# A NANOSYNTACTIC ACCOUNT OF THE TURKISH COPULA AND AGREEMENT PARADIGMS

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# A NANOSYNTACTIC ACCOUNT OF THE TURKISH COPULA AND AGREEMENT PARADIGMS

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A Nanosyntactic Account of the Turkish Copula and Agreement Paradigms

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DECLARATION OF ORIGINALITY

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ABSTRACT

A Nanosyntactic Account of the Turkish Copula and Agreement Paradigms

Turkish displays a rich verbal domain which necessarily hosts a copula in certain contexts and where tense, aspect, mood/modality markers and agreement allomorphies abound. In this thesis, I have attempted to delineate a fresh analysis for these two phenomena, namely, the appearance of the copula in verbal structures, especially in the context of tense and aspect markers and their combinations, and agreement allomorphies -focusing on the most significant *k-z* paradigms- using a Nanosyntactic toolset. Although these phenomena were probed in light of earlier theories like DM, Nanosyntax, which is a rather new approach, had not been used to evaluate the Turkish verbal domain in its integrity before. I also touched upon a related phenomenon in Turkish named "suspended affixation". Through that and the other phenomena mentioned earlier, it is shown here that Nanosyntax is perfectly capable of accounting for the most part of the rich verbal domain of Turkish thanks to several tools and mechanisms it offers. However, it also has yet to provide a holistic and satisfying answer to some questions built around the appearance of the copula in general by moving from word-level to phrase-level morphosyntax. I hope for this thesis to provide a base to accelerate the research towards that direction and to be of assistance to those who would like to work on Nanosyntax with a focus on Turkish morphosyntax.

# ÖZET

Türkçede Koşacın ve Uyum Dizilerinin Nanosözdizim Programıyla İncelenmesi

Türkçe, belirli bağlamlarda zorunlu olarak koşaç barındıran ve zaman, görünüş, kip/kiplik belirticileri ile uyum allomorfileri açısından zengin olan, eylemsel alanı dinamik bir dildir. Bu tez Nanosözdizim araçlarını kullanarak bu iki olguya, yani eylemsel yapılarda, özellikle de zaman ve görünüş belirticileri etrafında ve bunların bileşiminde, koşacın belirişine ve -öne çıkan *k* ve *z* dizileri odağında- uyum allomorfilerine dair yeni bir çözümleme üretmeyi amaçlamaktadır. Bu iki olgu Dağıtılmış Biçimbilim gibi daha önceki teoriler tarafından irdelenmiş olsa da görece genç bir yaklaşım olan Nanosözdizim daha önce Türkçenin eylemsel alanını öz bütünlüğü içinde ele almak için kullanılmamıştır. Buna ek olarak tez, Türkçedeki ilintili bir olgu olan "ertelenmiş ekleştirme"ye de değinmektedir. Bu ve öncesinde bahsedilen olgular aracılığıyla Nanosözdizim'in, sunduğu araçlar ve mekanizmalar sayesinde, Türkçenin zengin eylemsel alanının büyük kısmını gayet başarılı bir şekilde çözümleyebildiği bu tezde gösterilmiştir. Ancak Nanosözdizim, bağlamdan bağımsız olarak koşacın belirişine dair bazı sorulara halen bütüncül ve tatmin edici cevaplar verebilmiş değildir. Bunun yolu ise Nanosözdizimin sözcük düzeyinde biçimsözdizimden öbek düzeyinde biçimsözdizime ilerlemesinden geçmektedir. Umulur ki bu tez bu yöndeki araştırmaları hızlandıracak bir temel görevi görecek ve Türkçe biçimsözdizim odağında Nanosözdizim çalışmaları yapmak isteyenlere destek olacaktır.

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TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION . . . . . 1
CHAPTER 2: LITERATURE REVIEW . . . . . 4
2.1 An overview of the Turkish markers . . . . . 4
2.2 An in-depth account of the relevant TAM markers in Turkish . . . . . 5
CHAPTER 3: NANOSYNTAX BACKGROUND . . . . . 51
CHAPTER 4: THE ANALYSIS . . . . . 59
4.1 The first attempt . . . . . 59
4.2 A more holistic attempt . . . . . 76
CHAPTER 5: A RELATED PHENOMENON: SUSPENDED AFFIXATION . . . . 86
5.1 An attempt that goes right systematically but is wrong in its starting point . . . . . 93
5.2 Nanosyntax and "pre-" elements . . . . . 95
5.3 A second attempt to account for SA using CLBs . . . . . 98
CHAPTER 6: CONCLUSION . . . . . 102
6.1 Summary of the current system . . . . . 102
6.2 Remaining questions . . . . . 102
REFERENCES . . . . . 105

# ABBREVIATIONS

| | |
|---|---|
| ABIL | ability |
| ABL | ablative |
| ACC | accusative |
| ADJZ | adjectivizer |
| ADVZ | adverbializer |
| ANT | anteriority |
| AOR | aorist |
| COM | comitative |
| COND | conditional |
| COP | copula |
| DAT | dative |
| EMP | emphasizer |
| EVID | evidential |
| GEN | genitive |
| IMP | imperative |
| IMPF | imperfect |
| INF | infinitive |
| INS | instrumental |
| LOC | locative |
| NEC | necessity |
| NEG | negative |
| NMLZ | nominalizer |
| NOM | nominative |
| PASS | passive |
| PL | plural |
| POSS | possessive |
| PROG | progressive |

| | |
|---|---|
| PROSP | prospective |
| PST | past |
| QP | question particle |
| REFL | reflexive |
| REL | relative |
| VRBZ | verbalizer |

# CHAPTER 1

# INTRODUCTION

In the Turkish verbal domain, there are two phenomena that have received considerable attention yet still warrant further examination: the distribution of the copula and the allomorphy in the agreement paradigms. In this thesis, I will provide a Nanosyntactic analysis of these phenomena, investigating if they interact or are independent phenomena.

Let us start with the distribution of the so-called auxiliary copula *i*. Unlike the English *be*, the copula *i* is a postverbal element. *i* does not always appear on a verbal complex. For example, it does not show up when a verbal root gets a tense suffix but no aspect suffix (1b) or vice versa (1c). However, the copula does show up in structures where both aspect and tense are overtly marked as in (1a). The other environment where *i* emerges is nominal stems that get an overt tense marker (1d).

(1) a. *yaz-ıyor* **i**-*di*
write-IMPF COP-PST
'she was writing.'

b. *yaz-dı*
write-PST
'she wrote.'

c. *yaz-ıyor*
write-IMPF
'she is writing.'

d. *kalem* **i**-*di*
pen-COP-PST
'it was a pen.'

Notably, in colloquial speech, *i* is mostly cliticized and loses its phonological exponence as in (2a) (when the stem is consonant-final) or is realized as *-y* as in (2b) (when the stem is vowel-final). In the event of cliticization, vowel harmony takes the last syllable of the stem as reference, harmonizing with its vowel. Nevertheless, even when the copula is phonologically zero, its presence is still detectable through stress patterns (Kornfilt, 1996 and Kelepir, 2001, among others). Moreover, it is always optionally available to produce the full free form *i*. For the sake of exposition,

henceforth I will only present the copula in its full form, setting aside its variable phonological behavior.

(2) a. *yaz-ıyor-∅-du*
write-IMPF-COP-PST
'she was writing.'
b. *evde-***y***-di*
home-COP-PST
'she was home.'

The second set of facts that this paper is concerned with is the allomorphy in the agreement markers of Turkish (Kornfilt, 1996; Kelepir, 2001, a.o.). There are two major verbal agreement paradigms in Turkish: the so-called *z* and *k* paradigms named after the forms for 1PL. The *k* paradigm occurs only after past tense and conditional mood suffixes, *-DI* and *-sA* respectively (3a). All the other tense and aspect suffixes –which are sometimes called "fake tenses" in the literature (Kornfilt, 1996)— are followed by the *z* paradigm (3b).

(3) a. *çiz-di-k*
draw-PST-1PL
'we drew.'
b. *çiz-iyor-uz*
draw-IMPF-1PL
'we are drawing.
c. i. *çiz-iyor i-di-k*
draw-IMPF COP-PST-1PL
'we were drawing.
ii. *çiz-ebil-iyor-uz*
draw-ABIL-IMPF-1PL
'we can draw.'

As seen in (3c), if any number of these morphemes are combined, the paradigm to follow is determined by the last morpheme in the string.

In this thesis, I will examine these two phenomena within the framework of Nanosyntax, and question whether they can be linked. I will finally offer a preliminary Nanosyntactic analysis of the phenomenon called suspended affixation, an example of which can be seen below:

(4) *Gül-üyor ve ön-ü-ne dön-üyor-0-du-n*
laugh-IMPF and front-POSS-DAT turn-IMPF-COP-PST-2SG
'You used to laugh and turn aside.'

In Chapter 2, I provide a detailed literature review for Turkish in the hope that the nuances there will be integrated with Nanosyntactic tools in further research. Chapter 3 offers a basic literature review on Nanosyntax exploring these tools and the core ideas of the program. Underlining my fundamental assumptions, I present my analysis regarding the two mentioned phenomena with a Nanosyntax mindset in Chapter 4. Chapter 5 is where I introduce the suspended affixation phenomenon via a comprehensive literature review and make a crude attempt to tackle this phenomenon using Nanosyntax. Chapter 6 concludes.

# CHAPTER 2

# LITERATURE REVIEW

## 2.1 An overview of the Turkish markers

Before delving into the details of controversies or consensuses revolving around TAM and agreements markers in Turkish, I would like to provide a quick look at the core functions of the markers I will benefit in this thesis.

Although these markers are rich in number and function as will be seen in the second section of this chapter, only some markers are relevant for this thesis, and for illustrative purposes, their corresponding structures are designed -as will be explained in the following chapters- as simple trees with no more than two features. To put it differently, their additional contributions in terms of meaning are disregarded in the present thesis with the hope that these contributions will be accounted for in further research.

Here are my assumptions briefly: -DI is the only overt tense marker in Turkish. For this reason, its past meaning is preeminent, independently of the discussions regarding its additional meanings or possible variants. Therefore, its tree has a Past feature. Similarly, -sA is defined through its dominant conditional meaning.-(A)r, -mAktA,-Iyor, -AcAk and -mIş are assumed to be pure aspect markers with only one piece of aspectual information, which is habitual, progressive, imperfective, prospective and anterior aspect for each marker respectively. It should be noted that since -mIş is also linked to evidentiality, which finds place much higher than the aspect zone in the hierarchical structure, the underlying assumption in this thesis is that there are two different -mIş morphemes in the lexicon reserved for these two different roles. Yet, for these markers are equal in their weight, i.e. they are all assumed to have only one core aspectual meaning, the analysis chapter will not dwell on a comprehensive account of all these markers. Only -Iyor will be used in that chapter for the sake of clarity, and it will be mentioned as an imperfective marker based on the consensus about this fundamental function of it.

Such are the basic assumptions about TAM markers in Turkish that will be of relevance in this thesis. The uninterested reader may skip the next section without hesitation where a detailed summary of discussions around these markers will be presented.

## 2.2 An in-depth account of the relevant TAM markers in Turkish

Tense and aspect are grammatical categories that help us locate an event in time.[1] Intuitively, this sounds like a task assigned to tense alone, However, it has been argued that tense does not directly manipulate the *event time* (i.e. the time span that the event occupies) but rather the *reference time* (i.e., the time span we are talking about). The two may overlap in some cases, but not always. Therefore, starting with Reichenbach's (1947) introduction of the reference time, scholars began to emphasize this new element on the timeline.

Tense on its own does not form a relationship between the event time and the utterance time; it merely informs us about where the reference time (RT) is situated in relation to the utterance time (UT) (Reichenbach, 1947; Klein, 1994).[2] The RT is the time span (henceforth interval) the sentence is anchored. In other words, it is the interval relative to which the ET is situated. The ET, on the other hand, is the interval in which the event holds true, i.e. the "runtime" of the event. The RT, unlike the ET, needs to be shared knowledge (Hamm & Bott, 2018) which is also in line with the RT being renamed as the topic time by Klein.

(1) a. Ursula served Phoebe some rotten fruits. (E=R<U)
b. Camilla would sing when her mother gave her a sign. (R<E<U)[3]

In (1a) the event takes place in the past which is also the silent RT of the sentence. Both the ET and RT are before the UT. In (1b), on the other hand, the when-clause clearly pinpoints the RT which is the time of the sign given by the mother, which precedes the time of the main event, i.e. Camilla singing. However, adverbial phrases

[1]Following the standard practice, I use the label event to refer to all eventualities including states.
[2]RT is renamed as the topic time (TT) in Klein (1994).
[3]Unless stated otherwise, all the examples in this thesis have been produced by me.

like when-clauses are not the only indicators of the RT. The category called aspect gives us information about where the RT is located by forming a relationship between the RT and the ET.

This relationship also clarifies the internal structure of the event. That is, it states whether the event is continuing, repetitive, finished, etc. in the given RT interval. Hence, aspect tells us how the event is perceived relative to RT. In Cable's words, "aspect morphology contributes information regarding the contained-ness relationship between the TT [RT] and the ET" (Cable, 2008).

In the rest of this thesis, I will consider tense and aspect in the above terms by taking the former to indicate the temporal relationship between the UT and the RT while considering the latter as indicating where the ET is located relative to the RT.[4]

### 2.2.1 Tense markers in Turkish

Before delving into the details of functions undertaken by different markers in Turkish, it is necessary to point out that all these markers are meticulously examined in this chapter through the literature on each of them. However, these different views by scholars and different functions of the markers are not reflected in the analysis in Chapter 4. These markers are accepted as unifunctional structures in the present thesis. However, I assume that this detailed literature is beneficial in both having a holistic picture of the Turkish TAM domain and reflecting on prospective goals in applying these multifunctionalities to the Nanosyntactic analysis of Turkish to get it better framed. Therefore, I preferred to present the literature on tense and aspect markers of Turkish with all its richness to the reader in the hope that it will encourage further Nanosyntactic analyses that aim to integrate various aspects of TAM markers into their base.

[4]It should be useful to note here that "aspect" in this thesis refers to the grammatical aspect, and should not be confused with Aktionsart, also called lexical aspect.

2.2.1.1 -DI

There is a controversy about whether there is a single morpheme -DI with different forms or two morphemes as -DI and –(y)DI.

(2) a. *Bugün epey gül-dü-nüz.*
today quite laugh-PST-2PL
'You have laughed quite a lot today.'
b. *Fırtına yaklaş-makta-ydı/yaklaş-makta i-di.*
storm approach-PROG COP-PST-1SG
'The storm was approaching.'

Among those who support the former view, or who at least do not advocate the separation, Göksel (2001) meticulously refutes the arguments presented by others for differentiating –(y)DI from -DI. In brief, she explains the stress difference between these two forms, i.e. the stressed -DI vs. unstressed –(y)DI, by noting the fact that verbs assign stress to their left in Turkish: -DI is stressed only when there is nothing to the verb's left in the sentence, that is when the verb is in isolation, whereas the copula, being a verb, assigns stress to the morpheme preceding it (p.170). Others who explicitly separate the two forms (Erguvanlı Taylan, 2001; Sezer, 2001; Göksel & Kerslake, 2005; Temürcü, 2007; Jendraschek, 2011) focus on the functional differences between the two markers which will be summarized below.

Göksel & Kerslake (2005) touch upon the fact that -DI serves as an indicator of entry into a state when used with psychological verbs (p. 291). Sezer (2001) also classifies -DI as a present tense marker with psychological verbs, adding that adverbials are needed to shift the meaning to past (p.10).

(3) a. *Bu olay-a çok sevin-di-m.*
this incident-DAT much rejoice-PST-1SG
'I am so happy about what happened.'
b. *Dün bu olaya çok sevindim.*
yesterday this incident-DAT much rejoice-PST-1SG
'Yesterday, I got so happy about what happened.'

Apart from such few instances, -DI is always mentioned in relation to the past tense. -DI's past tense function is acknowledged by all whereas it is argued to be accompanied by additional aspectual and/or mood/modal functions in some accounts.

Perfective aspect is frequently added among -DI's functions (Kornfilt, 1997; Erguvanlı Taylan, 2001; Göksel & Kerslake, 2005; Temürcü, 2007; Jendraschek, 2011) referring to the fact that it allows us to mention an event as a completed whole. However, Jendraschek's approach is not very clear regarding the aspectual side of the morpheme since he calls -DI as "aspectually unspecified" but assigns it a perfective aspect right in the next sentence, asserting -DI to be the only cumulative marker in Turkish (p.263).[5] Sezer (2001) only mentions a perfect aspect and links it to present[6], not past, tense (p. 9) which can be explained by the continuation of a state caused by the event expressed with -DI at the utterance time:

(4) *Ben gel-di-m.*
I come-PST-1SG
'I have come.'

Assessing -DI's past meaning as a recent past and posing it near present perfect, Kornfilt (1997: 355) also assigns a perfect aspect function to -DI. Yet, she, along with Erguvanlı Taylan (2001) and Temürcü (2007), adds this function on top of perfective. Yavaş (1980) asserts that the perfect meaning is conveyed through conversational implication in Turkish: Because of the maxim of quantity, the hearer is inclined to assume that the past event's results are still relevant; the speaker would indicate it if it was otherwise. She, following Palmer (1965), states that it is adverbials that differentiate past or present perfect meaning (p. 13). Similarly, Erguvanlı Taylan suggests adverb(ial)s and context are the tools to determine whether the perfective or perfect reading will be derived (p. 102).

Although accompanied by aspect markers or aspectual readings quite often as summarized above, -DI can also be used without any of these allowing a simple past

[5]This is not so for –(y)DI which is a pure tense marker in Jendraschek's account (p. 263). Yet, for Göksel & Kerslake –(y)DI has both past tense and imperfective aspect (p. 285), and for Temürcü (2007) –(y)DI is cumulative in that it both conveys anteriority and certainty (p. 136).

[6]Since Sezer assumes two different morphemes, he indicates that –(y)DI has no such present perfect reading (p. 10).

reading (Yavaş, 1980; Aksu Koç 1988).[7] This is also the reason why it is called "the most verbal" tense/aspect marker in Turkish by Jendraschek (2011: 263).

The duplication of this marker, that is, using the DI+ydI combination has also evoked some debate in the literature. While it is just a "substandard" version of -mIştI for some (Sezer, 2001: 12) and some indicate that the first -DI is not different from -mIş (Göksel & Kerslake, 2005: 286), it is past in the past for others (Aksu Koç, 1988). Yavaş argues against the past in the past function, labelling it "emphatic past" which merely intensifies pastness (1980: 11). In this respect, Cinque (2001) and Göksel & Kerslake (2005) can be considered Yavaş's followers. Yavaş also notes that this combination may block the perfect interpretation of -DI since "it disconnects the past occurrence from the present" (pp. 16-17) for sure.

Even though not all assign a mood/modal function to the morpheme, nearly all accounts relate -DI to factuality or direct experience on the side of the speaker (Aksu Koç, 1988; Kornfilt, 1997; Erguvanlı Taylan, 2001; Cinque, 2001; Sezer, 2001; Johanson, 2003; Temürcü, 2007). An interesting and unique addition to this part comes from Yavaş (1980) who labels -DI as a subjunctive mood marker at the same time. Connecting it to the morpheme's past function, she suggests that in Turkish "remoteness in modality and remoteness in time are marked in a similar fashion" (p. 8). She explains this function by indicating that -DI expresses doubt or hesitance at times, as can be seen in the below examples:

(5) a. *Pilot-tu-nuz değil mi?*
pilot-PST-2PL not QP
'(As far as I remember,) You are a pilot, isn't that the case?'
b. *Pilot-sunuz değil mi?*
pilot-2PL not QP
'You are a pilot, isn't that the case?'

Connected to what Yavaş asserts with respect to the perfect reading of -DI, i.e. that it is only through implicature that -DI gets such a reading, sentences like (5) can be interpreted to assume a present reading, as well. The reason for that is, the speaker

[7] Yavaş indicates that it marks anteriority with respect to the utterance time, which, equalizing the utterance time with the reference time and differentiating the event time from them somehow, reminds the definition of aspect (p. 11).

has doubts about the validity/continuation of a past situation/event, and decides to present the situation/event from a past perspective when the validity of the proposition is certain (pp. 19-20), also indicating in questions that the speaker assumes the past event's effects/validity to continue. Using -DI as such both enables the speaker not to commit themselves to the truth of the proposition for the present time (p. 24) and allows room for the addressee to say something about the current state of affairs. This may be linked to the politeness undertone of this usage since it can be evaluated as being "attentive to [the addressee's] wishes" (p. 25) or their right to object. Yavaş exemplifies this function of -DI with sentences like those below:

(6) a. *Sinema-ya gid-ecek-ti-k, sen de gel-ir mi-sin?*
cinema-DAT go-PROSP-PST-1PL you too come-AOR QP-2SG
'We are (thinking of) going to the cinema, would you consider coming with us?
b. *Sinema-ya gid-eceğ-iz, sen de gel-ir mi-sin?*
cinema-DAT go-PROSP-1PL you too come-AOR QP-2SG
'We are going to the cinema, would you come with us?' (Yavaş, 1980: 24-25)

The latter implies that the plan is going to be carried out regardless of the addressee's answer while (6) conveys the implication that according to the answer, the plan may change (p. 25). The politeness reading might then have extended to include questions without any background information on the side of the speaker like (7):

(7) *Kek al-ır mı-y-dı-nız?*
cake take-AOR QP-COP-PST-2PL
'Would you have some cake?'

Yavaş also argues that -DI may mark counterfactuality in conditionals (p. 29)[8] and in those instances, it is also devoid of any temporal information (p. 35):

(8) *Gün bit-se-y-di iş-ler-in-i yetiş-tir-e-mez-0-di-n.*
the.day end-COND-COP work-PL-POSS-ACC
'If the day ended, you wouldn't be able to complete your workload.'

It can mark counterfactuality even in the absence of the conditional marking, as exemplified by Göksel & Kerslake (2005):

[8]Temürcü (2007) assigns this role specifically to –(y)DI (p. 136).

(9) *Sen bu iş-i daha güzel yap-ar-0-dı-n.*
you this work-ACC more beautifully make-AOR-COP-PST-2SG
'You would have done this job better.' (Göksel & Kerslake, 2005: 468)

#### 2.2.1.2 Present tense

The most obvious controversy about the present tense in Turkish is the existence of a morpheme for it. The absence of a morpheme with a phonological representation to express present tense has led some to mistake other markers such as the so-called aorist for a present tense marker (as observed by Yavaş, 1980, based on semantic points; Erguvanlı Taylan, 2001; Jendraschek, 2011: 254 based on morphological grounds). Kornfilt (1997), for instance, does so despite also recognizing other temporal meanings conveyed by this morpheme. She also claims that the aorist "talks about general events and comes closer to a universal tense" (p.336). In another chapter, she indicates that the existential copula undertakes the present function without requiring any additional suffix (p.189), and it is possible to find other existential expressions like the verb bulun- ("to be found") labeled as PRES in her glosses. Moreover, she mentions several other ways of expressing the present since the aorist is not applicable all the time. As such, her definition of the present tense seems to be a bit overinclusive. Although she later mentions a null morpheme to indicate non-past tense and as an alternative to -ymIş (p.378), this is probably related to her assumption of a null copula. In these instances, she does not make an explicit claim about the relationship between that null morpheme and the present tense. Other than Kornfilt, Nakipoğlu (2001) also assigns –(A)r a present tense function along with some other functions, and Sezer (2001) claims that -DI sometimes expresses present tense.

Yavaş (1980) claims that -DI is the only tense marker in Turkish and thus, builds an opposition between past and non-past (pp. 8-9). Drawing attention to the facts that there is no simple present tense in Turkish and that all non-past predicates are obligatorily marked with aspectual markers (see (10)), she concludes "Turkish lacks morphological marking for present tense (or better, non-past tense)" (p. 9).

(10) *Orhun her hafta münazara pratiğ-i yap-ıyor.*
Orhun every week debate practice-ACC make-IMPF
'Orhun practises his debating skills every week.'

Göksel & Kerslake (2005), too, are of the opinion that it is the absence of relative tense markers that express the present tense in "absolute terms" and this absence sets the utterance time as the reference time (p. 284).

Among those who advocate a null morpheme, some (Erguvanlı Taylan, 2001; Sezer, 2001; Temürcü, 2007) delimit its use by the non-verbal domain. Temürcü (2007) adds some epistemic and aspectual roles to this morpheme. Yet, although he mentions Ø and -Iyor under the heading "present continuous" (p. 148), he does not present an organic link between an overarching present tense and Ø. Following Göksel & Kerslake (2005), Jendraschek (2011) claims that the absence of past copular marker leads to a present reading in non-verbal predicates. Despite this explanation, he considers the mentioned absence as a Ø morpheme, following the criteria proposed by Dixon (2009): since (a) the differences between the agreement paradigms when the past morpheme appears and when it does not (see (11)) show that Ø has a morphological existence and a slot to its own, (b) Ø brings with it a specific present meaning (see (12)) and (c) it has a contrastive value which is traced in the contrast between it and the past morpheme, no marking is not a viable option and Ø emerges as a present morpheme (p. 248). It should be noted that he prefers "present" over "non-past" asserted by Yavaş (1980), due to point (b).

(11) a. *Yarış-ıyor-uz.*
race-IMPF-1PL
'We are racing.'
b. *Yarış-ıyor-0-du-k.*
race-IMPF-COP-PST-1PL
'We are racing.

(12) *Sıradan insan-lar arasında o, göz-e bat-ar.*
ordinary human-PL among he/she eye-DAT sting-AOR
'He/she stands out among ordinary people.'

All in all, although the points these scholars make about how present tense is expressed in Turkish are similar, their labels for this mechanism differ which leads to a rich set of answers to the question of existence of a present tense marker in Turkish.

### 2.2.2 Aspect markers in Turkish

#### 2.2.2.1 -(y)AcAk

The suffix –(y)AcAk is associated with futurity in most accounts. However, its function is not clearcut. There still is no consensus as to its categorization. Some take it to be a tense marker (Kornfilt, 1997; Cinque, 2001; van Schaaik, 2001; Göksel & Kerslake, 2005) some an aspect marker (Jendraschek, 2011), and some a modality marker (Yavaş, 1980; Rivero, 2021).

Descriptive grammars of Turkish (Kornfilt 1997; Göksel & Kerslake 2005 among others), as well as papers on the Turkish verbal domain like van Schaaik (2001) and Cinque (2001), label the suffix – (y)AcAk as the future tense marker. Specifically, Kornfilt (1997) underlines its tenseness by saying "[t]he future form, when used as a genuine, fully finite verb, has only a tense function and no aspectual or mood values" (p. 341). She touches upon the increased level of certainty –(y)AcAk brings to the utterance compared to what is traditionally called the aorist when it is used for future reference.

(13) a. *Akşam iş-im erken bit-er-0-se kitapçı-ya gid-er-im.*
evening work-POSS early finish-AOR-COP-COND bookstore-DAT go-AOR-1SG
'If I finish my work early in the evening, I will/may go to the bookstore.'
b. *Akşam kitapçı-ya gid-eceğ-im.*
evening bookstore-DAT go-PROSP-1SG
'I am going to go to the bookstore in the evening."

Göksel & Kerslake (2005) categorize –(y)AcAk as the future tense marker explicitly. Yet, they classify it as a relative rather than absolute tense marker which, combined with another tense marker (they specify it as the "past copula" (p. 287)) locates the event based on the reference point introduced by that tense marker, which is an explanation that immediately reminds of the definition of aspect. Kornfilt (1997)

indicates that –(y)AcAk cannot be stacked onto other tense/aspect markers while creating a relative tense meaning itself.

(14) *Saat 15-te kümes-i temiz-le-miş ol-acağ-ım.*
clock 3pm.-LOC coop-ACC clean-VRBZ-ANT be-PROSP-1SG
'I will have cleaned the coop by 3 pm.'

This behavior, as well, is reminiscent of a group of markers, some and sometimes all of which are labeled as aspectual markers that need an auxiliary to form complex forms.

Although both van Schaaik (2001) and Cinque (2001) mention the suffix as the future tense marker, they also recognize its connection to aspectuality, van Schaaik examines –(y)AcAk ol constructions as in (3) and argues that such sentences express only aspect (p. 62). Cinque mentions the possibility of –(y)AcAk being an aspectual marker for Prospective when it is used as a participial (p. 53, 57, fn 13). Similarly, Kornfilt acknowledges that –(y)AcAk as a participle can assume the values she says it cannot assume as a finite form, i.e. aspect or mood. Jendraschek, on the other hand, labels all the usages of –(y)AcAk as prospective aspect suggesting that future reference is obtained by combining this aspectual marker with present tense (2011: 256). Yet, it should be noted that it is difficult to test the validity of this explanation since the present tense marker, if it exists at all, is null after all aspectual or modality markers. Jendraschek also points towards the abovementioned difference between the levels of certainty of the aorist form, which he labels dispositive, and the prospective form that is captured by Kornfilt (1997). However, his explanation for this difference is related to intentions and predictions. He even lists epistemic modality as a second function of the prospective marker.

Jendraschek is not the only one who relates the suffix to modality. While contrasting it with the so-called imperfective marker –(I)yor, Göksel & Kerslake (2005) find –(y)AcAk to express a prediction while the imperfective puts forth a firm plan. They also list two modal functions for the suffix, namely assumption (15) and command (16), in Appendix 2 of their book (p. 466):

(15) *Kapı çal-dı, Hasan ol-acak.*
door ring-PST Hasan be-PROSP
'The doorbell rang; that'll be Hasan.'

(16) *Herkes saat iki-de burada ol-acak, anlaş-ıl-dı mı?*
everyone clock two-LOC here be-PROSP deal-PASS-PST QP
'Everyone is to be here at two o'clock; is that clear?'

Kornfilt explicitly assigns an "irrealis or potentiality" function to this marker when it is a participle (p. 341), whereas van Schaaik adds the intention-related function on top of the marker's inherent future function (2001: 85). Apart from these accounts, Kelepir, who avoids referring to –(y)AcAk with any of the three categories and who simply names it "future" in her analysis, still treats it as a participial and lists it category as modal once (p. 35, fn 16).

These approaches inevitably bring us closer to the accounts which regard –(y)AcAk as a modal operator. One of these is Rivero (2021) who claims that this epistemic operator takes grammatical aspect markers —of which she argues there are three: the imperfective –(I)yor, the perfect –mIş and a null perfective, if we are to use her terms— as its complement and that it is these markers which endow the constructions with –(y)AcAk their future-orientedness, not the suffix itself. To support her claim, she underlines the fact that when –(y)AcAk follows overt aspect markers, the meaning may be shifted from future as in (17) and (18).

(17) *Halı-dan tuhaf bir koku gel-iyor. Biri üstü-ne süt dök-müş ol-acak.*
carpet-ABL weird a smell come-IMPF someone over-DAT milk spill-ANT be-PROSP
'The carpet smells weird. Someone must have spilled some milk on it.'

(18) *Firdevs Bihter-in sırr-ı-nı bil-iyor ol-acak ki böyle kendi-nden emin konuş-uyor.*
Firdevs Bihter-GEN secret-POSS-ACC know-IMPF be-PROSP that like.this self-ABL sure speak-IMPF
'Firdevs must know Bihter's secret seeing that she speaks so confidently.'

In (17) it is obvious that the action has terminated in the utterance time since the carpet smells weird now. Therefore –(y)AcAk in this example cannot refer to future. In (18) the factual event, Firdevs's speaking confidently is also taking place

simultaneously with the UT which indicates that the state of "knowing" must belong to the UT, not the future. Still, it is to be remarked that these usages of –(y)AcAk are obsolete in daily speech. Rivero also argues that there is a null perfective aspect marker which complements the modal FUT and gives it a future reading (p. 12). However, she seems to overlook that her morphological argument in favor of a FUT modal, that is, it displays similar characteristics to other modals which require the auxiliary ol in periphrastic forms, is also valid for nearly all TAM markers:

(19) *Böylelikle tüm görev-ler-im-i tamamla-mış ol-acağ-ım.*
thus all duty-PL-ACC complete-ANT be-PROSP-1SG
'Thus, I will have completed all my tasks.'

(20) *Böylelikle tüm görevlerimi tamamlamış oluyorum.*
thus all duty-PL-ACC complete-ANT be-IMPF-1SG
'Thus, I have completed all my tasks' (in the sense that the person recently acquires that state of having completed his/her tasks)

(21) *Böylelikle tüm görevlerimi tamamlamış olmuşum.*
thus all duty-PL-ACC complete-ANT be-IMPF-1SG
'Thus, I, reportedly, had/have completed all my tasks.'

Yavaş (1980), too, asserts that –(y)AcAk is mislabeled as a tense marker and is actually a modality marker for presumptions, directing the reader's attention to the fact that future markers which are regarded as tense markers are used in many different temporal contexts crosslinguistically. "This affinity between future and modal expressions is due to the element of uncertainty that is inherent both in future events and in the application of modal categories," she observes (p. 70). For the non-future uses of –(y)AcAk, she gives examples parallel to (17) and (18) above. In these examples allegedly future forms truly have a meaning almost equal to the necessity marker -mAlI. Yet again, it should be noted that such usages of –(y)AcAk are marked in regular speech. Moreover, that –(y)AcAk alone is not capable of conveying the modal meaning in such constructions and always needs the auxiliary ol is an important detail not to be overlooked. An account where these two are thought to be modal operators only when juxtaposed comes from van Schaaik (2001) that is mentioned above. Yavaş (1980) on the other hand, believes that it is the adverbials

that give a sentence with –(y)AcAk its future reading (p. 74). Another argument she uses to support the suffix's being a modality marker is the use of it in embedded clauses in all contexts other than the past.

(22) *Mary John-un kırk yaş-ı-nda ol-abil-eceğ-in-i söyl-üyor.*
Mary John-GEN forty age-POSS-LOC be-ABIL-PROSP-POSS-ACC say-IMPF
'Mary says that John may be forty years old.' (Yavaş 1980)

Here, the meaning is not at all related to the future. The only message given is that the subject has a prediction about someone's present age. However, this issue gets complicated since only two TAM markers are employed in embedded clauses, -DIk and –(y)AcAk, and they both work well with the present readings depending on the meaning conveyed.

(23) *Mary John-un bazen çok sinirli ol-abil-diğ-in-i söyl-üyor.*
Mary John-GEN sometimes very angry be-ABIL-NMLZ-POSS-ACC say-IMPF
'Mary says that John may be furious at times.'

In brief, the use of one of the two markers in embedded clauses may not point towards anything about their inherent function in finite forms.

Yet another point she makes is the use of the suffix in conditional clauses. She asserts that for a regular future meaning, the so-called aorist marker is enough.

(24) *Yemeğ-e sumak ekle-r-0-se-n hala-n-a söyle, ye-m-iyor.*
food-DAT sumac add-AOR-COP-COND-2SG aunt-POSS-DAT tell eat-NEG-IMPF
'If you add sumac to the dish, let your aunt know. She does not eat it.'

Obviously, the aorist here does not indicate a habit but a possibility that the adding takes place in the near future. The use of –(y)AcAk in such contexts is indicative of a present plan or intention aimed at a future time, Yavaş observes (p. 79).

(25) *Yemeğ-e sumak ekle-yecek-0-se-n hala-n-a söyle, ye-m-iyor.*
food-DAT sumac add-PROSP-COP-COND-2SG aunt-POSS-DAT tell eat-NEG-IMPF
'If you are planning to add sumac to the dish, let your aunt know. She does not eat it.'

As such, -(y)AcAk increases the level of certainty of a future possibility expressed by the aorist by rendering it a plan, a firm intention, which is an

observation also made by Kornfilt (1997) as touched upon above. Moving from this, that –(y)AcAk is similar in behavior to modal markers in Turkish, and that future can be expressed without the marker –(y)AcAk, Yavaş argues that it marks presumptive modality, not future time reference.

When all these approaches are taken into account, it seems clear that although traditionally labeled so, -(y)AcAk does not seem to be a tense marker by either morphological or semantic criteria, but it definitely has future references. Whether it is by nature a modality marker with prospective direction or a prospective marker with modal contributions is a more intricate question seeking a definite answer as yet. However, since the modal uses of the marker are explicitly marked or obsolete for modern speakers of Turkish, I will follow Jendraschek in accepting –(y)AcAk as an aspect marker which, combined with present tense, can contribute a future meaning to the sentence. This is supported by the fact that the marker combines with the overt past tense marker -DI to render a meaning that belongs to the future of Utterance Time (UT), as well as a meaning that does not.

(26) *Ofis-e gid-ip kitab-ın-ı al-acak-0-tı (, aldı).*
office-DAT go-ADVZ book-POSS-ACC take-PROSP-COP-PST
'He/she was going to go the office and take his/her book'

In other words, -(y)AcAk clearly behaves as an aspect marker by positioning an event relative to an anchor point in the timeline, i.e. Reference Time. What their relation to the UT can be is determined by the tense information in the sentence. Taking –(y)AcAK as an aspect marker, I will also be putting aside the modal-like uses it exhibits, hoping that such readings are not due to the truth conditional aspect of the meaning of –(y)AcAK but arise in pragmatics.

#### 2.2.2.2 -mAktA

The suffix -mAktA is understudied even if it is not totally ignored. One of the reasons for this is the optional status of this suffix, that is, it serves as a progressive marker, but we already have a less formal, more popular and more comprehensive marker for that, -Iyor (also observed by Kornfilt, 1997, and Göksel & Kerslake, 2005).

(27) a. *Üç senedir bir inşaat şirket-i-nde çalış-makta-yım.*
three for.year a building company-POSS-LOC work-PROG-1SG
'I have been working in a building company for three years.'
b. *Üç senedir bir inşaat şirket-i-nde çalış-ıyor-um.*
three for.year a building company-POSS-LOC work-IMPF-1SG
'I have been working in a building company for three years.'

In fact, Johanson lists it as the third form used for present tense-aspect(1994: 248).[9] The first two in his system are –(A)r and -Iyor respectively. Erguvanlı-Taylan, too, observes this optionality and relates it to -mAktA's being a literary form rather than spoken (2001: 125, fn 9).

Kornfilt (1997) categorizes the suffix as a progressive aspect marker. Yet, she analyzes it as consisting of two morphemes, the infinitive marker -mAk plus the locative marker -DA (p. 358). This division would seem natural to any native speaker, and is valid since another form to the same effect can be employed with the other infinitive marker, -mA, although this second form is even rarer and confined mostly to obsolete contexts which is exemplified below by a line from a non-contemporary poet:

(28) *"Ne için muttasıl mey iç-me-de-yim"*
what for non-stop alcohol drink-INF-LOC-1SG
'Why am I drinking non-stop?' (Muallim Naci)

Sezer also recognizes the validity of such a bimorphemic analysis for the suffix (2001: 38, fn 2), but labelling -mAktA as a continuous marker, he lists it among tense1 forms which he indicates he will treat as morphosyntactically simple forms (p. 4). Nevertheless, it is important to note that he describes tense as a category which may, now and then, realize tense, aspect and mood at the same time (p. 4) Göksel & Kerslake (2005), too, treat it as a simplex affix expressing imperfective, more specifically, progressive aspect. They add that the suffix may add emphasis to the utterance when appealed to in informal contexts, and that it expresses habituality from time to time. -mAktA, just like -Iyor, presents a situation as ongoing or recurring within the time span the reference point is contained in (Göksel & Kerslake,

[9] Johanson (1994) introduces a kind of combined system which he calls aspektotempora.

2005, p. 374). Kornfilt acknowledges that -mAktA's usage apart from progressive contexts is rare but present, but adds that because of that occasionality, the suffix results in ungrammatical or infelicitous sentences when in the company of stative verbs, as in (29).

(29) *?Günümüz-de-ki çocuk-lar böyle zor problem-ler-in çözüm-ün-ü daha*
today-LOC-ADJZ kid-PL like.this difficult problem-PL-GEN solution-POSS-ACC more
*hızlı kavra-mak-ta.*
swiftly perceive-INF-LOC
'Kids nowadays perceive the solutions to such difficult problems more swiftly.'

#### 2.2.2.3 -Iyor

-Iyor is a suffix that is at times analyzed or described from a diachronic perspective. It descends from the obsolete verb yorımak (Lewis, 1983, as cited in Jendraschek, 2011; Göksel & Kerslake, 2005). Sezer (2001), too, divides the suffix into two: the converbializer -I plus the root yorı- (p. 38, fn 2) but still treats it as a simplex form.

Independently from its origin, the suffix is variably named as the present, imperfective, progressive or continuous marker in Turkish. Moreover, authors sometimes use these terms in a way that enriches their regular meanings. For example, Johanson (1994) combines tense and aspect into a system which he calls "Aspektotempora". -Iyor is a form listed under present in this system (p. 248). An approach akin to this may be observed in Sezer (2001) who describes tense as a category encompassing tense, aspect and mood altogether and classifies the suffix under Tense1 morphemes labeling it as a "continuous aspect marker" (pp. 4–5). Later, he lists it among "participial tenses" along with –(y)AcAk, -(A)r, -mIş and -mAktA (p. 27), but reminding Deny's (1921, as cited in Sezer, 2001) view on -Iyor not being a participial suffix despite its adoption of the clitic paradigm) Sezer draws attention to the fact that unlike other Tense1 markers, -Iyor —and -mAktA— cannot be used to be modifiers (p. 41, fn 27).

(30) *oku-muş insan*
read-ANT human
'a well-read person'

(31) **oku-yor insan*
read-IMPF human
Intended as 'a person who is studying/reading'

Apart from the accounts discussed above, -Iyor is often analyzed as an aspect marker. When it is accepted as an aspect marker, the labels different authors have used for it are interrelated. Therefore, before turning to the Turkish suffix, it will be instructive to take a quick look at the relationship between imperfective, continuous and progressive aspects.

Imperfective aspect views a state or event as incomplete as it is seen from an internal position, a subpart of the event time. Continuous and habitual are subdivisions of imperfective, the former of which is the overarching aspect above progressives and nonprogressives (Comrie, 1976, as cited in Erguvanlı-Taylan, 2001). As is seen, progressive is the least comprehensive aspect among these which is rooted in its disagreement with stative verbs, which is a commonly underlined point by scholars. Mair (2012) summarizes the difference between progressive and continuous aspects as such:

> While the progressive is usually reserved for dynamic verbs and predicates, non-progressive continuous aspectuality additionally covers stative predicates, i.e., those in which, in contrast to dynamic predications, there is no volitional agent involved and which therefore do not usually occur in the imperative or allow modification with adverbs such as eagerly. (p. 3)

(32) You are running.
Entails 'You have run.'

(33) They are writing a book together.
Does not entail 'They have written a book together.'

Based on the differences touched upon in the previous paragraph, many authors accept -Iyor as a continuous or imperfective marker but not a progressive

marker (except some like Yavaş, 1980[10]; Cinque, 2001; and Jendraschek, 2011) because it can cooccur with statives:

(34) *Şu adam-ın şov-lar-ı-nı çok beğen-iyor-um.*
that man-GEN show-PL-POSS-ACC very like-IMPF-1SG
'I like (literally "I am liking") that man's shows a lot.'

By the same line of reasoning, Erguvanlı-Taylan (2001) rejects the possibility of -Iyor being a progressive aspect marker and refers to it as the imperfective marker. It can express any interval in the span from the event's beginning point to end point. She also defies accounts which treat -Iyor as a tense marker on the grounds that it can cooccur with past tense (p. 103).

(35) *O küskün çocuk bana gülüms-üyor-0-du.*
that resentful kid to.me smile-IMPF-COP-PST
'That resentful kid was smiling to me.'

Yet, she argues that it functions as a present tense marker in the absence of any other TAM marker. Göksel & Kerslake (2005) also refer to -Iyor as the imperfective aspect suffix, recognizing its habitual and progressive usages, which find place under the label imperfective as mentioned before.

(36) *Zinde kal-mak için her gün yarım saat koş-uyor-um.*
fit stay-INF for every day half hour run-IMPF-1SG
'I run every day for half an hour to stay fit.'

Justifying her choice with the abovementioned observation about -Iyor and statives, Kornfilt (1997) advocates the label "continuous aspect marker" for the suffix. Following Kornfilt's reasoning, Cinque (2001) who labels -Iyor as a progressive

[10]Among those which opt for the label progressive for -Iyor, Yavaş (1980) is the only one who calculates in a systematic way the ramifications this choice brings about. She thinks of two options to justify its usage with statives in Turkish: either the verbs are not true statives or the progressive has a different function in English and Turkish (p. 126). Moving from Carlson's (1977) view on object-level versus stage-level predications and matching the progressive and aorist markers with stage-level and object-level statements respectively, Yavaş refuses the first option. Then, she infers that the fact English does not use statives with stage-level statements but Turkish does may be rooted in the different worldviews of the two societies using these languages (p. 136). Carlson (1977) argues that stage-level predications which are linked to progressive usages can also be used for object-level predications —which normally denote an inherent property of the subject— forming a basis for habitual interpretations (as cited in Yavaş, 1980).

aspect marker later seems to agree with Kornfilt in finding it more suitable for continuous aspect since it can be stacked on stative verbs (p. 56, fn 7).

Despite explicitly stating -Iyor is the continuous marker, Kornfilt refers to it as the present progressive form quite often, as well, reminding of Erguvanlı Taylan's statement above about -Iyor functioning as a present tense marker in the absence of other TAM markers. They both accept it as a present perfect continuous marker, as well, in the presence of suitable adverbials, Kornfilt by placing it under the heading "Situation which began in the past and is still continuing" (p. 354), and Erguvanlı Taylan by explicitly stating this property of it (p. 110).

(37) *On saattir sana ulaş-ma-ya çalış-ıyor-um.*
ten for.hour to.you reach-NMLZ-DAT try-IMPF-1SG
'I have been trying to reach you for ten hours.'

**-Iyor's additional functions and its relation to modality** Thanks to supportive adverbials, -Iyor can assume many other roles, so much so that this has led Erguvanlı Taylan to claim that "the imperfective -Iyor [. . . ] stands out as the unmarked viewpoint aspect in Turkish, since it can occur freely in all situation types, including statives" (p. 120). She is among those who acknowledge future readings of the suffix and states that the reason underlying these readings is -Iyor acting like a default present tense marker at times (p. 103). Kornfilt also recognizes the future function of this suffix but gives it an informal status (p. 341). Contrarily, Göksel & Kerslake spare the future function for strictly fixed events which connotes formality. In addition, similar to their attitude towards –(y)AcAk, they describe this future usage of -Iyor as a relative tense marker, which resembles, as stated before, the definition of aspect.

Habitual is another function which most of the time arises thanks to an adverbial (as argued in Erguvanlı Taylan, 2001: 106). Given that it at least requires habituality-or duration-related adverbials in the context to stand on its own as a habituality marker, considering –Iyor's habitual interpretation an additional one

owing to the presence of adverbials just like the future reading and leaving it outside the suffix's core functions seem more reasonable.

As an interesting contribution to -Iyor's functions, Kornfilt assigns ingressive aspect, which points to the beginning of a situation/action, to the suffix (p. 359) which perhaps becomes more visible when, again, supported with suitable adverbials:

(38) *Hemen şimdi leke-yi çıkar-ıyor-um.*
at.once now the.stain-ACC wash.out-IMPF-1SG
'I am washing out the stain right now.'

Another interesting observation on Göksel & Kerslake's side is the function of specificity -Iyor introduces into the meaning. The suffix makes generic subjects specific ones in generic statements when it substitutes –(A)r (p. 296):

(39) a. *Kitap insan-ı aydınlığ-a çek-er-0.*
book human-ACC brightness-DAT draw-AOR-3SG
'Books draw people into light.'
b. *Kitap insan-ı aydınlığ-a çek-iyor-0.*
book human-ACC brightness-DAT draw-IMPF-3SG
'The book draws one into light.'

Apart from its generally acknowledged aspectual status, -Iyor is occasionally associated with modality. Erguvanlı Taylan relates its habitual meaning to witnessing a repeating situation and deriving a generalization from it (p. 111) This property of the marker points towards the likelihood of its connection with modality since it presumes a certain level of belief or knowledge on the side of the speaker.

(40) *Her akşam yüz-ler-ce insan umutsuzluk batağ-ın-a düş-üyor-0.*
each evening hundred-PL-ADJZ human hopelessness mire-POSS-DAT fall-IMPF-3SG
'Each evening, hundreds of people are plunged into despair.' (derived from a personal experience/observation)

Göksel & Kerslake also draw attention to this property under the heading of modality by stating that the choice between the so-called aorist and -Iyor creates different results. The former foregrounds an inherent property, behavior, etc. (p. 290, 295).

-Iyor, on the other hand, seems to signal knowledge on the side of the speaker who has observed, experienced or come to know a long-term state (p. 295).[11]

(41) a. *Kendi-si şu mor ev-de otur-ur-0.*
himself/herself-POSS that purple house-LOC reside-AOR-3SG
'He/she resides in that purple house.'

b. *Kendisi şu mor ev-de otur-uyor-0.*
himself/herself-POSS that purple house-LOC reside-IMPF-3SG
'He/she resides in that purple house.'

Göksel & Kerslake additionally underline -Iyor's future reference as indicative of "a strong confidence on the speaker's part that events will indeed run according to the schedule" (p. 287) which resonates with modality, as well. Being so connected to speaker's belief worlds may be the reason why Kornfilt regards the future usage as informal. The fact that the two readings arising, to a great extent, from adverbial use, namely future and habitual, are at the same time found to be connected with modality may indicate the necessity of evaluating these readings side by side with modality features.

-Iyor's functional richness exceeding a certain category is obvious thanks to these observations. Nevertheless, although this richness surely deserves further examination and formalization, I will accept -Iyor as an imperfective aspect marker for the purposes of this thesis, considering the consensus on its aspectual core function.

#### 2.2.2.4 -(A)r

The so-called aorist is associated with different functions. Among these, a combined structure is offered by some (Johanson, 1994; Nakipoğlu Demiralp, 2001). Johanson lists the marker –(A)r among the forms for present tense in his aspektotempora system (p. 248) but claims that its neutral present tense meaning renders it quite favorable to express habitual/repetitive aspects (1994 as cited in van Schaaik, 2001). Nakipoğlu Demiralp (2001) states that the marker contains present tense, habitual

[11] This habitual use of a marker which primarily expresses continuity is a good example of Carlson's (1977) stage-level vs. object-label predications mentioned above.

aspect and epistemic modal at the same time, the last function including both necessity and possibility (p. 137).

The suffix is treated as a tense marker by few (Kornfilt, 1997; Sezer, 2001 among others). Yet, even in some of these, the aspectual status of this suffix is not ignored. For instance, its habituality meaning is underlined in Kornfilt (1997: 356), who unquestionably treats it as a present tense marker despite acknowledging its future and past usages (p. 336). While expressing future "tense", it conveys a less certain meaning than –(y)AcAk as mentioned earlier. Cinque (2001) is uncertain as to the head which may be associated with the so-called aorist suffix although he propounds that it may be placed between past tense and alethic modality (p. 57, fn 16) which is a location usually spared for aspect in the functional sequence.

A considerable majority of those who have written on –(A)r ascribe it an aspectual status that is habitual[12] (Yavaş, 1980, 1982; Erguvanlı Taylan, 2001; Göksel, 2001; Göksel & Kerslake, 2005; Jendraschek, 2011).

(42) *Her kış ol-ma-yacak heves-ler-e kap-ıl-ır-sın.*
every winter be-NEG-NMLZ whim-PL-DAT catch-REFL-AOR-2SG
'You get zealous about things that are impossible every winter.'

(43) *Zor-u gör-ünce hep kaç-ar-lar zaten.*
difficult-ACC see-ADVZ always run.away-AOR-3PL anyway
'They always run away when they encounter difficulty anyway.'

This habituality is often perceived in relation to genericity as can be seen in (43) but the truth value of the former is transtemporal whereas the truth value of the latter is omnitemporal (Yavaş, 1980: 103). Still, they are alike in expressing a behavior that extends over a considerably long period of time. As Yavaş puts forth, –(A)r does not have a certain temporality; it may create propositions that are valid in the present, future or past which is why she treats it as an aspect and mood marker but not a tense marker (p. 95). In fact, the quasi permanency mentioned above is what connects the two forms in the examples; they both point towards a long-term behavior, be it omni- or transtemporal, which is perceived as a characteristic/property

[12]Erguvanlı Taylan (2001) adds another aspectual function to the suffix by regarding the future-related meaning of it as prospective.

of the subject being so continuous (as also pointed out by Göksel & Kerslake, 2005). Accordingly, -(A)r and its negative form -mAz are also used with passive and double passive constructions which express an essential quality of an entity (p. 136), which, being devoid of a subject, is valid for all and thus sounds as a general rule.

(44) *Hastane-de çok ses yapı-l-ma-z.*
hospital-LOC much noise make-PASS-NEG-AOR.NEG
'One does not/should not make too much noise at hospitals.'

(45) *Böylesi şey-ler yaşa-n-ıl-ır ve unut-ul-ur.*
such thing-PL live-PASS-PASS-AOR and forget-PASS-AOR
'One experiences and forgets such things.'

Denoting an inherent property of an entity is regarded as the focal task of the "aorist" by others, as well (Yavaş, 1980; Jendraschek, 2011). On the grounds of the relationship between the Greek aorist and aspectuality and finding Reichenbach's (1947) "extended tense" analysis for the Turkish aorist problematic, Yavaş categorizes it as an aspect marker. Contrary to what Reichenbach claims for the aorist, i.e. that being an extended tense it may express repetitivity of events through past and future, Yavaş indicates that iterativity alone is not sufficient for the use of –(A)r (pp. 97-98) as she shows with the below example:

(46) **Bebek bu gün-ler-de çok öksürür.*
baby this day-PL-LOC a.lot cough-AOR
'The baby coughs a lot these days.' (1980: 98)

-Iyor comes out as the natural choice in this example instead of -Ar. That -Iyor finds itself a space of existence in both medial (in the sense Starke (2021) uses the term in relation to the link between habitual and progressive) and progressive constructions (and to a degree, habituals) whereas -Ar can only realize a habitual function hints at the additional property(ies) -Ar must have, since if it did not contain such properties, -Iyor could adequately express the habitual meaning. Therefore, -Ar should be formalized with at least two additional features (or the lack thereof if the directionality Starke opts for is adopted, i.e. habitual does not abide by the time limitations medial and progressive do) on top of those for progressive. Habituality,

which is often associated with the aorist, often, but not always, includes repetition which may have confused Reichenbach (Yavaş, 1980: 98). Yavaş differentiates habituality from mere durativity, as well, by indicating that habituality points towards a typical, expected quality of an entity which is rooted in the extended temporality of the marker. So, "permanency of time is merely a sufficient condition, not a necessary one for the use of aorist" (p. 103). She clearly states that the meaning of –(A)r should be sought "not along the real timeline" (p. 103) which peels the tense function off the suffix.

In relation to the abovementioned role assigned to –(A)r, namely denoting a property, Yavaş mentions that the difference between -Iyor and –(A)r is occasionally regarded as a matter of register, but she clearly rejects this approach by differentiating one from the other as such: "*[T]he aorist has the effect of characterizing the entity in question, while the progressive reports a certain behavior of the entity*" (p. 101). Doing so, the progressive becomes less strong than the "aorist" since it focuses on a temporal action or situation whereas the "aorist" talks about a pattern of behavior that can be seen as almost embedded in the subject. Jendraschek (2011) draws attention to this point, as well, by assigning a dynamicity meaning to the progressive and an inherency-denoting function to the dispositive (p. 255).

He suggests the above name "dispositive" for the suffix. What underlies this decision of his is the difference between the crosslinguistic function of the aorist, past tense plus perfective aspect, and the so-called Turkish aorist (Comrie, 1976 as cited in Jendraschek, 2011: 253-254). He thinks the marker is mistakenly considered as a tense marker because the present tense is silent in Turkish (p. 254).[13] Aorist is employed to talk about past actions by only referring to their pastness and not specifying any other detail, and therefore it is sometimes seen as pointing towards propositions that are always true (Goodwin, 1822, as cited in Jendraschek, 2011:

[13]However, he seems to miss the point that if that were the only reason for –(A)r to be regarded as a tense marker, all the other aspectual markers would be considered also tense markers, again being the only suffixes in the verbal complex to be related to temporality. Yet, this is not the case and not all of those who regard –(A)r as a tense marker treat the other markers which share the same slot with this suffix as tense markers.

254). This remark may explain why the label aorist is chosen for –(A)r, which is very commonly used to express general truths.

Four roles are listed by Jendraschek for this suffix: denoting (i) generic statements, (ii) inherent properties or long-term behaviors of subjects, (iii) ability, possibility, and (iv) intentions or promises projecting towards the future. All of these, according to him, more or less denote a disposition of the subject. Hence the name "dispositive".

Notice that although (iii) and (iv) are modality-related functions, Jendraschek still treats the suffix as a pure aspect marker. Nevertheless, there are others who mention a separate modality function, as well. Göksel & Kerslake (2005) accept it as an aspect marker denoting habituality and a modality marker with diverse functions such as expressing assumptions, volitionality, and so on. The aorist is also used in conditional structures to state the potential result of a fulfilled condition (Göksel & Kerslake, 2005: 298). Utterances of –(A)r in isolation may therefore be linked to the intentionality or potentiality function of it if the condition part of the whole sentence is thought to be a silent "if everything goes as planned/is compatible with what I know". Such volitional usages of –(A)r no doubt carry future connotations. When–(A)r is used with a future reference, it is used to talk about events that are not planned, not definitely intended or less certain. Certainty, on the other hand, requires the suffix –(y)AcAk (Jendraschek, 2011: 255), and therefore may create a volitionality effect. Yavaş (1980) also assigns this volition/intention-related role to the suffix which is more obvious when the speaker and subject match (p.105). She explains this by the speaker's not being so certain about his or her future actions to use –(y)AcAk and this sounding like a sign of mere willingness to the hearer (p. 107).

(47) *İleri-de daha da lezzetli yemek-ler yap-ar-ım.*
forward-LOC more EMP tasteful food-PL make-AOR-1SG
'I will/am willing to cook even more delicious dishes in the future.'

An important aspect to notice here is that Yavaş considers these two functions of –(A)r, namely aspectual and modal functions, separately, not basing one on the

other, which she also highlights and sees as problematic but leaves unresolved (1982: 49).

#### 2.2.2.5 -mIş

Apart from its tense/mood/modal functions, an aspectual role has commonly been assigned to -mIş in the literature. Although labels range from perfect (Aksu & Slobin, 1982; Cinque, 2001; Sezer, 2001) to perfective (Yavaş, 1980; Göksel & Kerslake, 2005; Jendraschek, 2011) or both (Kornfilt, 1997; Erguvanlı Taylan, 2001), the aspectual contribution of -mIş is always related to the completeness of the event in these accounts. It is important to notice that this aspectual flavor of -mIş emerges in the verbal complex only if it precedes any form of the copula:

(48) *Hüner o sırada çoktan uyku-ya dal-mış-0-tı/dal-mış i-di.*
Hüner that during already sleep-DAT dive-ANT-COP-PST/dive-ANT COP-PST
'Hüner had already fallen asleep by then.'

(49) **Çocuk-lar tüm duvar-lar-ı boya-mış-0.*
kid-PL all wall-PL-ACC paint-ANT-3SG
Intended as 'The children have painted/finished painting all the walls.'

-mIş will be discussed in detail in its entirety in the following section.

### 2.2.3 -mIş: a multifunctional suffix

-mIş is a suffix with more than one function which has led people to refer to it with different names ranging from some aspect or tense labels to mood labels. These differences in its meaning are drastically affected by the presence/absence of a form of the copula. Based on this fact, some (Schroeder, 2000; Sezer, 2001; Johanson, 2003; Göksel & Kerslake, 2005) prefer to separate -mIş and its copular form –(y)mIş whereas the majority rejects this idea on different grounds and consider one single morpheme to have different tasks in different positions (Aksu & Slobin, 1982; Kornfilt, 1997; Erguvanlı Taylan, 2001; Cinque, 2001; Göksel, 2001; Jendraschek, 2011). Yavaş (1980) too, asserts there are two -mIş suffixes, one for mood and one

for aspect, but she does not include the copula in her explanations for this assertion.[14] Yet, since she previously highlights perfectivity as just another function of -mIş (p. 55) and states that two semantic notions have the same exponent (p. 64), her stance on the enumeration of -mIş is not crystal-clear.

Those who assign the status of a different suffix to the copula+mIş formation draw attention to the fact that the two "suffixes" have different stress patterns (Schroeder, 2000; Johanson, 2003):

(50) *Su kayna-MIŞ.*
water boil-EVID
'Apparently, the water has boiled.'

(51) *Su sıCAK-0-mış (=sıcak i-miş).*
water hot-COP-EVID
'Apparently, the water is warm.'

Moreover, -mIş attaches to a verbal stem while –(y)mIş attaches to nominal stems including those derived from a verb (Johanson, 2003):

(52) *Hala-m gel-miş.*
aunt-POSS come-EVID
'It seems my aunt has come.'

(53) *Hala-m gel-iyor-muş.*
aunt-POSS come-IMPF-EVID
'As I learned, my aunt is coming.'

It is said to have past time reference (Schroeder, 2000; Johanson, 2003) while –(y)MIş is ambiguous between past and present (Sezer, 2001; Johanson, 2003: 276; Göksel & Kerslake, 2005). Johanson (2003) also claims the former fills an obligatory slot while the latter fills an optional slot (p. 276). Göksel & Kerslake treat –(y)mIş as

[14] She proposes a constraint that would delete the perfective -mIş when two instances of -mIş occur in a row (1980: 62), transforming (i) into (ii):

(i) Hafta bit-miş-miş. the.week end-MIŞ-MIŞ "It is said that the week has come to an end."

(ii) Hafta bit-miş. The.week end-MIŞ "Apparently, the week has come to an end."

This, she reckons, may be the reason that creates the illusion that the same morpheme undertakes both functions. However, this approach seems to ignore the cases where -mIş+mIş string actually occurs.

a pure evidentiality suffix without any tense/aspect value (2005: 309-310).[15] Both they and Yavaş (1980: 57), who advocates the same view, indicate that tense value in such cases is derived from the linguistic context or utterance situation.

On the other camp, Göksel (2001) puts forth that –(y)mIş is just -mIş stacked onto an additional verbal stem which is inserted out of purely morphological reasons, namely that an additional verbal stem is needed after a certain number of suffixes are added onto the first stem (p. 153). Having different homophonous morphemes for each function of -mIş unnecessarily complicates the system and requires extra explanations for cases where one -mIş stands for more than one meaning (Erguvanlı Taylan, 2001: 127, fn 28). Some explicitly underline the role of the mobile nature of this suffix in accounting for its different functions. (Cinque, 2001; Jendraschek, 2011). Cinque (2001) suggests that evidential/inferential/evaluative meanings of -mIş may be the result of its raising to relevant mood/modal heads after being generated under the node $T_{past}$ (p. 52).

#### 2.2.3.1 -mış as a tense/aspect marker

Due to the abovementioned division of treatments, the exact nature of this suffix(es)[16] has not been clearly delineated yet. It has been described as realizing tense, mood or aspect or any two or all three of these in different accounts. Yet, a detail of importance is that in the relatively small group who assign a tense value to -mIş, no one considers the suffix as a pure tense marker.[17]

The multiplicity of terms remains stable in the aspectual descriptions of the suffix, as well. Preferred names for it range from perfect (Aksu & Slobin, 1982;

[15] Despite not recognizing a second suffix such as –(y)mIş, Kornfilt (1997) makes the same observation.

[16] For ease of reference only, I will henceforth combine the two suffixes under the name "-mIş" until the end of this chapter.

[17] Rejecting to evaluate tense, aspect and mood categories in isolation, Aksu & Slobin (1982) treat the suffix as a past tense marker which necessarily denotes indirectivity, which, in turn, is historically and semantically connected to perfect aspect (pp. 185-186). Kornfilt (1997) notes -mIş expresses reported past which sometimes functions as the perfective marker, as well (pp. 337-340). Erguvanlı Taylan (2001) describes it as a perfect marker which has additional past tense and evidential mood meanings (p. 102). For Göksel & Kerslake (2005) -mIş is a past tense marker also expressing perfective aspect (p. 286).

Cinque, 2001; Sezer, 2001) to perfective (Yavaş, 1980; Johanson, 2003[18]; Göksel & Kerslake, 2005; Jendraschek, 2011) or both (Kornfilt, 1997; Erguvanlı Taylan, 2001). In these accounts, there seems to be a consensus about the result-based interpretation of the aspectual role of -mIş. The event mentioned is understood to have been completed at a given reference point and left a resultant state (Yavaş, 1980: 51-52). The focus here is not on the event but the resultant state it leads to (Kornfilt, 1997: 352; Schroeder, 2000: 117-118; Johanson, 2003: 277). Erguvanlı Taylan (2001) reminds that -mIş –as well as -DI– "cannot be used with stative verbs [. . . ] when these verbs do not allow for a change of state interpretation" (p. 120). Assuming that -mIş operates as a state generator, we correctly rule out sentences like (54) where -mış combines with a verb which already denotes a state.

(54) **Ali Fransızca bil-miş* (Erguvanlı Taylan, 2001: 120)
Ali French know-ANT

The resultant state is an important part of the perfective meaning so much so that Cinque (2001) claims there is a pure resultative interpretation of -mIş in some contexts (p. 51) while Aksu & Slobin (1982) favor this achieved state instead of the completion of a process in their semantic description of -mIş participles (p. 189). This is why, they claim, phrases like "ölmüş adam" (A man who has died/is dead) is also possible although they don't point towards a process.[19] Although I am hesitant about the extent to which completion of the event can be excluded from the formation of -mIş, it is obvious that the final state derived from that completion is an essential

[18] Johanson (2003) often uses the term "postterminal" to talk about a completed event that is narrated through its results, but also explains this term via perfectivity.

[19] Nevertheless, they later (p. 190) state that -mIş covers both the process and its results. I assume they assert this for the cases when there is a process verb. Their claim about the ungrammaticality of phrases without the source of the process seems to be incorrect, though, for phrases like (ii) are equally acceptable as (i):

(i) *Sıcak-tan bayıl-mış hayvan*
heat-ABL faint-ANT animal
'an animal that has fainted because of heat'

(ii) *Bayıl-mış hayvan*
faint-ANT animal
'an animal that has fainted'

part of -mIş, which can be deduced from such usages as below where -mIş undertakes a perfective function without any tense suffix:

(55) *Kuru-muş toprak*
dry-ANT soil
'Dry soil' (lit. Soil that has dried)

(56) *Gömlek kuru-muş-0-sa/kuru-muş i-se ip-ten al-0.*
shirt dry-ANT-COP-COND/dry-ANT COP-COND clothesline-ABL take-IMP
'If the shirt has dried, get it off the clothesline.'

(57) *Hazır kıyafet-ler-in kuru-muş-0-ken/kuru-muş i-ken bir daha havuz-a*
now.that cloth-PL-POSS dry-ANT-ADVZ/dry-ANT COP-ADVZ one more pool-DAT
*atla-ma-0.*
jump-NEG-IMP
'Now that your clothes are dry, don't jump into the pool again.'

Apart from in modifiers[20], -mIş behaves like a perfective marker before any form of the copula, too, as is also supported by (56) and (57). This can be observed in tensed forms, as well:

(58) *Yarın 3'te hazırla-n-mış ol-acağ-ım.*
tomorrow 3 o'clock-LOC prepare-REFL-ANT be-PROSP-1SG
'I will have prepared by 3 o'clock tomorrow.'

(59) *Bağ-a gir-diğ-im-de bağ buda-n-mış-0-tı/buda-n-mış*
vineyard-DAT enter-NMLZ-POSS-LOC vineyard prune-PASS-ANT-COP-PST/prune-PASS-ANT
*i-di.*
COP-PST
'When I entered the vineyard, it had been pruned.'

It is clear that to undertake a perfective role -mIş needs a reference point when in the verbal stem according to which the completed event is located. It is possible to think of the time of utterance as a silent reference point in (55)-(57) and that the process has been completed by then. In (58) and (59) –(y)AcAk or -DI can bear the task of presenting a reference point. The copula in the examples (56)-(59) may be deemed to denote the state achieved upon completion. "-mIş ol-" constructions like (58) thus express "entry into the state of having done something" where there is a

[20] Additionally, -mIş also expresses perfectivity before -DIr and değil.

cause-and-effect relationship between the two events (Göksel & Kerslake, 2005: 318): preparation->having prepared. As for the tense-aspect related information of these constructions, Schroeder, following Johanson (various accounts cited in Schroeder, 2000: 136-137) states that it is "strongly dependent on the aspecto-temporal and modal markers on the governing verb, as well as on the aktionsart of the dependent verb".

The ambiguity in "-mIş+DI/mış i-di" constructions is noticed by many, leading us to remark a separate aspectual contribution of -mIş, that is, anteriority. Sentences like (54) can have a past in the past reading where one event is presented as having happened before another event or a past-perfect reading where the completion of an earlier event is mentioned in relevance to a reference point. Therefore, some like Yavaş (1980) and Demirok & Sağ (2023) claim that -mIş can also mark anteriority, with or without perfectivity(p. 54).[21] Additionally, Kornfilt (1997), following Johanson (1971, as cited in Kornfilt, 1997), points out -mIş+DI can be used in situation where there is no past reference point according to which to locate the event.

(60) *Söz-ler-im-i bir kağıd-a yaz-mış-0-tı-m/yaz-mış i-di-m ama*
word-PL-POSS-ACC a paper-DAT write-ANT-COPPST-1SG/write-ANT COP-PST-1SG but
*kağıt orta-da yok.*
paper middle-LOC NEG
'I had written my words on a sheet of paper but it is nowhere to be seen.'

In such instances, the form simply functions as a past tense marker (p. 351). Yet, when such examples are regarded as having emphatic past (as suggested by Yavaş,1980 and Göksel & Kerslake, 2005), anteriority can still be considered in force by taking the reference time simply as a period in the past and accepting the event to have happened before that unspecified period in the past. Since the reference time is

[21] There are cases where -mIş denotes only perfectivity, too, as Yavaş exemplifies with future cases like (i):

(i) *Yarın 8-de John yemeğ-in-i yemiş ol-acak-0.*
tomorrow 8.o'clock-LOC food-POSS-ACC eat-ANT be-PROSP-3SG
'John will have eaten by 8 o'clock tomorrow.'

In future usages, the only meaning derived is the completion of the event by the reference time.

not specified, this may result in perception of the event in far past. This is also compatible with the fact that this form is employed quite often in narratives, tales, etc.

#### 2.2.3.2 -mIş as a mood/modal marker

The evidential function of -mIş seems to be related with its resultative nature. Many scholars argue for a directionality from the perfect/perfective marker towards the mood marker, with some adding a tense phase in-between. Depending on their take on the separation of -mIş morphemes, some assert that –(y)mIş has lost its perfective meaning (Johanson, 2003), whereas some (Aksu & Slobin, 1982; Jendraschek, 2011) consider the perfective -mIş to have undertaken new roles in time. Yavaş (1980) attempts to account for the formal similarity between the two mış suffixes by highlighting Comrie's approach, namely that in general, perfective ("perfect" in Comrie's terms) and evidential are inherently linked since both present an event via its results (1976 as cited in Yavaş, 1980). Based on the same approach and by underlining the fact that -mIş emerges later than -DI while acquiring the language, Aksu & Slobin infer that inferential forms have emerged out of perfect forms (1982: 187-191). Modal meanings, they suppose, may have arisen due to the fact that the resultant state perfective brings in may belong to an event to which the speaker might not have been a witness. One can thus only comment on the results, not the event itself. Jendraschek (2011) adopts a similar way of thinking which regards -mIş as a perfective suffix which backgrounds the event while bringing out its results (p. 258) and states that all evidential meanings have their origin in present perfective, which, then might have extended to cover non-past cases, as well (p. 262). With respect to where Turkish stands now, we can say that -mIş locates traces not only in present time, but actually vis-à-vis a reference time, wherever that might be.

As such, the views that consider -mIş to have appeared out of perfect/perfective –which are used to mean the same thing in these accounts– can be subsumed into a coherent whole which stands on the same pillars.

As for the mood/modal nature of the suffix, several common remarks have been made. First of all, the term "dubitative" is found misleading as it unnecessarily loads the suffix with doubt from the speaker's perspective (Yavaş, 1980; Aksu & Slobin, 1982; Johanson, 2003). That its use creates a distance, be it physical or psychological, between the event and the speaker is another shared view (Yavaş, 1980; Aksu & Slobin, 1982; Johanson, 2003). Yavaş labels the marker "noncommitative" highlighting the speaker's not committing themselves to the truth of the statement (p. 49). This is noticed and regarded as unwillingness or inability of the speaker to share the responsibility of the statement by Kornfilt (1997: 377) and Johanson (2003: 283), as well. Johanson describes this function through indirectivity (so do Göksel & Kerslake, 2005) and explains indirectivity as referring to an event via a conscious speaker. The speaker is not a direct or conscious witness to that event (Aksu & Slobin, 1982; Johanson, 2003).

(61) *Bebek yeni beşiğ-in-e hemen alış-mış-0.*
baby new cradle-POSS-DAT immediately get.used.to-EVID-3SG
'Apparently, the baby has immediately adjusted to her new cradle.'

However, Yavaş (1980) rejects assessing -mIş forms the same way as indirectives by emphasizing the contrast between the two in that indirect utterances do not take a stance as to the truth of the conveyed statement whereas in -mIş forms the speaker believes in the truth of the statement (p. 42).[22] She shows this through the example below.

(62) **John çalış-ıyor-muş ama ben inan-m-ıyor-um.* (Yavaş, 1980:42)
John work-IMPF-EVID but I believe-NEG-IMPF-1SG
Intended as 'I heard that John was working but I do not believe this.'

In any case, the suffix does not say anything about the source of the event (Johanson, 2003: 274) which can be another person, traces of the unwitnessed event or even

[22] Although this is indeed the case, there is a possibility to combine -mIş and disbelief through an operator like "güya":

(i) *John güya çalış-ıyor-0-muş (ama ben inan-m-ıyor-um).*
John allegedly work-IMPF-COP-EVID but I believe-NEG-IMPF-1SG
'John is said to have been working but I do not believe that.'

Here, güya may take a proposition "p-mış" and return something like "I do not believe p".

speakers themselves since the evidential -mIş can also be used in cases where the speaker is involved in the situation.

(63) *A, kağıt zaten el-im-de-y-miş-0!*
Oh paper already hand-POSS-LOC-COP-EVID-3SG
'Oh, it seems I have been holding the sheet of paper in my hand.'

The speaker is a direct participant of the event here but is unconscious of it. Realization comes somewhat later, and this is why in these cases, -mIş may connote surprise or discovery. Aksu & Slobin (1982) argue that it is the mental unpreparedness of the speaker which allows the use of -mIş even in these situations. In the opposite scenario, that is when the speaker is mentally prepared for a situation, even unwitnessed events can be narrated using -DI (p. 196). Passage of time may also lead the speaker to shift from -mIş to -DI while talking about the same event (Yavaş, 1980: 47) which may be evaluated as the speaker's mind getting well-prepared for the narrated event from an Aksu & Slobin point of view.

Aksu & Slobin also draw attention to the fact that like in (63) "when suffixed to any stative, existential, modal, tense or aspect marker, -miş can only express hearsay or surprise, not inference" (193). Yet, Kornfilt (1997) contrarily attributes an "inferential force" to such complex structures (p. 378) and Yavaş (1980), too, labels the use of -mIş in such formations as "inferential" (pp. 43-44). Apparently, the term "inference" denotes different concepts in these accounts.

In the abovementioned complex verbal structures, -mIş definitely behaves like an attitude marker. One such case is "mirative evidentials" where the speaker comes to realize an event's results without consciously witnessing or realizing the event.

(64) *Sen ne hızlı ör-üyor-muş-sun.*
you what speedy knit-IMPF-ANT-2SG
'How fast you knit! (I just noticed this.)'

Here, -mIş is located in the tense slot since the aspect slot is already filled (Jendraschek, 2011: 258).[23] Yet, what Jendraschek assumes to be the tense slot may

[23]It is not clear to me why Jendraschek excludes the reportative and inferential uses in cases where -mIş appears after an aspect marker. -mIş can indeed appear in such cases, as well, as in the examples below.

in fact be the mood slot since such sentences are ambiguous regarding time and an adverbial support is needed to disambiguate them:

(65) *Dün/yarın Perihan-la konuş-acak-0-mış-sın.*
yesterday/tomorrow Perihan-COM talk-PROSP-COP-EVID-2SG
'I have heard that you will/would talk to Perihan tomorrow/yesterday.'

(66) *Geçen hafta/şu an bavul hazırl-ıyor-0-muş-sun.*
previous week/that moment suitcase prepare-IMPF-COP-EVID-2SG
'I have heard that you were/are packing your suitcases last week/right now.'

Yavaş (1980), too, points out that these -mIş constructions lack any time information in isolation (p. 58). She asserts the suffix lacks temporal information when it is stacked on a verbal stem, as well.[24] The reason why it is perceived as past is that this construction is deprived of any tool to reflect present tense there being no detectable present tense marker in Turkish and verbal stems always carrying aspect markers without a tense marker to have a present meaning (p. 59). That this is the case becomes more obvious thanks to copular structures with -mIş since such structures, just like aspectually marked ones which also contain a copula, are ambiguous between past and present, which would not be the case if -mIş inherently possessed temporal information (p. 60).

(67) *Karamel-li pasta çok lezzetli-y-miş-0.*
caramel-COM cake very tasteful-COP-EVID-3SG
'Apparently, the caramel cake is delicious.'

Nevertheless, hearers are still inclined to mark such copular -mIş constructions as referring to present time in isolation. The reason for that may be that the suffix

(i) *Nesrin-in söyle-diğ-in-e göre Nejat bugünlerde çok iç-iyor-0-muş-0.*
Nesrin-GEN tell-NMLZ-POSS-DAT according.to Nejat nowadays very drink-IMPF-EVID-3SG
'According to what Nesrin said, Nejat has been drinking a lot these days.'

(ii) (upon seeing a secret tunnel behind the poster on a prison wall)
*Demek o da kaç-ma-ya çalış-acak-0-mış-0.*
it.seems she/he too flee-NMLZ-DAT attempt-PROSP-COP-EVID-3SG
'Apparently, she was going to attempt to flee, too.'

[24] If we are to adhere to Yavaş's analysis of a tenseless -mIş, the reason why -mIş is thought in contrast with the tense marker -DI may be that evidentiality, which is perceived as having a past reference when -mIş is on a verbal stem, is the marked option whereas all unmarked cases automatically have the only past tense marker -DI.

describes the speaker's present attitude towards the event drawing a parallel between -mIş and modal usages where the utterance and reference times overlap (Yavaş, 1980: 61). Due to the mentioned parallelism, pastness in verbal stem+mIş constructions can be attributed to a perfective marker, just like in mIş ol+modal constructions, which happens to be deleted when it precedes the homophonous mood marker (p. 62, see fn 13 above). However, the existence of utterances with double -mIşs display a counterexample since the first -mIş here may not always denote perfectivity unlike what Aksu & Slobin (1982) assert (p. 194). This can be more easily noticed in nominal predicates instead of verbal ones.

(68) *Piyango-yu kazan-an genc-in akraba-sı-y-mış-mış.*
lottery-ACC win-REL young.person-GEN relative-POSS-COP-EVID-EVID
'He is said to be a relative of the young person who has won the lottery but I do not believe that/I doubt that.'

Here, the first -mIş cannot denote perfectivity since the predicate has a nominal stem. It may be considered as a hearsay marker at best whereas the second -mIş may denote the speaker's disbelief or doubt regarding the source of the hearsay. The predicate expresses disbelief or doubt as a whole perhaps because the double use of the suffix reinforces its innate uncertainty creating an emphatic evidential which positions the event and the speaker even further apart.

A final note should be uttered regarding the position of -mIş in relation to other mood markers and negators. Although Johanson (2003) claims that -mIş cannot cooccur with optative mood, forms like "geleymiş" (come-OPT-MIŞ) are totally acceptable. As for negation, it scopes solely over the event and not the reception of the event through traces (as also touched upon by Johanson, 2003).

(69) *Kitab-ı oku-ma-mış-sın.*
book-ACC read-NEG-EVID-2SG
'It seems you have not read the book.'

Here, the reading event is negated, not the speaker's learning about the addresse's not reading through traces. If one tries to negate the evidentiality by positioning the

negator higher, one gets the result where -mIş behaves as a perfective marker under the nominal negation marker *değil*.

(70) *Kitab-ı oku-muş değil-sin.*
book-ACC read-ANT NEG-2SG
'It is not the case that you have read the book.'

Thus, it is not possible to negate evidentiality. Combining this fact, the fact that the suffix is positioned higher than other mood markers like the optative, and the fact that Yavaş (1980) points to, namely that -mIş behaves like modals reflecting the speaker's perception of worlds without inquiring about the temporal load of the utterance, it seems possible to say that -mIş has an exceptionally high position in the verbal domain.

### 2.2.4 TAM combinations in Turkish

Each TAM morpheme in Turkish can directly attach to a verbal root as in (71), the NEG/ABIL suffixes as in (72) or a sequence like V+ABIL+NEG as in (73) without requiring any additional morphemes.

(71) a. *Sabah akşam iç-iyor-0.*
morning evening drink-IMPF-3SG
'S/he drinks non-stop.'
b. *Cam-ı top-la kır-dı-k.*
glass-ACC ball-INS break-PST-1PL
'We broke the glass with a ball.'

(72) a. *O yol-u yürü-me-miş-im.*
that way-ACC walk-NEG-EVID-1SG
'Apparently, I haven't taken that path.'
b. *Su-yla ayıl-abil-ir.*
water-INS sober.up-ABIL-AOR
'S/he may sober up by water.'

(73) *O konağ-a taşın-a-ma-dı-lar.*
that mansion-DAT move-ABIL-NEG-PST-3PL
'They couldn't move to that mansion.'

Yet, Turkish does not allow the stacking of these morphemes in most cases. Combinations of different TAM markers are allowed in Turkish only in the presence of several copular elements such as *i*, *ol*, and *bulun*.[25]

(74) a. *Hani biz-i bekle-yecek i-di?*
was.not.it.that we-ACC wait-PROSP COP-PST
'Didn't (s)he say (s)he would wait for us?'

b. *Kitab-ın-ı yaz-a bas-mış ol-acak.*
book-POSS-ACC summer-DAT publish-ANT be-PROSP
'(S)he will have published her/his book by summer.'

c. *Böylece görev-im-i tamamla-mış bulun-uyor-um.*
thus duty-POSS-ACC complete-ANT be-IMPF-1SG
'Thus, I have completed my duties.'

Most accounts (Kornfilt, 1996; Kelepir, 2001; Jendraschek, 2011; Hankamer, 2013 among others) argue that it is these copular forms that shoulder the inflectional weight of the whole verbal construction building their argument on various areas including stress assignment, phonological domains[26], negation and agreement preferences. Kornfilt (1996) accepts all verbal forms constructed with a marker other than -DI and -sA as participles which get inflected thanks to the copula, be it null or overt, at the end of the string. Being adjectival, they have parallels —stress and morphology-wise— with nominal structures which show clear evidence for the existence of the copula through their counterparts with a free copular form:

(75) a. *çocuk-0-tu-n = çocuk i-di-n*
child-COP-PST-2SG = child COP-PST-2SG
'You were a child.'

b. *gel-iyor-0-du-n = gel-iyor i-di-n*
come-IMPF-COP-PST-2SG = come-IMPF COP-PST-2SG
'You were coming.'

Kelepir (2001) adopts Kornfilt's view adding that a copula is inserted at the T0 head to satisfy the position's verbal requirement since the participle, being

[25]It should still be underlined that some combinations, like aspecpt+aspect if the aspectual value is the same, can still be ungrammatical or close to ungrammatical despite the presence of a copular form (Kornfilt, 1997).

[26]See Güneş (2021), who suggests that copula insertion splits the verbal domain into two parts, for the phonological implications of copula's existence in such structures.

[-verbal][27], cannot rise to that position —i.e. Asp0 head blocks the way towards $T_0$ for the verb root— whereas fully verbal constructions can, and, thus, do not need any copular insertion. Kelepir classifies participle making markers as "group 1"[28] and the rest as "group 2". Although it is necessary to acknowledge that some accounts (Kornfilt, 1997, Göksel & Kerslake, 2005; Jendraschek, 2011 among others) evaluate TAM combinations as having copular markers —copular conditional, copular past, etc.— rather than copula plus inflections, the core idea that such constructions should be somehow linked to the copula remains intact.

Therefore, the idea that inflections are carried out through the copula stacked on participles that is advocated by most authors seems viable. Thus, as in seen in the above examples, aspect+tense/mood[29] combinations, which necessarily include a non-verbal item, i.e. a participle, and inflection, are not possible in Turkish without the help of the copula.

An additional matter, however, asks for a more detailed explanation than the above in that the copula's presence is not limited to the position between non-verbal items and inflection markers. In Turkish, it is possible to encounter structures such as the ones below:

(76) *Bura-lar-a kadar gel-ecek-0-ti-y-se-k otobüs-e neden*
here-PL-DAT until come-PROSP-COP-PST-COP-COND-1PL bus-DAT why
*bin-me-di-k?* [30]
get.on-NEG-PST-1PL
'If we were to come this far, why didn't we get on the bus?'

A sentence as such, i.e. the possible occurrence of double copula, makes one question how significant the role inflection or non-verbality play in the copula's occurrence since after the first copula, the structure gets inflected and loses its non-verbal nature.

[27] Jendraschek (2011) also endorses the idea that aspect markers "deverbalize" a verb root but continues this line of thinking with this deverbalized stem's hosting what he calls the non-verbal predicate marker, -ydi. In other words, he bypasses the copula insertion here.

[28] Interestingly, Temürcü (2007) argues that all bound TAM markers are nominalizers (fn.109).

[29] Some other combination types such as necessity modal+tense, tense+mood and aspect+mood are also disallowed unless the copula is present. However, being peripheral to the content of this thesis, they are only mentioned and not analyzed in detail.

[30] It should be clarified that these structures are highly marked in Turkish and not every native speaker finds them grammatical.

### 2.2.5 Agreement paradigms of Turkish

There are four agreement paradigms for predicates in Turkish. The less prominent ones among these are those that have a pretty limited environment, namely optative and imperative[31] paradigms, simply named after the mood they appear with. Due to this limitation, these paradigms are overlooked in most accounts. However, they are clearly different from the most commonly encountered, so-called k and z paradigms as is seen below:

(77)

| | z paradigm | k paradigm | optative paradigm | imperative paradigm |
|---|---|---|---|---|
| 1SG | -(y)Im | -m | -(y)AyIm | – |
| 2SG | -sIn | -n | -(y)AsIn | $\emptyset_{\text{imp}}$ |
| 3SG | -$\emptyset_z$ | -$\emptyset_k$ | -(y)A | -sIn |
| 1PL | -(y)Iz | -k | -(y)AlIm | – |
| 2PL | -sInIz | -nIz | -(y)AsInIz | -(y)In(Iz) |
| 3PL | -lAr | -lAr | -(y)AlAr | -sInlAr |

Although Kornfilt (1996) slightly touches upon these two less common paradigms, she does not offer any explanations for them. Yet, she reserves a more visible space for them in her book (1997), so do Göksel & Kerslake (2005) in their book. Sezer (2001) mentions only the optative paradigm on top of the two basic ones and calls it the "mixed paradigm" without any further explanation (p. 22). This little space allocated to optative and imperative paradigms has mislead Güneş (2021) to state that traditional grammars only allude to two paradigms. As a third, she offers a "reduced z paradigm" which is used for colloquial forms (pp. 145-146):

(78) a. Eve gidiyom (instead of standard "Eve gidiyorum")
b. Bahçeye gelcen mi? (standard: "Bahçeye gelecek misin?)

Other than these references to other types of agreement markers, most accounts focus on the so-called k and z paradigms[32], adopting these labels introduced by Good & Yu (1999). One of the controversies about these paradigms is the position of the z-paradigm. Good & Yu accept these markers as clitics, motivating their

[31] Imperative paradigm can even be regarded as a fused paradigm since there is no overt imperative marker in Turkish, and all the markers in this paradigm mark both the mood and person, unlike the other three paradigms.

[32] Although some markers require one of these paradigms and others the other paradigm, it does not mean that markers under the same grouping behave identically in every respect (as also noted by Kelepir 2001).

position from a phonological, morphological and syntactical perspective by stating respectively that these markers cannot be stressed, can attach to almost any host and behave as independent units in syntax which can be seen in suspended affixation constructions (1999: 68-69). They later provide a historical account to motivate their take on this matter, as well (2000). Kornfilt (1996) considers the members of the z paradigm[33] as copular markers since she assumes a null present tense copula to be present in what she calls "fake tenses" (p. 97), that is the verb root+TAM markers except -DI and -sE. She claims, contrary to Good & Yu's clitic explanation, that agreement markers are regular suffixes, and the difference in their behaviour is rooted in that they attach to the mentioned, inflected copula (p. 98). However, even in the presence of a copula, the "true tense" agreement markers, so called by Kornfilt, may appear on the predicate:

(79) *O zaman-lar hepimiz uçarı-y-dı-k.*
that time-PL we.all frivolous-COP-PST-1PL
'Back then, we were all frivolous.'

Noticing this, Kelepir (2001) argues against this assumption of markers attaching to a null copula, also indicating that these agreement markers do not always follow the copula immediately which is needed for them to be copular clitics:

(80) *Hasta-y-mış-ız* (Kelepir 2001: 48)
sick-COP-EVID-1SG
'Apparently, we were/are sick.'

Moving from examples that are parallel with (79), she concludes that it is the last TAM marker on the predicate that determines the paradigm category to be used: past and conditional suffixes require k-paradigm affixes to be used whereas the rest of TAM markers want z-paradigm to follow (p. 49). Güneş (2021) also agrees on the fact that TAM markers decide on the paradigm to follow (p. 145). Sezer (2001) makes the same point by claiming that agreement affixes must always head tense

[33] Kornfilt's preferences in naming the paradigms are rather blurry: she labels z paradigm markers as "copular markers" and distinguishes them from all other "verbal or nominal" markers (1996: 108). In her later work, she states that -mIş and -DI are followed by the verbal, and not nominal, paradigm (1997: 86). From this one may assume that she thinks of both the z and k paradigms to be verbal. Then, she must be talking about the possessive paradigm by the name "nominal". However, in a later article, she clearly depicts the z paradigm as nominal and the k paradigm as verbal (2001: 233).

affixes (p. 4) and that it is not the copula but the highest tense affix that chooses the paradigm to follow (p. 24-26). He also integrates Chomsky's checking theory (1995) into the choice of paradigm by assigning features -nominal, +finite to the k-paradigm and +nominal, +finite to the z-paradigm (pp. 30-31). This resonates with Aygen's (2005) idea that mood features of the clause decide on the paradigm (p. 3) in that agreement choice is linked to the clause features in both approaches. Despite disagreeing with Kornfilt's copular suffixes idea (1996), Kelepir (2001) is of the same opinion with her regarding the presence of the copula in the constructions with the z-paradigm (p. 44). Güneş (2021) also declares that z paradigm affixes are somehow related to the copula, arriving at that point by comparing z paradigm markers with their colloquial counterparts and noticing the additional (y)I part the former includes (p. 147). Sezer, following Deny (1921), maintains an intermediate position and asserts that nominal hosts like (81) contain a copula in the form of agreement markers.

(81) *Öfkeli-y-im.* [34]
angry-AUX-1SG
'I am angry.'

Yet, participial forms like (82) do not contain a copula, and the agreement markers following those only indicate person, not tense or mood (2001: 25).

(82) *Hatırla-yacak-sın.*
remember-PROSP-2SG
'You will remember.'

This has led him to underline that "we understand [81], but not [82], in the present tense" (p. 26).

#### 2.2.5.1 Differences between the k and z paradigms

The most notable distinction between the two primary paradigms is their stress patterns as observed by many (Kornfilt, 1996, 1997; Good & Yu, 1999, 2000; Sezer,

[34] The gloss here is adapted from Sezer's own example. However, why he glosses a separate AUX morpheme if he assumes the agreement markers as the present form of the copula (2001:25) is unclear to me.

2001; Göksel & Kerslake, 2005 among others). While k paradigm markers take regular Turkish word-final stress, z paradigm suffixes cannot be stressed. While Kornfilt (1996) suggests that this is related to the copula's presence before z paradigm markers, to Sezer this is just because z paradigm markers are prestressing (2001: 23).

The 3SG marker which is null in both paradigms transfers its stress to the preceding syllable. Although this creates some confusing results, final stress in the k paradigm and prestressing in the z paradigm work as they should, the only curious case being the *continuous* marker -Iyor.

(83) *BenZ-İyor*
resemble-IMPF-3SG
'She resembles'

In accordance with other z markers before 3SG, one would expect to see the stress on the last syllable, which is not the case.[35] There is a significant consequence of the difference in stress patterns regarding the 3PL marker -lAr, as well, which has the same form in both paradigms. This marker is also the plural marker for nominals which takes regular, word-final stress. This is why Sezer attempts to account for the optional unstressed -lAr of the z paradigm by stating that must be due to analogy with other agreement markers in the z paradigm. However, the fact that we cannot stress -lAr after non-adjectivizing aspect affixes —that is, those which clearly belong to the verbal domain and cannot have any nominal counterparts— as shown below,

(84) a. **sol-uyor-LAR*
fade.away-IMPF-3PL
'They are fading away.'
b. **sol-makta-LAR*
fade.away-PROG-3PL
'They are fading away.'

proves that -lAr has actually lost its original stressed nature in the verbal domain and is fully integrated into the stress pattern of the z paradigm. In other words, not the unstressed -lAr but stressed -lAr in are the optional and exceptional alternative when verbal paradigms are considered; it is them that are present due to analogy, namely

[35] It should be noted that this is a property peculiar to -Iyor which gets its "I" part stressed in any structure, even when the hosting structure ends with the *k* paradigm.

with adjectives, since the aspect markers that allow -lAr to be stressed are also adjectivizers unlike those in (84).

(85) a. *unut-acak-LAR/unut-aCAK-lar*
forget-PROSP-3PL
'They will forget'
b. *unut-muş-LAR/unut-MUŞ-lar*
forget-EVID-3PL
'They have forgotten'
c. *unutkan-LAR*
forgetful-PL
'forgetful ones'
d. *unutuş-LAR*
forgetting-PL
'forgettings'

The stressed -lAr on nominal predicates generates, most of the time and in a neutral context, a plural reading instead of a predicate inflected for 3PL[36]–although that reading, too, is possible in some environments. This also supports the idea that -lAr of the z paradigm has become a regular, prestressing marker by now. A prosodical analysis regarding the two —in her case, three— paradigms comes from Güneş (2021). She classifies paradigms according to the presence of copula nearby as "copula free" (AGRf) and "copula containing" (AGRc) (p. 147). The z paradigm markers except 3rd person markers are AGRc and all the rest, including the "reduced z paradigm" containing colloquial forms, are AGRf. She finds the latter group to be optionally independent from their TAM host in terms of prosody, that is they can be analyzed separately from the TAM marker's prosodical unit (p. 160). Another difference she attributes to AGRf markers is that they can be doubled (86)[37] or placed in medial position (87) (p. 152).

(86) *Unut-tu-m-sa-m*
forget-PST-1SG-COND-1SG
'If I had forgotten'

[36]In fact, being the PL marker is the only option for a stressed -lAr according to Göksel & Kerslake who employ this difference in the stress pattern of -lAr as a mechanism to distinguish the plural and inflected meanings (p. 82).

[37]This is rather a non-standard, obsolete form.

(87) *Git-se-k-miş*
go-COND-1PL-EVID
'If we had gone'

These options are likely to sound ungrammatical to a standard Turkish speaker, but Güneş asserts that they are attested in historical data and some dialects (2021: 149-151). Good & Yu (2000), on the other hand, exclude the possibility of a medial z paradigm marker from any kind of combination, be it with a k paradigm licenser or a z paradigm licenser (p. 761-762).

(88) a. **Katl-ıyor-um-du.*
fold-IMPF-1SG-PST
'I was folding'
b. **Katl-ıyor-um-muş.*
fold-IMPF-1SG-EVID
'As is said, I was folding'

Although combining z paradigm and k paradigm markers may thus result in controversial opinions, and combining z paradigm licensers with a medial agreement marker is impossible, some configurations with medial k paradigm markers are definitely possible.

(89) *Sev-di-y-se-niz* = *Sev-di-niz-0-se*
like-PST-COP-COND-2PL = like-PST-2PL-COP-COND
'If you like'

(90) *Sev-di-y-di-niz* = *sev-di-niz-0-di*
like-PST-COP-PST-2PL = like-PST-2PL-COP-PST
'You had liked'

Yet, combinations like (91a) and (91b) are problematic:

(91) a. *Sev-se-y-di-niz*
like-COND-COP-PST-2PL
'If you liked'
b. **/?Sev-se-niz-0-di*
like-COND-2PL-COP-PST
'If you liked'

The second ordering is accepted as grammatical by some (Good & Yu, 1999: 65) but is rejected by native speakers I have been able to consult. Still, that there should be a past morpheme somewhere is certain if there is to be a medial agreement marker.

# CHAPTER 3

# NANOSYNTAX BACKGROUND

Nanosyntax (henceforth Nano) is a generative approach "designed to make (better) sense of the new empirical picture emerging from the recent years of syntactic research" and better accommodate these empirical findings in syntax (Starke, 2009: 1). It has been argued that syntax should operate on fine-grained structures (Starke, 2009; Baunaz & Lander, 2018; Wiland, 2019; Caha, 2019). A crucial assumption in Nano that is shared with Cartography is that each feature is a head and has its own projection in syntax. This paves the way for the possibility of having submorphemic nodes in syntax. In other words, terminal nodes in syntax does not correspond to words, or even morphemes. Being a late insertion model like Distributed Morphology (Halle & Marrantz, 1993), Nano requires that all these submorphemic features to be arranged in syntax first, and then, get realized through contact with lexicon. Therefore, syntax compiles or puts together these tiny, submorphemic particles called features and does not operate on lexical items. Rather, it builds lexical items, just like it builds sentences.

One way languages can differ from each other is how these features are packaged into morphemes (e.g. being a suffix vs prefix, being a portmanteau affix, etc.). Since a "submorphemic-terminal" approach is offered for syntax now, morphemes cover more than one terminal, making them trees rather than terminal nodes (Starke, 2009: 2).[1] Working with these tree-structured lexical items, Nano adopts an approach called "phrasal spellout" or "phrasal lexicalisation", which works via an algorithm matching structure with tree-structured lexical items.

The first tenet, namely, phrasal lexicalization, is cyclic and follows from the syntactic practice of binary merge (Chomsky, 1995) which is adopted all the way down to the lowest features in Nano, making it a morphosyntactic approach. Nano starts any derivation by merging two features first. This creates an XP which, then,

[1] Starke (2009: 2) argues that these lexical entries corresponding to trees minimally have the form <phonological information, syntactic tree, conceptual information> and that lexicon is only responsible for matching syntax to these other representations.

searches its match in the lexicon. When a match is found –or formed, which will be explained shortly– in the lexicon, the derivation continues in syntax by merging a new feature. Syntax again consults the lexicon to see if it has an item matching this new YP. After the match is found, syntax goes on and merges the new feature. In this manner, syntax builds bigger and bigger structures after each successful lexicalization through cooperation with the lexicon and going back and forth until the whole structure is exhaustively realized. Hence, the name "cyclic" lexicalization. This concept of a system that moves on cyclically brings another notion with it that allows changes in lexicalization. This notion is called cyclic override and is explained along with cyclic lexicalisation by Starke as follows: “Spellout is taken to be cyclic, with a spellout attempt after each merger operation. Each successful spellout overrides previous successful spellouts. Since merger is bottom-up, the biggest match will always override the smaller matches” (2009: 4). This mechanism allows more suitable lexical items in the lexicon to cancel out earlier matches at each phrasal formation.

Since it stipulates phrasal lexicalization, Nano requires the subset principle of DM to be reversed into a superset principle as stated below.

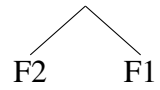
> A lexically stored tree matches a syntactic node iff the lexically stored tree contains the syntactic node. (Starke, 2009)

The reason for this change is straightforward since the subset principle targets terminal nodes, and even if it also targeted non-terminal nodes, this would bring with it some other problems (cf. Caha, 2020). On the other hand, Starke justifies the formulation of this principle with the following reasoning: “Any subtree of the lexically stored tree is also stored in the lexicon, and hence is a potential match for whatever syntax has built” (2009: 3). As such, Nano turns away from underspecification –a more general requirement that allows a morpheme to be inserted at a terminal node iff the morpheme is a proper or non-proper subset of the features specified in that node— to overspecification –which, on the contrary, allows a lexical item to be inserted at a node if the item is a proper or non-proper superset of

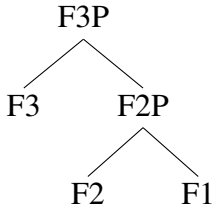
the features specified under that node. In tune with this shift from under- to overspecification, Nano brings about an alteration while applying the Elsewhere Principle, as well, which prefers the most specific entry when two entries are in competition. Since it is not possible to insert an underspecified lexical item at a node now, it is likewise not possible to choose the item matching more features of that node when two items are in competition for insertion. The reason for that is, from Nano's perspective, competing lexical items either match all of the features of a node or have even more features. Therefore, the Elsewhere Principle seeks to sort out these extra features to find a better match according to Nano, an adaptation Starke (2009) calls "Minimise Junk": At each cycle, if several lexical items match the root node, the candidate with least unused nodes wins (p. 4). So, again, the winner is the most specified lexical item.

Suppose a toy lexicon with the exponents $\alpha$ and $\beta$ given in (2). Let's start the derivation by merging F1 and F2, which gives us (1). Due to cyclic lexicalization, lexicon is consulted to find a match suitable for the result of this merge.

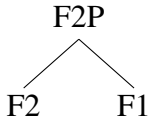
(1)




(2) a. $\alpha \Longleftrightarrow$




b. $\beta \Longleftrightarrow$




Lexicon does have such exponents, both $\alpha$ and $\beta$. Yet, the Elsewhere Principle/Minimize Junk will make sure that it is $\beta$ that wins to lexicalize the structure in (1), because it has less unnecessary features compared to $\alpha$. $\alpha$ is eligible, being a superset of F2P whereas $\beta$ is preferred, being an exact match.

What about when there is no lexical item matching the structure at hand? And what determines which lexical item is to occur where? The answer to these questions

lies under the second important component of Nanosyntax: the lexicalization algorithm.[2]

The algorithm allows us to derive structures until the whole structure is matched with a lexical item/items and spelled out exhaustively. The steps in the algorithm result in matching the syntactic structure with lexical items of different sizes and structures. Below, first three steps of the algorithm, which are also the ones that are relevant for the purposes of this thesis, are stated.[3] They will be explained in more detail shortly.

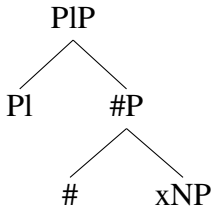
a. Merge F and spell out.

b. If (a) fails, move the Spec of the complement and spell out.

c. If (b) fails, move the complement of F and spell out. (Caha, 2020)

Since Nanosyntax assumes a hierarchy between features, how a structure will be realized heavily depends on the first features to be merged, which brings us to roots. Nano allows roots to have different sizes, i.e. to contain more or less features than other lexical items[4], due to aforementioned phrasal spell out and superset principles. This alternation in root sizes enables some of them to be inserted at higher nodes. This ability is also how Nano explains the cases of syncretism. For instance, suppose a plural structure for any noun (3) and the lexical entries in (4):

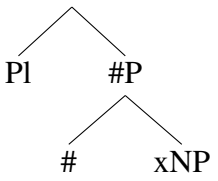
(3)

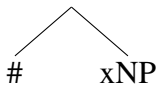



[2]Wiland (2019: 12) indicates that algorithm was not always there to guide merge operations. He reminds in Caha (2011b) movements are considered to be caused by the shape of certain lexical items. In other words, phrases move to match a certain shape compatible with a given lexical item.

[3]The steps following these, backtracking and creating a new workspace, are left out for the purposes of this thesis. They are responsible for processes like prefix formation which is not a major concern for Turkish.

[4]Yet is is to be remembered that roots, having a special nature connected to a concept, do not compete with each other as Caha (2020) underlines.

(4) a. /children/ ⟺ 

b. /child/ ⟺ 


Here, *children* is a candidate for the structure even before # is merged to it since it is a superset of xNP, too. When # is merged, syntax searches through the lexicon to find a match which *children* still is. It just does not win in the above phases due to the Minimise Junk principle since it has more superfluous features compared to another lexical entry, *child*. This "junk" feature is no more junk when, after the last successful lexicalization, syntax merges a feature for plurality. Then, *children* becomes a 1-1 match for the plural noun structure.

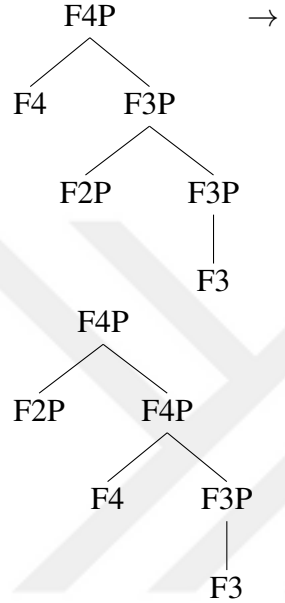
For the same structure, (3), other nouns like *fish*, *sheep* and *deer* are among possible candidates. What is common between all these nouns is that they all go up until PlP in their lexical structures so that they can realize plural nouns, unlike those which have unidentical forms for singular and plural, without the need for an extra morpheme. Hence, nanosyntax offers a neat solution about how to analyze syncretism in nouns.

As such, diverse structures can be realized by the same item without any further need for other morphemes. The first step of the algorithm is in alignment with this characteristic of roots: when a new feature is merged into the syntactic structure, there is a possibility that the lexicon has a root that may cover both the previous features and the new feature. This goes on until a feature not covered by the root is merged to the structure.

If the lexicon does not have a matching root for the structure, then it is time to move on to the next steps of the algorithm. Allomorphy is explained via the mentioned characteristic of roots and these steps: when roots differ in size, the affixes they take to express what appears to be the same meaning vary in size in accordance with the root they attach to. That is, when roots are not big enough to realize all the features in an fseq, a root+affix combination will need to be used. This will always require a step of lexicalization-driven movement. In the second step of the algorithm,

the algorithm checks if the newly merged feature's complement has a specifier, and when it has one, checks if making it to the specifier of the newly merged feature would yield successful lexicalisation. Notably, lexicalization-driven movement is assumed to not leave any trace, hence the moved object truly evacuates its position, yielding unary branching phrases (i.e. singleton sets). This is illustrated below where F2P, the specifier of F4's complement has become the specifier of F4P.

(5)



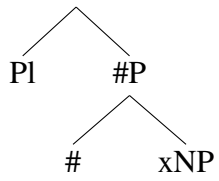

→



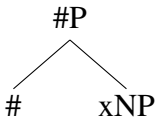

Yet, in a system like Nano, it is not expected to find a specifier unless a certain XP is moved to that position in the previous cycle since merge is binary and mergers are realized with exactly matching roots without any movement if possible. In this case, that is, if there is no specifier to rescue the structure, an action is needed to be able to lexicalize it. This brings us to the third step of the algorithm, i.e. moving the complement of the novel feature upward to the specifier position of the newly merged feature. This movement also creates a specifier position activating the possibility of applying the second step in the following cycles.

The third step can explain how regular pluralization with *-s* in English works. Let us use the structure (3) again which is repeated below as (6), since it is the plural structure for any noun, and the lexical entries below in (7).

(6)




(7) a. /tear/ ⟺

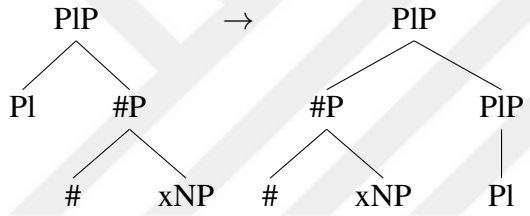



b. /-s/ ⟺




As before, *tear* can lexicalize the structure until Pl is merged. At that point, lexicon offers no entry that is big enough to realize the whole structure at once. That means, having no specifier to the complement of Pl, syntax needs to skip the second option of the algorithm and do something else to use what lexicon has to lexicalize the structure. So, following the third option, it moves the complement of the newly added Pl to the SpecPlP:

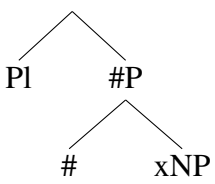
(8)




This movement leaves Pl alone and allows the newly formed specifier and its sister containing Pl to be lexicalized separately. This enables *tear* to get inserted to #P and *-s* to PlP, giving us the result *tears*.

However, it is to be remembered that at each cycle, there is a possibility of having a bigger lexical item in the lexicon covering the whole structure at once. The system prefers to proceed with the least effort. So, instead of realizing the structure with different morphemes, it selects that effortless morpheme thanks to cyclic override. So, if there were an additional exponent like (9) covering the plural feature of *tear* as well, it would win over *tear* + *-s*.

(9) /teere/ ⟺



Caha (2020) names the second and third steps of the algorithm “spellout driven movement” and states that they are rescue operations (p. 27) for it is impossible for a derivation to go on and add a new feature without successfully spelling out the structure at hand first; no feature can be ignored (“Exhaustive Lexicalization” in Wiland (2019), following Fábregas (2007). Therefore, these operations come to the rescue if a root that is big enough is found, as examined above.

# CHAPTER 4

# THE ANALYSIS

## 4.1 The first attempt

In this section, I will provide a Nano analysis of the two sets of facts regarding the Turkish verbal complex: the distribution of the copula and the allomorphy in the agreement paradigms. As is the case for any Nano analysis, the analysis will consist in positing a functional sequence of features active in the derivation of the verbal complex in Turkish and positing lexical items of different sizes that correspond to the exponents that appear in the verbal complex in Turkish.

### 4.1.1 A possible functional sequence for Turkish

First of all, we need a functional sequence (fseq) for the Turkish verbal complex. Following Cinque (2001) and Starke & Cortiula (2021), let us adopt a basic fseq that has tense features above aspect features. Aside from reflecting the universal fseq adopted by Nano, this order is also compatible with Turkish data as seen in (1). Furthermore, I will assume that $\phi$ features are positioned above tense morphemes in accordance with the morpheme order in the verbal complexes of Turkish, which results in the ordering in (2).

(1) *iç-iyor* *i-di-niz*
drink-IMPF COP-PST-2PL
'You (pl.) were drinking.'

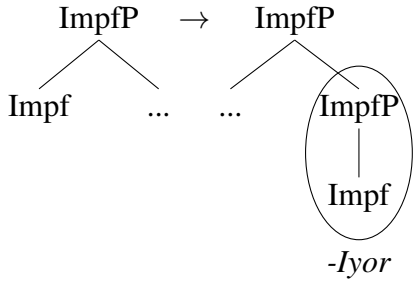
(2) basic fseq to be assumed: xVP > Asp > T > $\phi$

When it comes to offering a lexicon for the Turkish verbal domain with only these features, it is relatively clear which features tense and aspect morphemes lexicalize since Turkish has suffixes that match these features in an almost 1-1 fashion. That is, from a Nano point of view, any such item in the lexicon often corresponds to a tree that is a unary branching phrase, as in (3a). This simplifies the derivation process since it means that after at worst two attempts of movement, these features will be lexicalized as a suffix as exemplified in (3b). When the derivation continues, such items lead to the realization of the fseq through a string of suffixes.

(3) a. /-Iyor/ $\Longleftrightarrow$

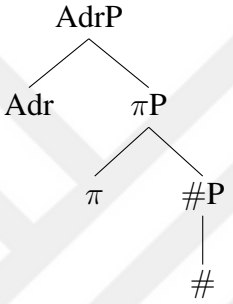



b.




Although $\phi$ features are contained in possibly larger structures than those for Asp and T features, that is, although the markers exponing $\phi$ features do not match them 1-1, they, too, have clear-cut meanings most of the time, such as (4) which lexicalizes # and person features at the same time.

(4) /-sIn/ $\Longleftrightarrow$




### 4.1.2 Finding a place for *i* in the fseq

However, the remaining morpheme in (1), *i*, which is an indispensable part of the realization of some verbal structures in Turkish, has an eyebrow-raising nature. There is no native speaker intuition concerning what it could mean. Since it is not obvious what syntactic feature(s) the copula *i* lexicalizes, it is not an easy task to assign a tree structure to it. We have to find a role, that is, a feature for it in syntax which motivates its appearance, following the Nano way of thinking. This feature has to be such that it should always be a part of the fseq but not lexicalized by *i* all the time since there are "*i*"less structures in Turkish as repeated below ((5a), (5b)).

(5) a. *yaz-dı*
write-PST
'She wrote.'

b. yaz-ıyor
write-IMPF
'She is writing.'

The first thing to do is to find the location of this mysterious feature. As was discussed in the introduction, *i* always appears between aspect and tense morphemes when present (see (6)), which hints at the whereabouts of its corresponding feature to us.

(6) *yaz-ıyor* **i**-*di*
write-IMPF COP-PST
'She was writing.'

It should be underlined that the appearance of *i* here necessitates the existence of a feature that is different than the root or aspect features below or the Pst or $\phi$ features above; otherwise, lexical items containing those features would lexicalize the whole fseq and there would be no need for any other morpheme to occur. Taking into account where the copula emerges in its free form, which does not create any difference in the meaning as explained in the introduction, I place the feature(s) corresponding to the copula, whatever it may be, between Asp and T morphemes in the earlier functional sequence and call it F for now. This requires modifying (2) as (7).

(7) basic fseq to be assumed: xVP > Asp > F > T > $\phi$

As stated, F should be always present in the fseq, be it for present or past tense structures. Thus, given the Gricean reasoning assumed for the fseq, F must be the T head, which is present in both present and past tenses. Pst is only present in the past tense while the absence of Pst leads to the reasoning that tense is present. Since F is the new T, and T in the above fseq (7) is used only for Pst, let us renew the basic fseq as such:

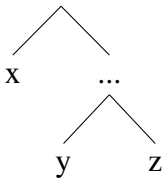
(8) basic fseq to be assumed: xVP > Asp > T > Pst > $\phi$

Now that we have an fseq where every morpheme has more or less found its place, we can start exploring why *i* appears at all when we already have distinct tense and aspect morphemes.

First, I would like to emphasize that xVP above covers all the features related to verbalness and has a two-footed bottom as any derivation begins by binary merge

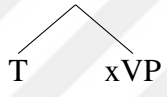
in Nano. Yet, these mergers are squeezed into the label "xVP" for convenience since sub-VP structures play no role in the present analysis. Still, it should be remembered that any verbal derivation involving tense and aspect markers will build on (9) and any root should at least realize up to xVP. Therefore, (9) can be a feasible structure for any root in our lexicon for now.

(9) /ROOT/ ⟺

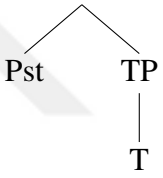



Yet, moving on, it is seen that no additional morpheme is used to lexicalize T in structures as (5a) where only a tense suffix is affixed to the verbal root. This shows that T must be a feature that either Root (10) or the lexical item for *-DI* (11) contains. Accordingly, these are the logical possibilities on which exponents lexicalize T:

(10) /ROOT/ ⟺

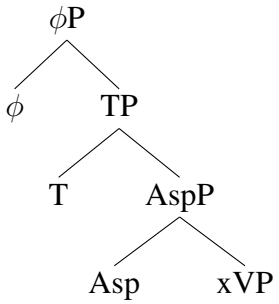



(11) /-DI/ ⟺



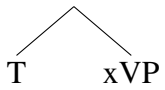

So, T will be lexicalized either as part of the Root when Root is inserted thanks to flexible root sizes or as a suffix when *-DI* is inserted. However, in a scenario where the lexicon has only one item with T, the latter option, (11) is immediately out because, making T dependent on the past marker *-DI*, it renders the correct derivation of structures without a past meaning like (12) impossible.[1] The reason for this is the superset principle mentioned in the second section: any feature can be lexicalized by a perfectly matching phrasal lexical item or a superset of it. Therefore, *-DI* gets inserted in TP as the superset of T because it is the only item containing T. Yet, inserting *-DI* in present tense structures like (12) would disallow us to have anything like (13) although it is the expected realization.

[1] It should be highlighted that in other scenarios where T is also contained in other lexical items different sets of possibilities and impossibilities arise.

(12) 


(13) *gez-iyor-um*
travel-IMPF-1SG
'I am traveling.'

Therefore, (10) seems to be the feasible option which leaves us with this lexicon:

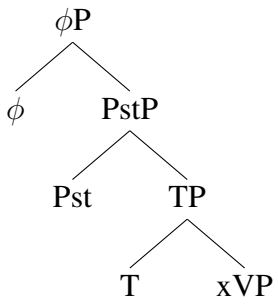
(14) /ROOT/ ⟺ 


/-DI/ ⟺ 

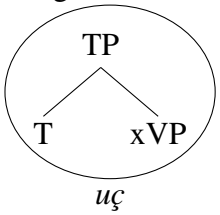

Having thus eliminated the option where *-DI* lexicalizes T, (11), the lexicon above is ready to lexicalize some derivations. To summarize the system up to this point, I posit that for structures where there is no intervening feature between T and Root, no additional lexical item is required to lexicalize the structure: Root lexicalizes T.

(15) If the fseq is xVP > T > Pst:
a. Root lexicalizes xVP+T
b. *-DI* lexicalizes Pst

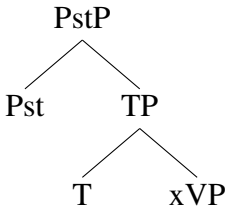
We can now easily derive past tense structures like (16) with the lexicon in (14). The first steps of the derivation are given in (17).

(16) uç+tu is the target lexicalization of 

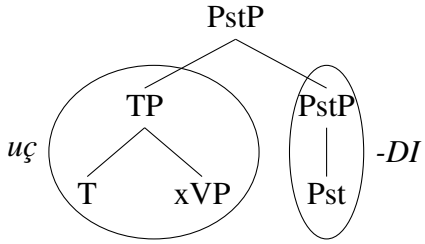

(17) a. merge T → [1] lexicalize




b. merge Pst → [1] no morpheme matching PstP & [2] no spec to move




c. [3] move comp and lexicalize




In the above derivation, the verb root, here /uç/, realizes the part up until PstP (17a). Then the derivation proceeds with the next cycle, merging the past feature Pst. In this cycle, there is no longer a lexical item big enough to match the whole structure (17b). Therefore, according to the third step of the Nano algorithm, that is, complement-to-specifier, or snowball, movement, TP is moved to SpecPstP. Notice that since there is no specifier to the complement of the recently added Pst feature, the second step of the algorithm cannot be applied. With the second step in place, we can now lexicalize TP and PstP separately (17c).

As is seen, *i* does not show up in this derivation, T being covered by Root. However, *i does* show up when there is, in addition to *-DI*, an aspect suffix:

(18) *um-uyor* **i**-*di-k*
hope-IMPF COP-PST-1PL
'We were hoping.'

Why though? The Exhaustive Lexicalization principle (Wiland, 2019) requires this: The derivation can only continue after the successful lexicalization of each new feature and no feature can be skipped. However, Root cannot lexicalize up to T this time since the lexical item for roots does not involve an aspect feature. So, when an Asp feature is part of the fseq, it intervenes in the lexicalization of the whole structure by Root, disallowing Root to reach up to T. In that case, Root is said to "shrink", lexicalizing (thanks to Superset) a smaller structure that it can maximally do. In this instance, it will only lexicalize xVP. Since *-DI* lexicalizes only Pst as shown in (14), it cannot be the one to lexicalize T, either. Both Asp and T above need

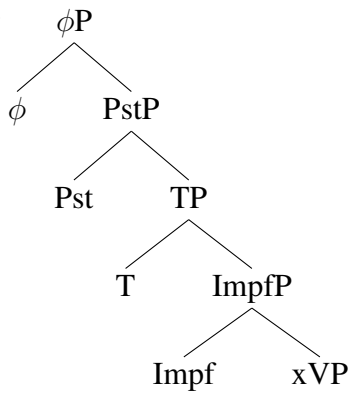
to be lexicalized by other items now. For now, let us assume that Asp features are lexicalized by relevant lexical items with only an Asp feature.[2] Consequently, T is still waiting to be lexicalized. It is right at this point that *i* steps in to lexicalize T. Below is a summary of how the system works in cases where Asp and Pst cooccur.

(19) If the fseq is xVP > Asp > T > Pst:
  a. Root can lexicalize up to xVP, cannot reach up to T
  b. Asp and Pst are lexicalized by the lexical items for aspectual markers and *-DI*, respectively
  c. T is lexicalized by *i*

Hence, our lexicon now has the exponents in (20) - where /ROOT/ is a respresentative entry for any verbal root. The fseq for a Past Progressive structure is provided in (21).

(20) a. /ROOT/ $\Longleftrightarrow$ TP (T, xVP)
b. /-DI/ $\Longleftrightarrow$ PstP (Pst)
c. /i/ $\Longleftrightarrow$ TP (T)
d. /-Iyor/ $\Longleftrightarrow$ ImpfP (Impf)

(21) um+uyor i+di+k is the target lexicalization for

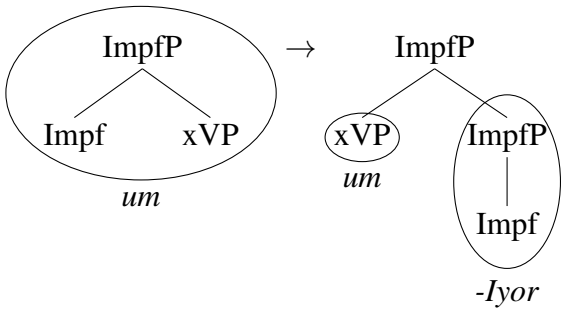



With the given lexicon, the verb root can lexicalize only the part below the imperfective aspect feature, Impf, as mentioned above. Consequently, when Impf is merged in syntax, no insertable lexical item is found for this tree. According to the algorithm, we snowball to create a separate ImpfP by moving xVP to the specifier

[2]Notice that the marker that lexicalizes T cannot be the same marker that lexicalizes the aspect feature, for, in that case, we would have no *i* showing up. The hypothetical marker would lexicalize both features and there would not be any further need for another morpheme. However, we do know that *i* has to show up in structures like (18).

position of ImpfP. In this way, xVP and ImpfP can be lexicalized separately by Root and *-Iyor* respectively. This movement is shown below.

(22)



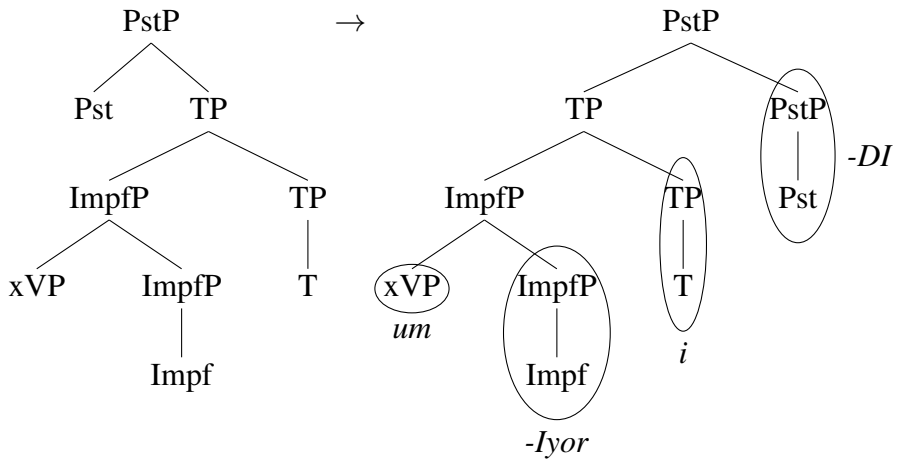

In the next cycle, T is merged. Again there is no matching item in the lexicon. This time, cyclic movement is possible (SpecImpfP, i.e. xVP, being present) but does not yield an effective result because there is no lexical item that contains both T and Impf, either. The option left is to apply the third step again and lexicalize ImpfP and TP separately by *umuyor*, which is formed by two lexical items in the previous cycle, and *i* respectively:

(23)




After this point, only Pst is left to be merged ($\phi$ features are discussed later and do not affect the derivation mentioned here). The cyclic movement would apply successfully if there were a morpheme containing both Pst and T. Yet this scenario was opted out before. So, snowball movement is the place to go once more, again giving us a suffix.

(24)




With this, the correct lexicalization for a past progressive verb complex like *umuyor idi* is acquired.

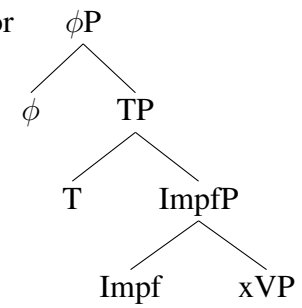
4.1.3 The role of agreement markers and the function of different paradigms

The reason for *i*'s appearance in structures like (25a) is thus explained from a Nano point of view. However, this solution predicting that *i* should appear whenever there is an intervening feature between Root and T in the fseq leaves a question unsolved: why does *i not* appear in structures like *kaçıyor* in whose syntactic formation there is an intervening aspect feature. The structure is given in (26).

(25) a. *kaç-ıyor* *i-di*
run.away-IMPF COP-PST
'She was running away.'

b. *kaç-ıyor*
run.away-IMPF
'She is running away.'

(26) kaç+ıyor is the target lexicalization for




As mentioned before, it cannot be the aspect suffix that lexicalizes T because that would prevent us from seeing *i* in (25a). If T is not lexicalized by Root or *-Iyor*, what lexicalizes it so that we successfully convey the aimed meaning? The answer cannot be *i* this time, either, for that would lead us to a non-existent form, *kaçıyor i*.

T may not be covered by the lower feature's corresponding lexical item, but there is yet another set of features above it that can come to the rescue: $\phi$ features. Since T is not lexicalized by *i* as seen in (25b), the only way out is to hypothesize that T is lexicalized along with the features above it, that is, by the same $\phi$ marker.

At this point, the appearance or disappearance of the copula gets linked to the other phenomenon that is mentioned in the beginning, i.e. the allomorphy in agreement markers. In the introduction, we have seen that there are two major agreement paradigms in Turkish: the *k* and *z* paradigms. (27) shows a table of inflections for the verb *kes*-, "to cut", in these two paradigms.

(27)

| | present progressive | past progressive |
|---|---|---|
| 1SG | kesiyor-um | kesiyor i-di-m |
| 2SG | kesiyor-sun | kesiyor i-di-n |
| 3SG | kesiyor-$\emptyset_z$ | kesiyor i-di-$\emptyset_k$ |
| 1PL | kesiyor-uz | kesiyor i-di-k |
| 2PL | kesiyor-sunuz | kesiyor i-di-niz |
| 3PL | kesiyor-lar | kesiyor i-di-ler |

Since the markers for third person singular and plural are identical in the two paradigms, it is challenging to notice the difference between them when *i* is around and when it is not. However, the situation becomes obvious through markers that do not mark third person.

(28) a. *yaz-ıyor-uz*
write-IMPF-1PL
'We are writing.'

b. *yaz-ıyor i-di-k*
write-IMPF COP-PST-1PL
'We were writing.'

How the form in (28b) is composed was explained above. Since Root cannot reach up to T in such structures and *-DI* is not anchored at T, T must be realized by a distinct morpheme, the copula *i*. Yet, in (28a) no such morpheme emerges. Still, just like Root reaching up to T, another lexical item can have its foot as low as T and lexicalize it according to the Nanosyntax mechanism. Following this reasoning, the only possible option left is that the agreement markers lexicalize T in structures like

(28a) since T cannot be erased from the fseq or disregarded. However, the asymmetry between when an agreement marker lexicalizes T and when it only lexicalizes $\phi$ features should be remarked upon.-*Iz* in the above example is the only morpheme that possibly is able to lexicalize T, whereas -*k* follows -*DI* which in turn follows *i*, the lexicalizer of T. That means -*k* does not need to have a T foot. With this comparison in mind, I hypothesize that z-paradigm suffixes lexicalize T (have a T-foot) while k-paradigm suffixes do not. It in fact follows that k-paradigm suffixes cannot lexicalize T since Pst would always be in the middle between T and the $\phi$ features. By this hypothesis, the allomorphy in the agreement paradigms is also accounted for. It is now possible to expand the lexicon in (20) even more:

(29) a. /ROOT/ $\Longleftrightarrow$ TP




b. /-DI/ $\Longleftrightarrow$ PstP



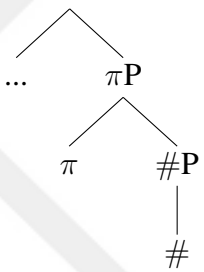

c. /i/ $\Longleftrightarrow$ TP



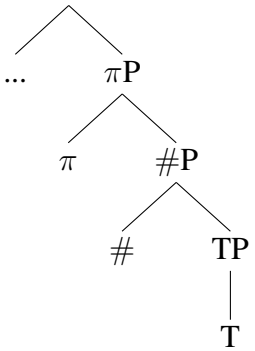

d. /-Iyor/ $\Longleftrightarrow$ ImpfP




e. /$\phi_k$/ $\Longleftrightarrow$ ...P




f. /$\phi_z$/ $\Longleftrightarrow$ ...P

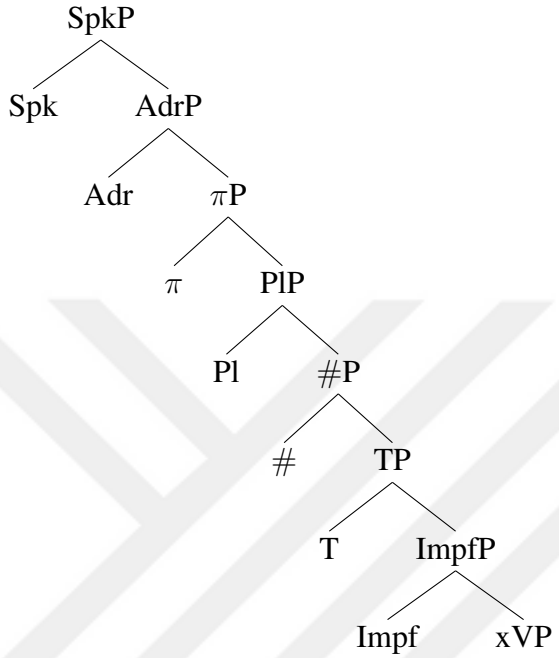



For agreement markers are portmanteau in Turkish, exponing number and person at the same time, their corresponding forms in the lexicon have at least two features for the k paradigm, # and $\pi$, and at least three features, T, # and $\pi$ for the z paradigm. "..." parts can then be modified according to the marker and have the second person feature, Adr (for Addressee), and the first person feature, Spk (for Speaker). $\pi$ is the default person feature and points to the third person in the syntactic skeleton.

This lexicon both reflects and accounts for the difference between agreement paradigms and lays the groundwork for *i*'s emergence. Structures as (28a) can now be smoothly derived.

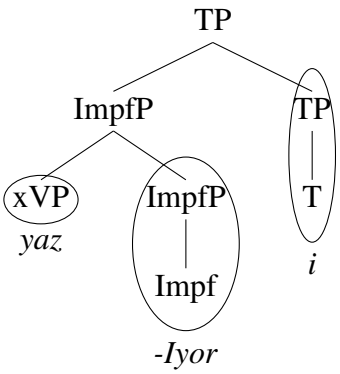
This is the fseq for a 1SG present structure like (28a):

(30) yaz+ıyor+uz is the target lexicalization for



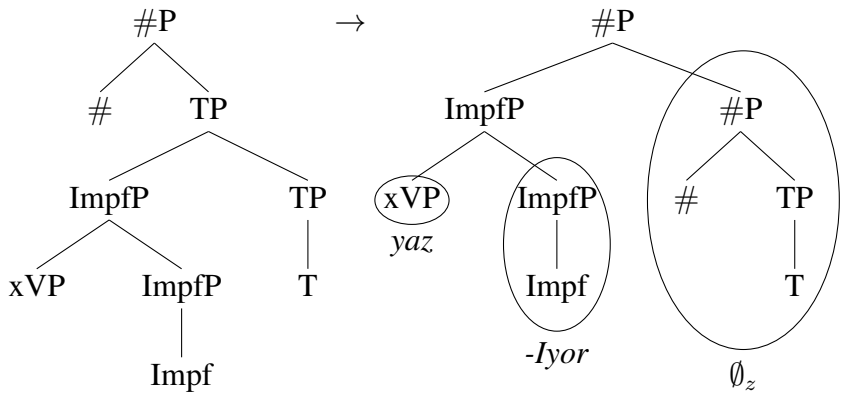

The derivation proceeds just like in *kaçıyor idim* until we get the structure *kaçıyor i* at TP:

(31)



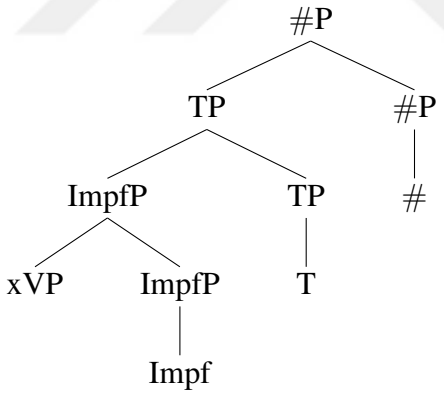

For now, we have an undesired result at hand. However, the derivation must continue, and thanks to cyclic override, this result changes when the next feature comes into the picture.

(32)




This time, the second option in the algorithm leads to a feasible result because, in the lexicon, there is an item, or rather a set of items, that have a T foot and contain several $\phi$ features on top of it: z paradigm agreement suffixes. Following the "biggest wins" principle (Starke, 2009), T and # should not be lexicalized separately (although there are lexical items capable of doing that: *i* and *k* paradigm suffixes which have a # foot), but as a whole, because there is a bigger item at hand. Notice that since the second step in the algorithm yields successful lexicalization, the structure below (which would be derived via snowballing) is never created.

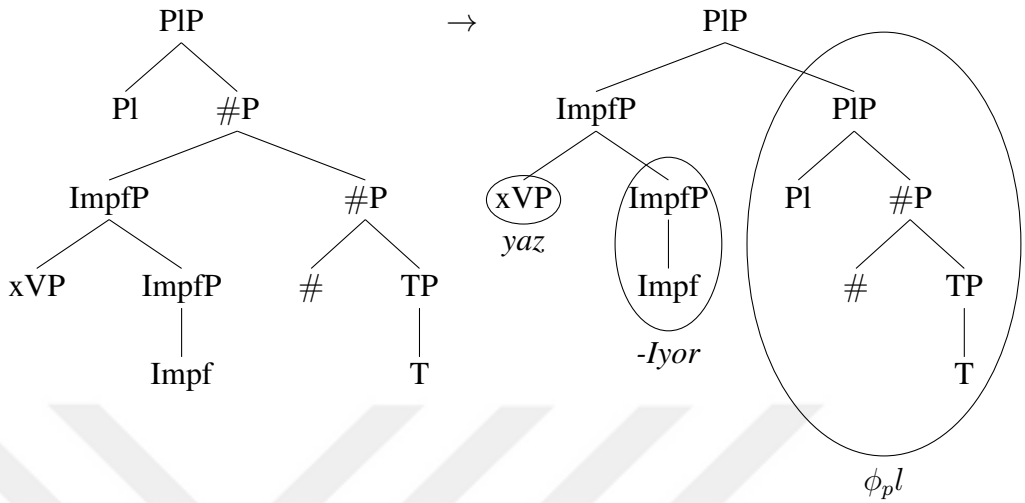
(33) The wrong option:



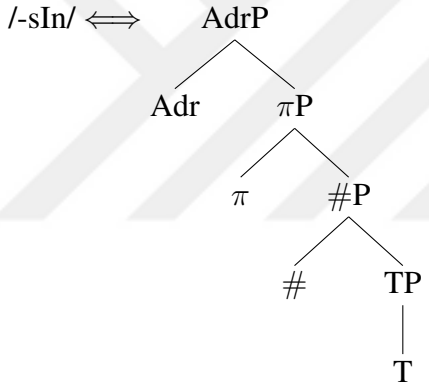

Returning to the correct step at (32), we should also notice that the lower #P can be realized by many lexical items since all the paradigm-z markers have a T foot, but for now $\emptyset_z$ wins over others because it has only # and T features; in other words, less junk. That is, it is preferable according to the "Minimise Junk" principle (Starke, 2009). The whole structure is now lexicalized as “yazıyor”, which is an acceptable form but not the meaning that we desire to convey through (30). Therefore, syntax merges subsequent features $\pi$, Adr and Spk, to the structure one by one. Like in (32), cyclic movement adequately derives desired results from now on. Observe that with

every feature merged, paradigm-z markers are also opted out one by one. For instance, the merger of Pl leaves out all singular markers since they do not have an intervening Pl feature between # and $\pi$.

(34)

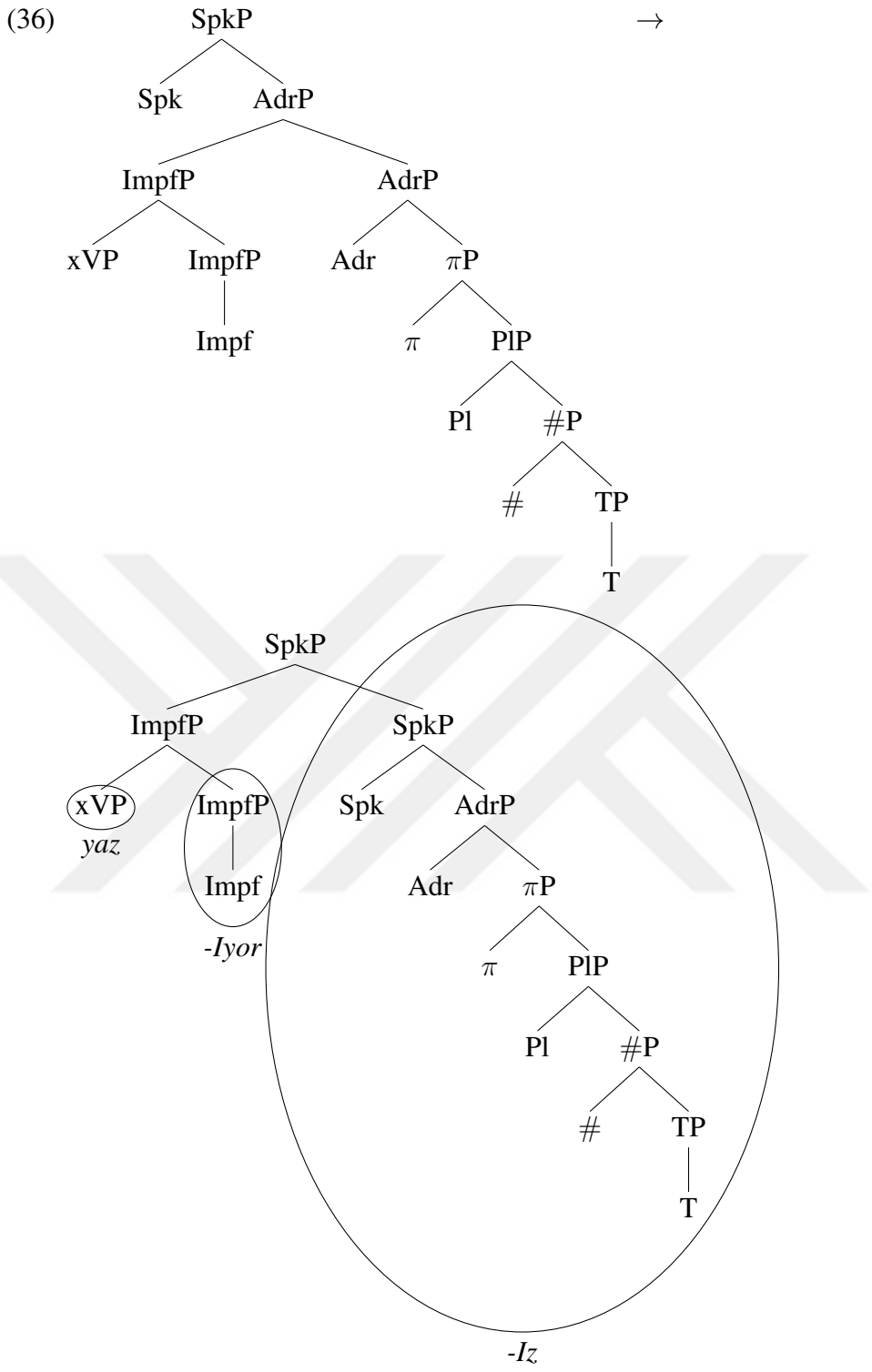



(35) A singular z-type suffix

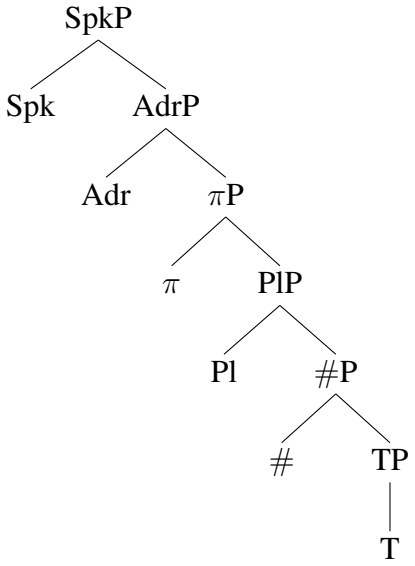



In this fashion, the only applicable item is *-Iz* when we reach the end of derivation, merge Spk and have this structure at hand:

(36)

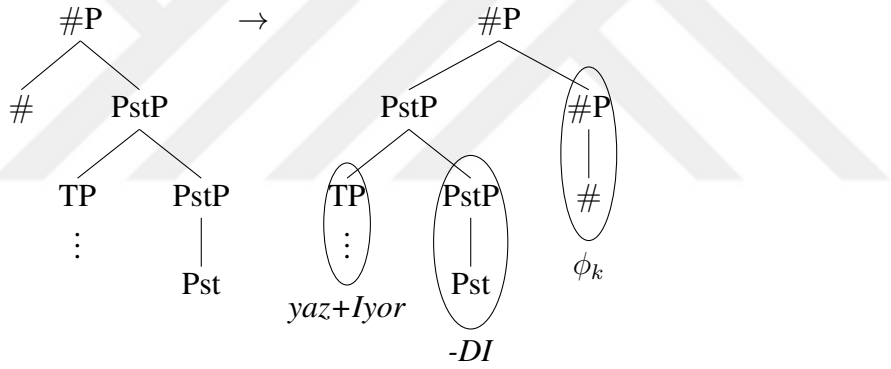

SpkP
Spk
AdrP
ImpfP
AdrP
xVP
ImpfP
Adr
πP
Impf
π
PlP
Pl
#P
#
TP
T
SpkP
ImpfP
SpkP
xVP
ImpfP
Spk
AdrP
yaz
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Adr
πP
-Iyor
π
PlP
Pl
#P
#
TP
T
-Iz

(37) /-Iz/ $\Longleftrightarrow$



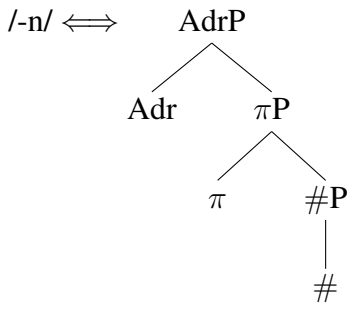

When *-Iz* finally gets inserted at SpkP, we have the final, correct form, *yazıyoruz*, whereas for any structure with Pst, like (28b) we need k-type markers since Pst blocks the way for any subsequent suffix to anchor at T as shown in (38).

(38)



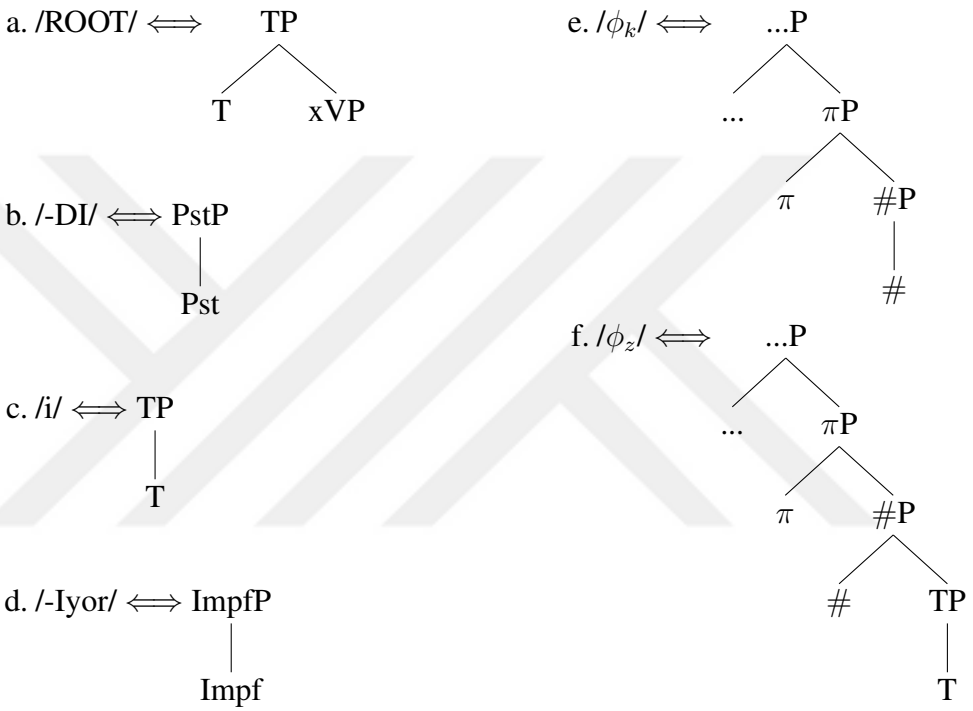

In this structure, comp-to-spec movement is applied since cyclic movement would not yield succesful lexicalization, for there is no item in the lexicon that contains Pst and # together. Hence, starting with #P, all the following features will be merged in a cyclic fashion, just like the sequence for z-type markers, but will be lexicalized by k-type markers instead, since any new feature will be disconnected from T due to Pst at each cycle. Therefore, solely items with a # foot, as exemplified in (39), can lexicalize upper features.

(39) A singular k-type suffix




All in all, the lexicon in (29), repeated below as (40), proves to be adequate for all three forms of Present Progressive, Past and Past Progressive.

(40)




4.1.4 The cooccurrence of *i* and *z* markers undermines the whole system

Nevertheless, this basic lexicon proves to be problematic precisely because we have tried to provide a uniform analysis of the agreement allomorphy and the distribution of the copula, making them parasitic on each other. In particular, *z* paradigm markers having a T foot predicts that whenever a *z* paradigm affix surface, the copula will not surface and vice versa.

In other words, the current lexicon predicts that *z* paradigm suffixes never occur in structures with an intervening feature because they have to be anchored at T while T is already lexicalized in such structures. However, the following form is perfectly acceptable in Turkish.

(41) *gül-üyor i-miş-iz*
laugh-IMPF COP-EVID-1PL
'Apparently, we were laughing.'

*-mIş* is a morpheme that is used to express either evidentiality or anteriority depending on its position in the verbal complex. Whatever its corresponding feature(s) is, the important point here is that it intervenes in the structure right between *i* and the agreement marker. This should mean that only *k* paradigm suffixes can lexicalize what is left above *-mIş*. Yet, the following result is definitely ungrammatical in Turkish.

(42) **gül-üyor i-miş-(i)k*
laugh-IMPF COP-EVID-1PL
'Apparently, we were laughing.'

Due to forms like (41), we have seen that the emergence of the copula and the agreement paradigm allomorphy are independent puzzles. Therefore, I suggest tackling these phenomena separately. *i* should be related to other facts in the system rather than *k* and *z* paradigms.

## 4.2 A more holistic attempt

### 4.2.1 The arrival of a new feature

Let us start anew by examining the verbal structures in Turkish altogether from scratch to take a closer look at *i*'s distribution. We have to form (41) which ends with a *z* paradigm marker, *-Iz*. Then, it turns out that z paradigm markers *can* occur along with the copula. This empirical fact requires a total revision of the system that has been built so far; not only the lexicon but also the functional sequence has to be reviewed.

We have already seen that *i* appears in combinations of tense and aspect as in (18) repeated below as (43) with the verb *gül-*.

(43) *gül-üyor* **i**-*di-k*
laugh-IMPF COP-PST-1PL
'We were laughing.'

However, there are two more morphemes, the conditional *-sA* and the evidential *-mIş*, that are suffixed to *i* when they are to follow an aspect marker:

(44) a. *gül-üyor* **i**-*se-k*
laugh-IMPF COP-COND-1PL
'If we are laughing'

b. *gül-üyor* **i**-*miş-iz*
laugh-IMPF COP-EVID-1PL
'Apparently, we were laughing.'

Moreover, the combination of any of these mood markers and *-DI* also paves the way for *i* to surface:

(45) a. *gül-dü* **i**-*se-k*
laugh-PST COP-COND-1PL
'If we laughed'

b. *gül-se* **i**-*miş-iz*
laugh-COND COP-EVID-1PL
'If we laughed' (followed by irrealis)

Interestingly, these two markers, along with *-DI*, are the only group of markers in Turkish which can be suffixed to both a root and *i* as can be seen through comparisons in (46).

(46) a. i. *gül-üyor i-di-k*
laugh-IMPF COP-PST-1PL
'We were laughing.'

ii. *gül-dü-k*
laugh-PST-1PL
'We laughed.'

b. i. *gül-üyor i-se-k*
laugh-IMPF COP-COND-1PL
'If we are laughing'

ii. *gül-se-k*
laugh-COND-1PL
'If we laughed'

c. i. *gül-üyor i-miş-iz*
laugh-IMPF COP-EVID-1PL
'Apparently, we were laughing.'

ii. *gül-müş-üz*
laugh-EVID-1PL
'Apparently, we laughed.'

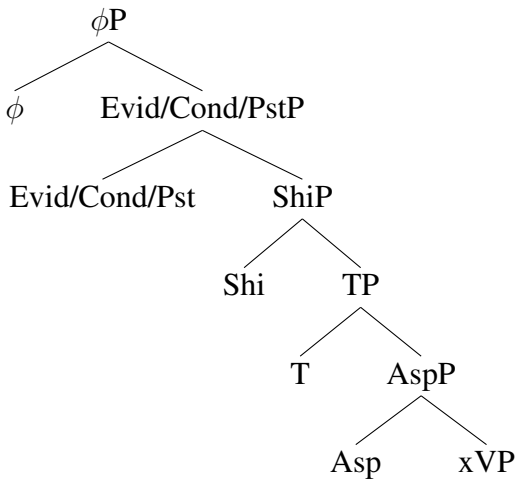
These empirical facts suggest that the suffixes *-DI*, *-mIş* and *-sA* have something in common so that they behave similarly around roots, aspectual markers and each other. What is that shared characteristics then?

Although *-DI* is a tense marker and the other two can be characterized as mood markers, I argue that there is something common that they share. In structures marked with these suffixes, there is always a shift from the present moment (i.e. context time) and world towards another time interval or world. Accordingly, I argue that in structures where one of these suffixes is used, the fseq uniformly has the feature proposed in (47). I hypothesize that all features lexicalized by the above-mentioned markers, i.e. Pst, Evid(ential) and Cond(itional), co-occur with the SHIFT feature in the fseq. In particular, I propose that this feature is merged right above T, whenever its use is required.

(47) SHIFT: signals a shift in the context time or world

With this addition to the fseq, syntax now looks like this for structures other than present tense:

(48)




Given that *i* is able to appear before Evid, Pst or Cond, the hypothesis that I will pursue is that *i* is able to lexicalize Shi, the new feature in (47). Accordingly, the lexical item for it should be as follows:

(49) /i/ $\Longleftrightarrow$



And since the lexical items with Evid, Cond, Pst, and aspectual features cannot also contain Shi for the reasons stated earlier, let us posit the following markers:

(50) a. /-DI/ $\Longleftrightarrow$ PstP
Pst

b. /-sA/ $\Longleftrightarrow$ CondP
Cond

c. /-mIş/ $\Longleftrightarrow$ EvidP
Evid

Now, the only remaining part in the fseq to be lexicalized is what is below Shi. Since we do not see any other morpheme show up to lexicalize T, and since we cannot include it in *i*, which would disallow us to have *i*-less structures because all fseqs are assumed to have T, the only option left is to include it on the marker that lexicalizes Asp feature below T. The remaining part is then, in turn, lexicalized by Root. The whole lexicon, which exhaustively lexicalizes the structure in (48), is gathered and presented below.

(51) a. /-Iyor/ $\Longleftrightarrow$ TP
T ImpfP
Impf

b. /ROOT/ $\Longleftrightarrow$ ShiP
Shi TP
T xVP

c. /-DI/ $\Longleftrightarrow$ PstP
Pst

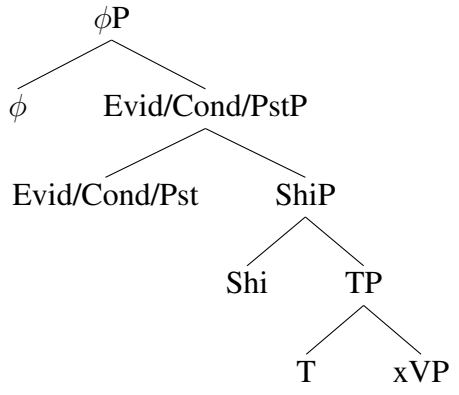
d. /-sA/ $\Longleftrightarrow$ CondP
Cond

e. /-mIş/ $\Longleftrightarrow$ EvidP
Evid

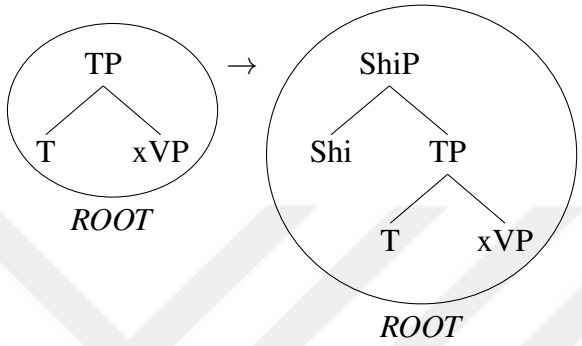
f. /i/ $\Longleftrightarrow$ ShiP
Shi

With the given lexical items, structures like (52), too, are easily derived. No movement, which amounts to suffixation in the visible forms, is needed until Evid/Pst/Cond is merged as shown below.

(52)



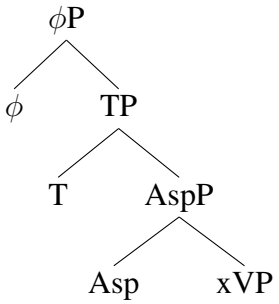

(53) xVP →




After these steps, the system proceeds with the necessary movements and lexicalizes features with items from the lexicon in (51).

Having determined the lexicon, a possible question may inquire how it is possible for structures like (28a), repeated below as (54) for convenience, not to have *i* although they, too, have an intervening aspectual feature that hinders the root from covering the Shi feature. While the lexicon above is successful at accounting for structures with *i* or without aspectual features, some structures without *i* still require further explanation. Since only *i* and Root contain the feature Shi, one of them is expected to lexicalize the feature. Nonetheless, *i* is not encountered in such structures and Root cannot reach up to Shi because of the intervening Impf feature. Then what lexicalizes the stranded Shi in the fseq of such structures? The answer to this can be as simple as "nothing", because there is actually no Shi in the fseq for present tense structures in the indicative mood. This absence of the feature can be motivated by the fact that there isn't any shift taking place in such structures. They merely denote an event that takes place in the present time and present world. Hence, present tense structures are hypothesized to have the structure in (55).

(54) *yaz-ıyor-uz*
write-IMPF-1PL
'We are writing.'

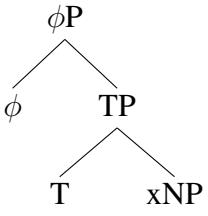
(55)


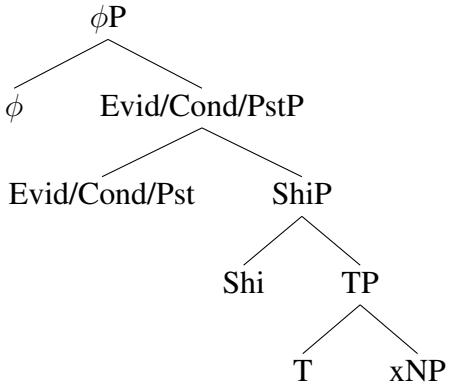

Under these circumstances, Root shrinks and lexicalizes only xVP, after which any aspectual marker lexicalizes AspP that is achieved as a result of comp-to-spec movement. Then come the $\phi$ features one by one. Thus, the whole structure is lexicalized without having anything to do with Shi.

Last but not least, let us return to the nominal domain in this system. Similar to the verbal domain, *i* emerges only before the trio on a nominal complex. In the absence of these features, $\phi$ features are directly attached to the root. See (56).

(56) a. *insan i-di-k*
human COP-PST-1PL
'We were humans.'
b. *insan-ız*
human-1PL
'We are humans.'

Based on these facts and the newly desribed Shi feature, let me assume the present structure in (57) and past/evidential/conditional structure in (58).

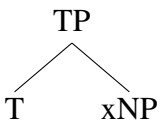
(57)



(58)



For the past tense structure, a situation similar to (52) is observed: There is nothing preventing Root from reaching up to Shi if we assume that Root also contains a T. However, such an assumption would mispredict an *i*less past form for Root would cover everything until the trio leaving no space for *i* to occur. Concordantly,

since we have an *i* in (56) in the past form, it is necessary to assume that Shi is lexicalized by that in nominal constructions. Then, $\text{Root}_n$ should contain only xNP and T. This assumption seems to be practical for present tense forms, as well, since that would predict that $\text{Root}_n$ can cover the structure up until $\phi$ and no extra morpheme is needed, which is the desired situation seen in (56). The lexical item for $\text{Root}_n$ is defined in (59) below:

(59) /ROOT$_n$/ $\Longleftrightarrow$




It should be underlined that T is there for present nominal structures as a basis to build verbal features like mood, tense or agreement on; it does not signal the tense being present. Just like in the verbal domain, the "presentness" of the construction is perceived thanks to the absence of other tense markers in such structures.

### 4.2.2 How the agreement allomorphy fits into this system

A final puzzle arises from (56) concerning the agreement markers. In the second system offered here, the lexicalization of agreement features are disconnected from the lexicalization of T, which renders the lexical items for agreement features in the first system inapplicable because the difference between paradigms was explained in that system by the presence of T as the foot of *z* paradigm suffixes whereas *k* paradigm suffixes have # as their foot. This was the reason *i*, which lexicalizes T, occurs with the *k* paradigm which cannot lexicalize T. However, neither *i* lexicalizes T nor has it any relation to agreement markers now. T is lexicalized by Root or the aspectual marker depending on the structure whereas *i* lexicalizes Shi, both of which happen long before agreement markers come into the picture. Therefore, the allomorphy in agreement paradigms should be treated locally.

For the only local difference when *k* suffixes emerge is the occurrence of the Evid/Pst/Cond node, the solution to the problem must be hidden there. However, before saying anything general encompassing all those features, let us remember the

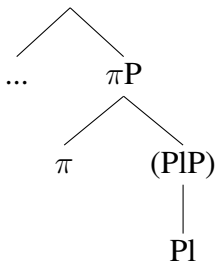
fact that *-mIş* requires *z* suffixes to be used as seen in (46c) and repeated below as (60).

(60) *gül-üyor i-miş-iz*
laugh-IMPF COP-EVID-1PL
'Apparently, we were laughing.'

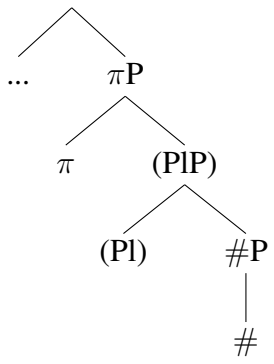
This fact points towards the exclusion of *-mIş* from the trio for the aimed explanation. Then, we can argue that it is something peculiar to the markers of Pst and Cond that allows Turkish speakers use *k* paradigm suffixes after those. These markers can apparently lexicalize more than all other markers in that position can, requiring *k* suffixes to have a higher foot than at least #.[3] This enlarged capacity to lexicalize more features is also in line with the literature which endows a special position to *-DI* and *-sA*, even labeling them at times as "true tenses" while others are labelled "fake tenses" (Kornfilt, 1996).

To keep the difference minimal and consistent, we can solve the allomorphy puzzle by simply proposing that *-DI* and *-sA* have a Pst/Cond feature as their foot and the # feature on top of that. Evidential *-mIş* and other markers simply lack this additional part. This causes *z* paradigm markers to have # as their foot whereas *k* suffixes start from a $\pi$ or Pl foot (depending on whether they realize plural forms or singular ones). The difference is captured in (61).

(61) a. /$\phi_k$/ $\Longleftrightarrow$



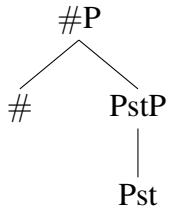

b. /$\phi_z$/ $\Longleftrightarrow$



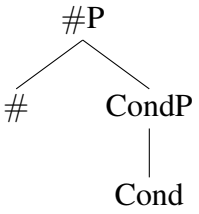

*-DI* and *-sA* also need to be modified according to the proposed mechanism as such:

[3]It is indeed possible that *z* paradigm markers are the ones with a higher foot but that would create an unnecessary burden of assuming that every marker other than *-DI* and *-sA* has an extra feature.

(62) a. /-DI/ $\Longleftrightarrow$

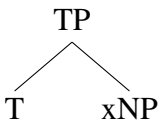



b. /-sA/ $\Longleftrightarrow$

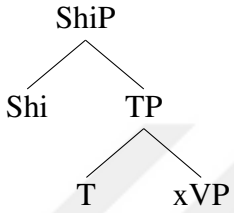



With these minor modifications, the lexicon now seems like this:

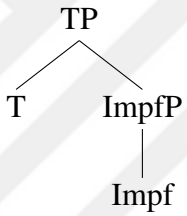
(63) a. /ROOT$_n$/ $\Longleftrightarrow$



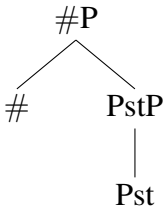

b. /ROOT$_v$/ $\Longleftrightarrow$



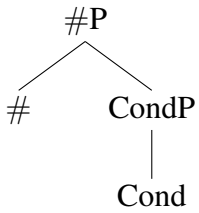

c. /-Iyor/ $\Longleftrightarrow$




d. /-DI/ $\Longleftrightarrow$




e. /-sA/ $\Longleftrightarrow$



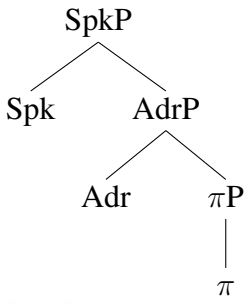

f. /-mIş/ $\Longleftrightarrow$



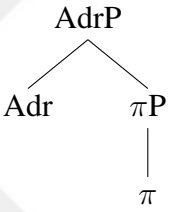

g. /i/ $\Longleftrightarrow$




h. /$-m_k$/ $\Longleftrightarrow$



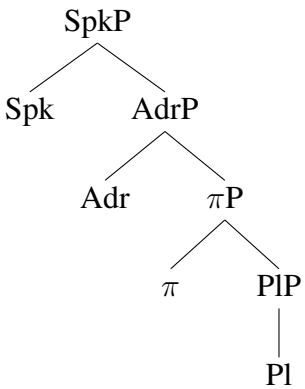

i. /$-n_k$/ $\Longleftrightarrow$



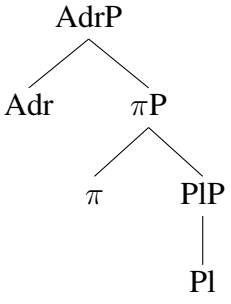

j. /$\emptyset_k$/ $\Longleftrightarrow$

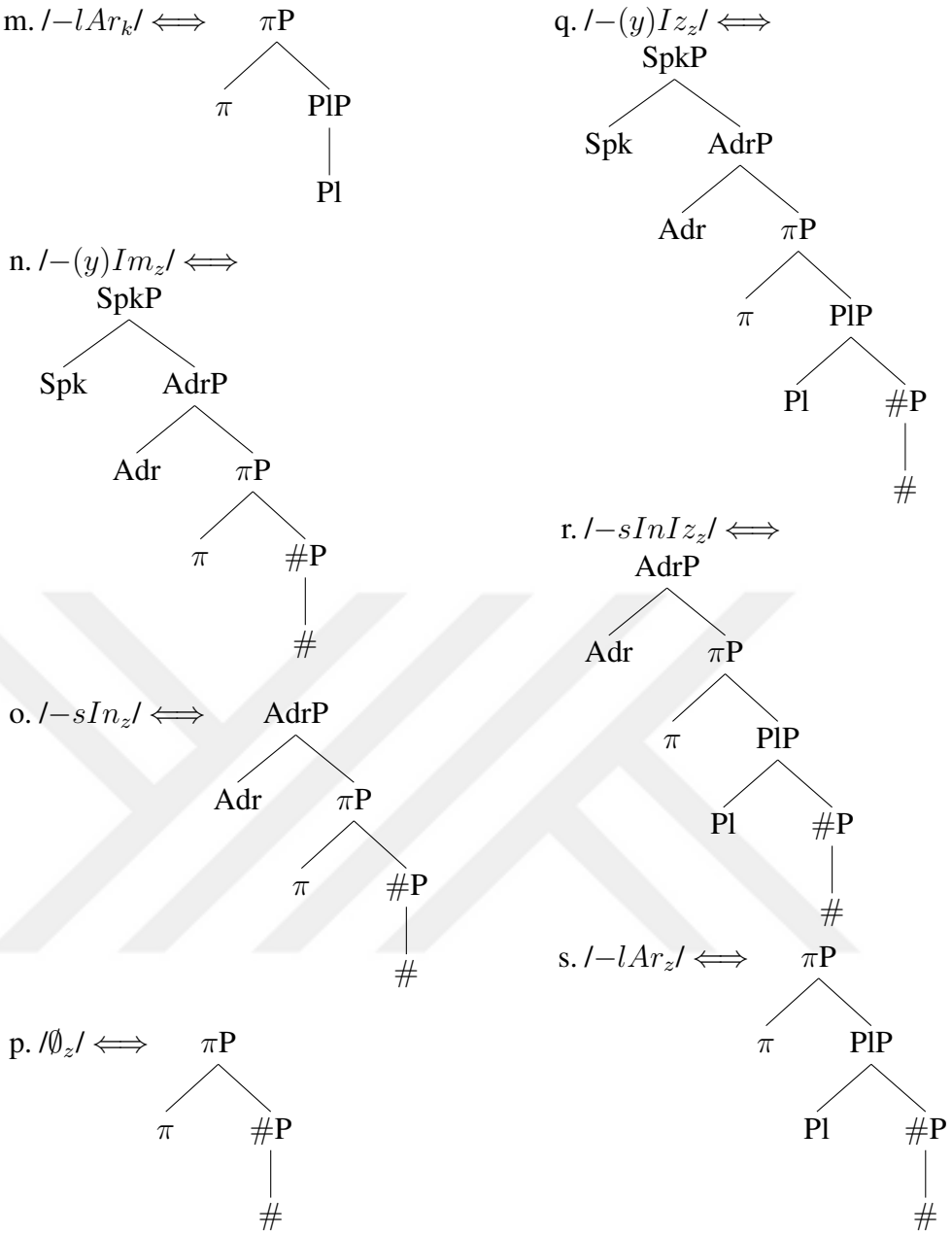



k. /$-k_k$/ $\Longleftrightarrow$




l. /$-nIz_k$/ $\Longleftrightarrow$






An illustrative lexicalization table for the three different, basic scenarios is given below (black cells indicate the absence of that particular feature in the relevant fseq).

(64)

| Root | Asp | Tense | Shift | Pst | # | Pl | π | Adr | Spk |
|---|---|---|---|---|---|---|---|---|---|
| √ | | | | DI | | k | | | |
| √ | Iyor | | i | DI | | k | | | |
| √ | Iyor | | | | z | | | | |

# CHAPTER 5

# A RELATED PHENOMENON: SUSPENDED AFFIXATION

There is a morphological phenomenon in Turkish that has attracted a fair amount of attention and is often mentioned in relation to the copula, namely, suspended affixation. Suspended affixation (henceforth SA) is what occurs when, in a coordinate structure, an affix which normally should appear on both conjuncts appears only on one of the conjuncts/on the final conjunct, i.e. gets suspended. In the literature on Turkish, this phenomenon is observed in both verbal and nominal domains, and different analyses have been proposed regarding the contexts that allow SA.

Kornfilt (1996) links the possibility of SA to the first (which she calls "bare") conjunct's being a "small word", defined by her as a complete form that is the complement of the copula: "SA is nothing but the cliticization of the inflected copula" (pp. 111-112). Finite forms, or "genuine inflections" cannot participate in SA since they are not complements of the copula and never use the copula in their inflections anyway. Compare (1) and (2) below.

(1) *Kutu-yu aç-mış ve çikolata-lar bul-muş-0-tu-m.*
box-ACC open-ANT and chocolate-PL find-ANT-COP-PST-1SG
'I had opened the box and found chocolates (in it).'

(2) **Ev-e gir-di ve manto-m-u al-ıp çık-tı-m.* [1]
home-DAT enter-PST and coat-POSS-ACC take-ADVZ exit-PST-1SG
'I entered the house and, after grabbing my coat, left.'

Göksel & Kerslake (2005) touch slightly upon the phenomenon stating that copular markers and personal markers can be omitted. They observe that except for the negative form of aorist for the 1st persons, all forms of *ıyor*, *makta*, *malı*, *ar*, *mış*, *acak* can participate in SA; for the aorist to be licit in conjunctions, either maz has to be in full form on both conjuncts (3) or the first persons should be fully inflected on both conjuncts which, naturally, cancels SA (4).

[1] Kabak (2007) later notes that constructions like this are legitimate only when the first conjunct is interpreted as denoting 3rd person. In that case, the legitimacy does not create a problem for Kabak's analysis since the 3rd person agreement suffix is null and the first conjunct should still be regarded as having a terminal morpheme. Apparently, no SA takes place in such a scenario. Kabak's approach is presented in detail in the following pages.

(3) *Konu ora-ya gel-ince tek kelime et-mez (ve) ağz-ın-ı*
topic there-DAT come-ADVZ single word do-AOR.NEG (and) mouth-POSS-ACC
*aç-maz-sın.*
open-AOR.NEG-2SG
'When it comes to that matter, you don't open your mouth or say a single word.'

(4) a. **O şehr-e bir daha git-me ve o insan-lar-a bir daha uğra-ma-m.*
that city one more go-NEG and that human-PL-DAT one more visit-NEG-1SG
b. **O şehr-e bir daha git-mez ve o insan-lar-a bir daha uğra-ma-m*
that city one more go-AOR.NEG and that human-PL-DAT one more visit-NEG-1SG
c. *O şehr-e bir daha git-me-m ve o insan-lar-a bir daha uğra-ma-m.*
that city one more go-NEG-1PL and that human-PL-DAT one more visit-NEG-1SG
Intended reading: "I won't go to that city and visit those people again."

An interesting observation in Göksel & Kerslake, which is not probed by any other author, is that in question forms with SA, the affix on the last conjunct and not the first conjunct is omitted (p.458).

(5) *Öğretmen mi-siniz (yoksa) öğrenci mi?* (Göksel & Kerslake, 2005)
teacher QP-2PL (or) student QP
'Are you a teacher or a student?'

Kabak (2007) is statedly the first to examine the SA phenomenon in its totality. He refuses the link between the copula and SA offered by Kornfilt (1996) and between the z paradigm and SA offered by Good & Yu (2000). He also criticizes Kornfilt's ambiguous justification stating that she is not clear about why SA occurs; for suffixes that are actually attached to the copula are omitted on the first conjunct or for once a word reaches a potentially full form, it can be left like that in the first position. Suggesting to expand Kornfilt's vague notion of "small word", he proposes the notion of "morphological word". This proposal is justified by the vagueness of the term "small word" since it is stated that the suffixes that form participles are in the same slot with other markers such as the past and conditional markers (see Göksel, 2001). Thus, Kabak argues, a word ending with one of these morphemes are in fact as small as any other "small word"; there is no reason for them not to participate in SA from this perspective. Yet, it is known that this is not the case as seen in (2). On another note, any structure that is the complement of the copula is suitable for SA according to Kornfilt's analysis. However, argues Kabak, this does

not apply all the time since structures like (6a) are inarguably ungrammatical although both conjuncts are complements of the copula.

(6) a. **Ev-imiz-i sat-sa ve bir dükkan al-sa-y-dı-k, (iyi olurdu).*
house-POSS-ACC sell-COND and a shop buy-COND-COP-PST-1PL

b. *Ev-imiz-i sat-sa-y-dı-k ve bir dükkan al-sa-y-dı-k, (iyi olurdu).*
house-POSS-ACC sell-COND-COP-PST-1PL and a shop buy-COND-COP-PST-1PL

'(It would be good) if we sold our house and bought a shop.' (Kabak, 2007)

Another counter-fact Kabak highlights concerns the necessity modal *mAlI*. Without touching upon its relation to the copula, he explains that the marker behaves like a genuine form in the Kornfilt sense. Nevertheless, it allows SA (7) just like participle maker markers which are described as the only deverbal complements of the copula by Kornfilt.

(7) *Yazı-m-ı bitir-meli ve yat-malı-yım.*
writing-POSS-ACC end-NEC and go.to.bed-NEC-1SG
'I should end my writing and go to bed.'

Therefore, an explanation other than word size or participle making is needed. Accordingly, the criterion of morphological wordhood is introduced: a morphological word is any form that overtly[2] ends with a terminal morpheme. Noting that agreement markers are the most basic word-enders in Turkish, Kabak argues that

[2]This is clearly stated since covert marking leads to ungrammaticality as shown in the negative forms of the aorist for 1st person inflections:

(i) a. *Peynir ye-mez-sin (ve) kefir iç-mez-sin.*
cheese eat-AOR.NEG-2SG (and) kefir drink-AOR.NEG-2SG

b. *Peynir yemez (ve) kefir içmezsin.*
cheese eat-AOR.NEG (and) kefir drink-AOR.NEG-2SG
'You don't eat cheese or drink kefir.'

(ii) a. *Oyun sev-me-m (ve) şaka-dan hoşlan-ma-m.*
game like-NEG-1SG (and) joke-ABL enjoy-NEG-1SG

b. **Oyun sev-me (ve) şaka-dan hoşlan-mam.*
game like-NEG (and) joke-ABL enjoy-NEG-1SG
'I don't like games or enjoy jokes.'

only words marked for agreement[3] or those that can stand alone without agreement count as morphological words, and aspect/modality markers are the only terminal morphemes in Turkish other than agreement markers (p. 325). However, this assertion also needs further elaboration since the situation with the abilitative marker poses an argument against it:

(8) **Kapağ-ı aç-abil ve turşu-yu çıkar-abil-di-m.*
lid-ACC open-ABIL and pickle-ACC take.out-ABIL-PST-1SG
'I could open the jar and get out the pickles.'[4]

Hankamer (2012) assesses both Kornfilt's and Kabak's approaches to the phenomenon and finding gaps in Kabak's proposal, opts for taking Kornfilt's analysis and extending it: he, too, states that solely verbs with the copula can participate in SA (or rather solely verbal stems including an aspect suffix, which necessarily require the copula to get further inflected, can do that); therefore, sentences like (2) are ungrammatical unless the first conjunct is interpreted to refer to the third person (pp. 3-5) as explained in (fn1). Yet, the mediation of the copula is inevitable in this system for the existence of the aspect suffix on the whole SA structure is not enough for it to be grammatical. In other words, verbal roots or stems cannot participate in SA even if the last conjunct has an aspect suffix:

(9) **Sabahları yukarı çık ve anten-i düzelt-ir-im.*
in.the.morning up climb and receiver-ACC fix-AOR-1SG
'I go up and fix the receiver in the morning.'

Still, Hankamer accepts these as facts about SA and not necessary conditions for SA to occur. Hence, to account for SA in the nominal domain, as well, he assumes (i) suspended affixes are ad-phrasal –they are syntactic heads with a phrasal complement–, and (ii) only if the phrases are coordinatable can SA take place. Following these, he analyzes exceptions to SA as the failure of meeting one of these criteria, that is, the affixes not being syntactic heads or their complements not being

[3]He considers 2nd person imperatives which seem as bare verb roots as having a silent agreement suffix. So, they also should be considered as ending with a terminal morpheme, i.e. an agreement suffix

[4]In the second part of his paper, Kabak provides a detailed examination of the nonverbal domain in Turkish which provides many instances of SA, as well. Being orthogonal to the present study, that part is left to the interested reader to peruse.

phrases, as well as complements being phrasal but not coordinatable. For instance, he explains the ungrammaticality of (2) if the meaning is intended to refer to non-3rd person subjects by viewing agreement markers as not syntactic heads but dissociated morphemes. This is why they cannot be suspended unless they are suffixed to a suspendable affix.

The ungrammaticality of sentences like (10) or (11) below, on the other hand, is not predicted at first glance since there is an ASP or TNS morpheme, in other words, a syntactic head, to carry the suspended affixes and their complements are phrasal.

(10) **Oda-ya gir ve ışığ-ı aç-tı-m.*
room-ACC enter and light-ACC open-PST-1SG
'I entered the room and turned on the light.'

This is where the second assumption plays its role: Hankamer asserts that VPs are not coordinatable in Turkish. He adds that non-identical aspect suffixes are not coordinatable either.

(11) **Gün-ü geçir-iyor ve ertesi gün çalışma-ya başla-yacak-0-tı-m.*
day-ACC spend-IMPF and next day study-DAT start-PROSP-COP-PST-1SG
'I was spending the day and was going to start studying the next day.'

Finally touching upon one of Kabak's counterarguments, namely that in (6) repeated below as (12), Hankamer expresses his hesitance to label the morpheme preceding -dI as copula.[5]

(12) a. **Ev-imiz-i sat-sa ve bir dükkan al-sa-y-dı-k, (iyi olurdu).*
house-POSS-ACC sell-COND and a shop buy-COND-COP-PST-1PL

[5]However, it should be observed that neither of the criteria he provides for a fake copula, that is, its being able to precede only -sA and -dI, not -mIş, and that it can optionally occur outside agreement markers, is actually applicable in the above context since -y there both can be followed by -mIş (i) and fails to optionally occur after agreement marker -k (ii):

(i) al-sa-y-mış-ız

(ii) *... al-sa-k-0-tı

b. *Ev-imiz-i sat-sa-y-dı-k ve bir dükkan al-sa-y-dı-k, (iyi olurdu).*
house-POSS-ACC sell-COND-COP-PST-1PL and a shop buy-COND-COP-PST-1PL

'(It would be good) if we sold our house and bought a shop.' (Kabak, 2007)

Using this "fake" copula, he finds counterexamples to Kabak's stipulation that morphological wordhood is what predicts the grammaticality of SA since when the fake copula occurs outside agreement morphemes the first conjunct becomes a full morphological word –agreement morphemes being terminal morphemes in Kabak's account– but the structure is still ungrammatical:

(13) **Bu oyun-u oyna-yacak-0-tı-m ve kazan-acak-0-tı-m-0-sa*
this game-ACC play-PROSP-COP-PST-1SG and win-PROSP-COP-PST-1SG-COP-COND
'If I were to play this game and win'

However, an environment renders both Kornfilt's and Hankamer's analyses partly lacking: this is when verbs marked with the evidential marker plus agreement enter an SA relationship as shown below.

(14) *Araba-yı çiz-miş-siniz ve kaç-mış-sınız = Araba-yı çiz-miş ve kaç-mış-sınız.*
car-ACC scratch-EVID-2PL and run.away-EVID-2PL = car-ACC scratch-EVID and run.away-EVID-2PL
'Apparently, you have scratched the car and run away.'

Kornfilt does not dwell on this marker which she labels "reported past". In her account, the perfective mış is one of the focal markers, and this might have led her not to offer a detailed analysis for the relationship between the evidential marker and the copula. This, in turn, is probably why -mIş is quoted as one of the legitimate markers for SA, creating a confusion in her glosses as well, since in her example with -mış for SA, she labels the marker as perfective but gives it a translation that suggests she takes it to be an evidential marker. This is indeed the right translation as also can be seen in (14) above, but her labelling is incorrect in this case, and it is not the perfective -mış that is found in SA examples with -mIş plus agreement marker. This fact and that it is still obvious that Kornfilt evaluates this type of mış as having the same position and distribution as her "true" finite markers in her tables bring us to a

point where SA needs not to be linked to the presence of copula since none of those forms host the copula in simple verbal structures:

(15) *Gel-di-m/gel-se-m/gel-miş-im*
come-PST-1SG/come-COND-1SG/come-EVID-1SG
'I came/If I come/Apparently, I came'

So, although it may seem so, the -mış suffixes in (14) do not form "small words" in Kornfilt's sense, not making participles, and are not complements to the copula as Kornfilt requires for SA. Hankamer's conditions are not met either since he accepts agreement affixes as not heads but dissociated morphemes which can only be suspended if they follow the copula, and in sentences like (14), the only suspended affix is an agreement morpheme. In this case, either it should be a head with a phrasal complement, which opens up a new set of possibilities for other structures with agreement markers, or the condition should be found insufficient. Kabak's account seems more viable, therefore, in a Nano way of thinking since it foresees that every morphological word can be considered as a suitable stem to suspend certain affixes on. It can be reworded as every fully developed XP which has completed the lexicalization of its basic fseq being available for SA. Verbal roots and finite tenses may be considered as not having completed their full potential regarding the verbal fseq, thus their incompetence to take part in SA. The other example that Hankamer uses to argue against Kabak, i.e. (13), can be considered an exception due to its having two copulas on the last conjunct and maybe extending to a second verbal slot because of that, which makes it unable to SA because the second copula plus -sA do not form a suffix, but a new word.

As can be seen, both Kornfilt's and Hankamer's analyses endow a special position to the copula in defining the legitimacy of SA contexts. However, this privilege is not applicable in Nanosyntax (at least not within the analysis offered in the previous chapter), and Kabak's account is more compatible with Nano as described above. Given the current system of Nano, the phenomenon of SA needs to be viewed from a fresh perspective. The reasons for that are multiple. First of all, SA is a syntactic formation involving the coordination of two (or more) fully-fledged

phrases with the help of any type of conjunction.[6] Nano, on the other hand, has little to elaborate on about the nature of conjunctions, let alone having concrete explanations for the derivation of full phrases with specifiers, complements and all. Although Nano does not differentiate between such positions, indeed (since every addition comes as a result of the same algorithm, not according to their relation to the head), the fact that it hasn't been used to deal with syntactic mergers so far, such as the merger of adverbials, subject phrases and the like, makes it difficult to assert that the same procedure in morphological mergers apply for the syntactic domain, as well. Second of all, even if one refrains from extending fully towards the syntactic level, the presence of the copula, which sits on the fence between word-level- and sentence-level formations, on verbal structures requires enlightenment from a Nanosyntactic point. Thus, deriving an explanation totally based on the copula needs to wait until the nature and the position of the copula is accounted for in Nano. Third of all, since every feature has the same value in Nano in terms of their place in the functional sequence, connecting the possibility of SA constructions mainly to the existence of the copula (or any morpheme, for that matter) goes against the premises of Nanosyntax.

For all these reasons, I will try to analyze SA using the Nanosyntactic tools that have been offered so far and develop a system which can successfully derive verbal complexes with a suspended affix.

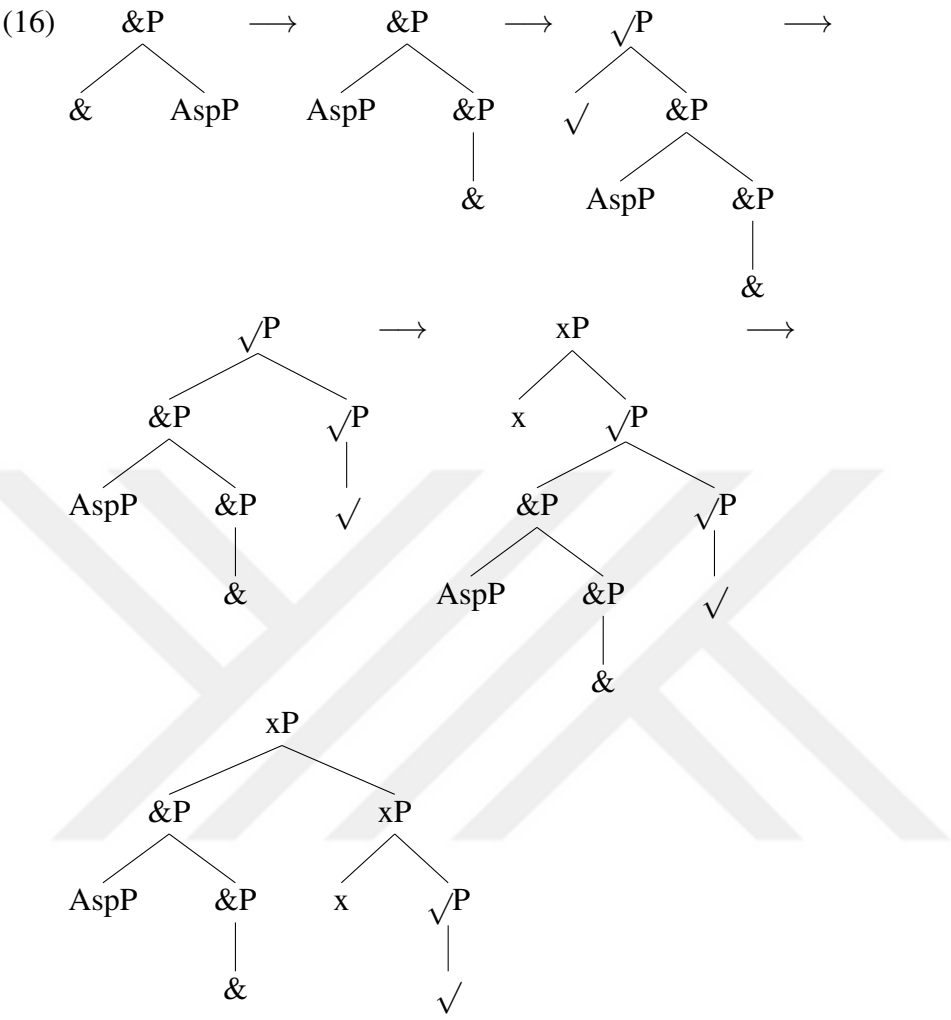
### 5.1 An attempt that goes right systematically but is wrong in its starting point

The first path that enables this derivation is assuming that everything is added one by one, no matter their category. Accordingly, after the first DP or AspP, syntax adds the conjunction feature which can be symbolized as &. Finding no match, AspP is snowballed; &P becomes a suffix, and &P and AspP get lexicalized separately. Then, a new root is merged, and after &P gets snowballed and RootP and &P are

[6] These are numerous in Turkish including ve, ile, ya da, hem … hem …, etc.

lexicalized, each new addition, until an AspP is formed, gets lexicalized as a phrase through cyclic movement. Steps can be seen below.

(16)




Since every affix is inevitably to be attached to the second conjunct, SA is formed without an empirical problem. Yet, although this scenario seems to operate smoothly, there are two systematic problems it generates, one relatively minor and one major. The minor one is that this path regards conjunctions as a simplex structure with only one foot.[7] Since not much has been put forth regarding the real content of this element, this vagueness is partly tolerable. The major problem, however, is that here, the second verbal phrase is also considered to start its derivation with a single foot and gets merged into syntax like a suffix. Such a merger is not possible since Nano

[7]Here, &P has also only one feature, but that can be multiplied to involve more features, and with every feature, it can still be lexicalized thanks to cyclic movement. The important point here is that the morpheme, although being a separate word, has only one foot which is usually reserved for only suffixes, not roots.

requires all roots to have binary feet. Therefore, the structures of this sort will not be lexicalizable.

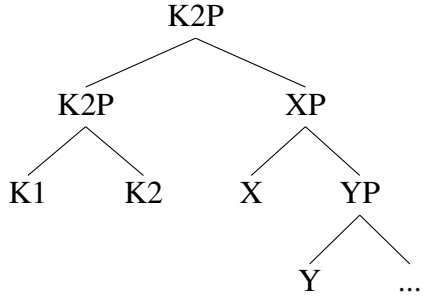
For this is a fundamental problem, a second path should be devised.

A second option can be to consider conjunctions as complex structures. In this case, they cannot be added to the system one feature by one feature as suffixes do. Luckily, there is a mechanism allowing complex structures, including prefixes, to be merged in syntax. Such structures are called complex left branches (CLB) in Nano and allow merger without movement which is how prefixes are also derived. Below is provided a detailed section on how the mechanism works.

## 5.2 Nanosyntax and "pre-" elements

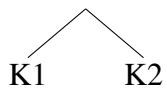
Starke (2018) expresses that the movement steps in the Nano algorithm are not exhaustive enough to encompass all forms of language capacity. That is, humans do not only produce strings of speech, which are obtained by continuously merging new features on an fseq, but also recursive structures, in other words, “pre-” elements like articles, negation and so on in some languages (and prefixes alike). While the first action produces only suffixes, another type of syntactic formation needs to be introduced to account for these “pre-” items. Starke suggest (17) as the syntactic representation for structures with a “pre” element.

(17) (Adapted from Starke, 2018)




For a prefix to fit into this structure, it has to have a different shape than a suffix which has a unary foot. (18) is proposed as the shape of prefixes.

(18) (Adapted from Starke, 2018)

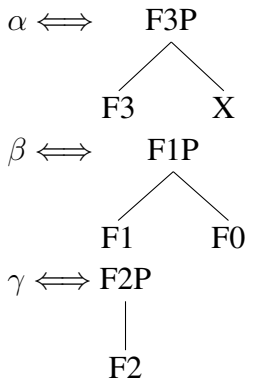


That a change in shape is necessary is obvious since if the movement steps are applied that enable suffixes fit into the syntactic structure by moving earlier features to the left (from traditional complement or specifier positions) and leaving unary footed new phrases on the right, there is no possibility left to lexicalize some features as a "pre-" element.

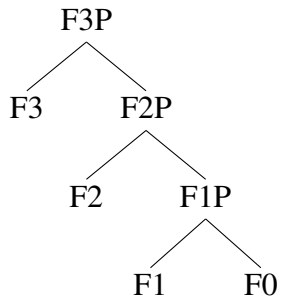
The reason for suffixes to have a different footing than prefixes is that derivation starts with roots and continues with binary merge. Suffixes are only derived through moving one part of one such binary merge operation when the root is not big enough to lexicalize the newer features, causing the other part stand alone, as a unary grouping. However, prefixes start a new derivation cycle by merging two features first, much like how roots are built, and then merging the resulting phrase into another syntactic structure. Thus, they are merge-XP operations, not merge-f operations. Since, after the root, the Nano algorithm forces everything to be integrated as suffixes (i.e. by leaving some unary footed phrase behind) Starke concludes that binary footed structures that appear later in syntax cannot be produced on the main spine; therefore, they are "specifier-like" complex-left branches (henceforth CLBs)(p. 242).[8]

The formation of CLBs happens through opening a new workspace in syntax along with the derivation of the main spine. They are resorted to when no suffix in the lexicon contains the necessary features to lexicalize the last addition to the main spine. Let us consider this example:

(19) a. Lexicon



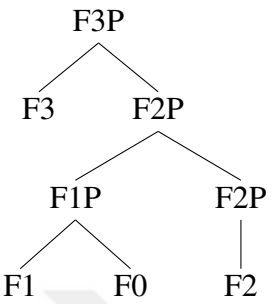

b. Fseq



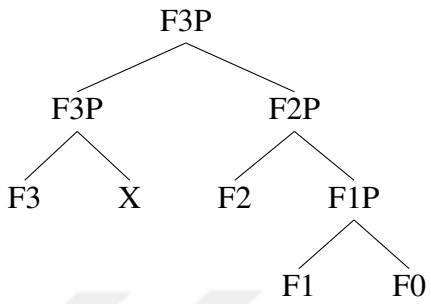

[8]Different names are proposed for such structures or environments. Caha (2019), for instance, calls them "projecting specifiers" and the workspaces they are generated at "auxiliary workspaces" (p.160).

According to what Starke suggests, after F3 is merged (20), every previous step is tried and the attempts do not yield anything, a new derivation is spawned which includes the latest, hierarchically highest feature and one other feature, which corresponds to $\alpha$ in (19a). This binary footed structure is then merged with the main space of derivation (p.246) which finally gives us (21). [9]

(20)




(21)




So, given the lexicon in (19a), an fseq like (19b) can only and only be realized as in (21)

The derivation of complex left branches is placed in the algorithm after all other steps, including backtracking which is basically going back to the previous cycle and trying, instead of the option that worked in that cycle, the next option for that cycle. Since this operation requires merging not a feature but a phrase, and since that phrase is built similarly to a root and thus starts a new derivation, Starke suggests that this operation is heavier[10] than merge-f and should be seen as a last resort (p. 245). Consequently, it should be noticed that a language which can lexicalize some feature via a suffix will always prioritize that lexical item and consequently not build require a prefix. This is also reflected in languages favoring suffixes over prefixes (Caha, 2019: 161)

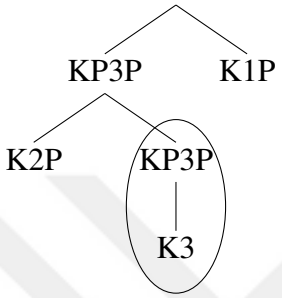
An important matter which has yet to be concluded in the Nano literature is when these additional workspaces complete their duty and get merged into the main spine. Although the literature offers little regarding this topic, there are two contrasting views belonging to Starke (2018) who contemplates that creating another

[9]The identity of this other feature has yet to be investigated and agreed on. However, Caha (2019: 157) suggests that one of the feet in CLB is the new feature and the other is one that has already found its place on the main spine under DP/NP, that is, one of the core features before inflections. The same can be applied to the verbal domain by assuming that one of the feet of a prefix is the lexical head V.

[10]The reason for the weight of this operation may also be rooted in the two workspaces being active at the same time and, thus, requiring more effort in syntax (Caha, 2019: 161).

workspace than the main one requires such an effort that once it is opened, it should stay open as long as possible (p.248), and Caha (2019) who opts for an early closure stating that requiring such an effort, such an operation should be done with as soon as possible, which he supports by examining the data at hand that show a tendency towards early closure. This is because a late closure may cause the highest feature merged to end up squeezed between two phrasal nodes, as shown below.

(22) (Adapted from Caha, 2019)




Still, he acknowledges that, although fewer, such forms are also attested in some languages, and accordingly revises his proposal in a way that does not exclude the possibility of late closure altogether but poses it after early closure in the algorithm. In other words, late closure option is only attempted if early closure, which yields phrasal suffixes, fails to find a match (p.175).[11]

### 5.3 A second attempt to account for SA using CLBs

The operation mentioned in the previous subsection can be applied for syntax level "pre-" elements, as well as prefixes, and lead the way in understanding how such higher structures are formed by Nanosyntax. As such, we can try to test it for SA in Turkish.

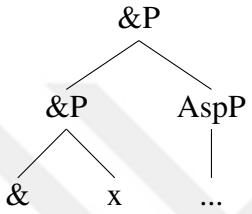
The first thing to do is to regularly build a verbal fseq until it becomes an AspP. After this point, the conjunction should follow but, being another word which logically seems more complex than just one feature, it is merged as a CLB.[12]

[11] In order to fully explain his Svinitsa data, Caha (2019) also experiments with the possibility of newer features getting merged into both the auxiliary workspace and the main spine at the same time during the period when auxiliary workspace stays open. This line of thinking, however, is irrelevant to our purposes.

[12] It should be kept in mind that adopting a lexicon with a unary footed conjunction item and a syntax with conjuncts as CLBs, and still having the attested morpheme order in Turkish would be

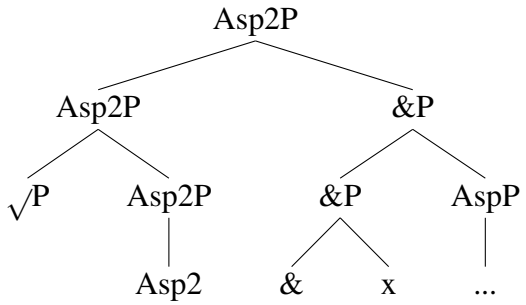
Although how different roots interact with each other on the same main spine is a problem that has not been systematically tackled with using Nano so far, as mentioned earlier, since prefixes can be merged as phrases to syntactic structures, distinct words should be more than eligible for the same operation. Therefore, let us assume that every distinct word starting a derivation with its own root is merged into the main spine as a CLB. Thus, merging the conjunction as a CLB leads to its being lexicalized to the left of the AspP since CLBs do are merged to the system as they are; no movement is required. The auxiliary workspace is closed (23).

(23)




Derivation returns to the main spine. It is the second conjunct's turn, and since it contains a different root, as well, another new derivation should start. The resulting new verbal complex, the second AspP, is then merged to the left of the previously built ConjP:

(24)




This second additional workspace is also closed as soon as AspP is derived. Then, the derivation proceeds through the main spine, and every feature is realized as a suffix since finding no match when the specifier is moved, i.e. there being no structure so big as to contain the new features and ConjP together as shown in (..), syntax moves the whole [[AspP][ConjP][AspP]] structure to the left of the newly added feature.[13] Thus, SA is perfectly compatible with the tools Nano offers. Caha (2019: 174) also

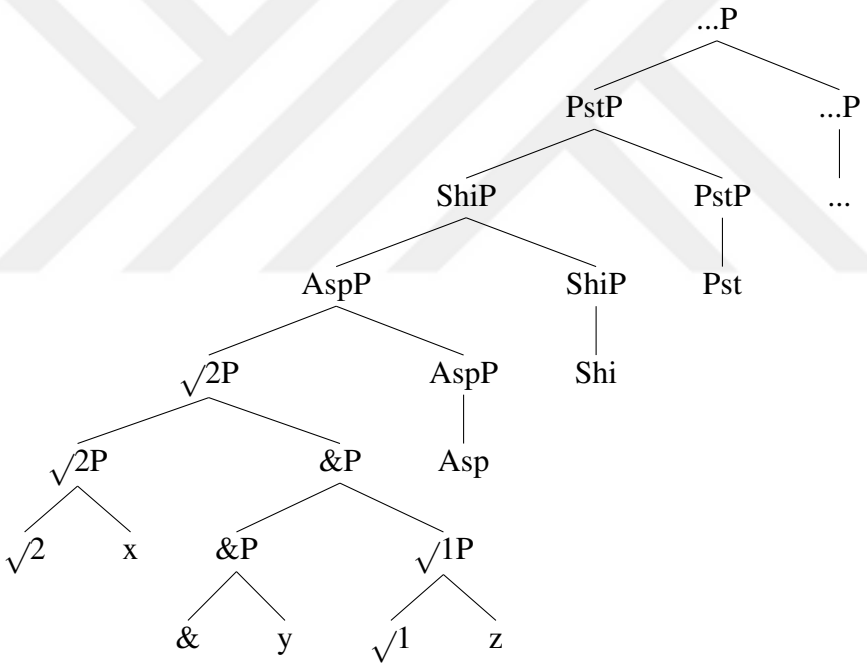
possible if Nanosyntax allowed terminal spellout, because that way, spelling out a syntactic formation such as [[AspP] Conj [AspP]] would be possible in that order.

[13]Caha (2019) rejects to even try moving Spec to begin with. He justifies this by stating that despite filling the specifier position, the last CLB (in our case, the last-added conjunct) is different than a regular specifier obtained originally through complement movement because CLBs are projecting

notes that early closure leads to phrasal suffixes that are seen in agglutinative languages which supports the preference in this section. However, it is crucial to remark that in such a scenario as above, the auxiliary workspace housing the second conjunct is allowed to perform movement operations before getting closed. Otherwise, the workspace would be immediately closed as soon as the root is lexicalized (since Asp is not contained in the lexical items for roots and, thus, requires complement movement), and we would have structures like (25) below whose syntax looks like (26).

(25) **gel ve git-miş-0-ti-k*
come and go-ANT-COP-PST-1PL
'We came and went'

(26)




This is exactly what Caha et al. (2019b: 60) suggest: "[T]he second workspace remains open and subject to further merge F operations only as long as the Spec spells out as one piece. Once we would need to do movements within the Spec, the workspace is closed". However, since this requirement yields ungrammatical results as above, I opt for Caha's own regulation of this rule as the "first early, then late closure" ordering which is mentioned earlier in section 5.2.

specifiers, and therefore should not be moved (p.173). This can be another path arriving at the same result, namely, snowballing the whole conjoined structure.

This section was an attempt to provide a rudimentary Nanosyntactic analysis for SA in Turkish, which necessitates the use of CLBs. Although it shows that SA is compatible with the mindset Nano offers, this compatibility should be supported by more elegant analyses touching upon the question of why some suffixes allow SA and some do not.

# CHAPTER 6

# CONCLUSION

## 6.1 Summary of the current system

I have devised two scenarios that can account for the Turkish copula *i*'s appearance and the agreement allomorphy in Turkish. The first attempt deals with these phenomena in a coherent manner but assumes them to be dependent on each other, for, in this scenario, *i*'s existence and the appearance of a *z* paradigm suffix are deemed to be in complementary distribution as both are assumed to realize the same feature, namely T. However, this approach cannot explain the appearance of *z* paradigm markers in an unexpected position, that is, their appearance after the evidential marker *-mIş* which is preceded by *i*. The second system solves this problem by separating the phenomena and assigning different raison d'êtres to each. A new syntactic feature, Shift, is introduced to motivate *i*'s emergence, whereas the difference between two agreement paradigms is minimized.Finally, I attempted to show how the SA phenomenon in Turkish, which is sometimes analysed in connection with the copula, can be dealt with through Nanosyntactic tools.

## 6.2 Remaining questions

The system offered in this thesis serves as a base to tackle with the copula and agreement markers in Turkish and their possible relationship with the universal fseq. This also requires some assumptions regarding the tense and aspect markers in Turkish, as we have seen. Yet, despite having provided an exhausting literature review on these markers, I have not offered a detailed Nano analysis with respect to the semantic nuances and depth of the approaches presented there since they were not pivotal to the analysis at hand. Making an idealization, I developed a system where each marker has only one tense or aspect function. Needless to say, all these markers have various additional functions on top of the fundamental ones that are adopted in the present analysis. All these diverse contributions are to be placed in the universal fseq if their presence necessitates a semantically motivated feature rather than being

derived in pragmatics. I hope all these contributions will be incorporated into the Nano studies on Turkish in further research.

Another matter to investigate is the copula's appearance not as *i* but *ol*. There are many contexts where only the *ol* allomorph is applicable such as the combinations of aspect markers (1a), combinations of an aspect and a tense marker in certain cases(1b), and embedded clauses(1c).

(1) a. *Gez-miş ol-acak-lar*
travel-ANT COP-PROSP-3PL
'They will have travelled.'
b. *Gez-miş ol-du-lar.*
travel-ANT COP-PST-3PL
'They ended up having travelled.'
c. *Gez-miş ol-duk-lar-ın-ı*
travel-ANT COP-NOM-3PL-POSS-ACC
'that they have travelled'

What is the link between *i* and *ol* from a Nanosyntactic point of view? Since these two items have at least some overlapping functions, what is the relationship between SHIFT and *ol*? These questions still await answers, and the alternation between the two allomorphs hints at a multilateral structure rather than a unilateral one in respect of the copula-related parts of the fseq which need to be reflected in the universal fseq.

The relationship between the copula and the question particle *mI* also remains to be discovered. *mI* has a floating nature in that it appears in different positions depending on the presence of an aspect marker. In a string where there is an aspect marker, *mI* follows this marker and precedes agreement markers, as well as the copula and the evidential *-mIş* or overt tense markers if there are any (2a). On the other hand, *mI* follows both tense/mood and agreement markers in the absence of an aspect marker (2b). To make the situation even more complicated, there is another, colloquial paradigm which has reduced forms consisting of aspect plus z paradigm markers which obligatorily precede *mI* (2c).

(2) a. *Yaz-acak mı-y-dı-k?*
write-PROSP QP-COP-PST-1PL
'Were we going to write?'

b. *Yaz-dı-k mı?*
write-PROSP QP-COP-PST-1PL
'Did we write?'

c. *Yaz-ca-z mı?*
write-PROSP(red.)-1PL QP
'Are we going to write?'

In light of these, we see that *mI*'s position is not fixed in relation to tense markers or even the same type of agreement markers, let alone those of different paradigms.It is, therefore, worthwhile asking in studies to follow if there is any way of accounting for this flexibility in *mI*'s position without contradicting with the universal fseq. Whether a feature driven movement is responsible for this change in its position is a puzzle that remains.

Additionally, the real boundaries of the difference between paradigms and *i*'s double position in less encountered structures like past conditionals should be investigated in depth.

(3) *oku-yor i-di i-se-k*
read-IMPF COP-PST COP-COND-1PL
'If we were reading'

Last but not the least, what this mobility of *i* means for the fseq, along with the universality and semantics of the feature Shift, are of utmost importance and should be the subjects of new enterprises.

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