

Converbs in Turkish and Greek

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ΠΕΡΙΛΗΨΗ

Το άρθρο εξετάζει αντιπαραβολικά τα ρηματικά επιρρήματα της ελληνικής με τα ρηματικά επιρρήματα και τις συναφείς επιρρηματικές προτάσεις της τουρκικής. Υποστηρίζεται ότι οι επιφανειακές διαγλωσσικές ομοιότητες των δομών που εξετάζονται εξαφανίζονται αν λάβουμε υπόψη μας ότι τα ρηματικά επιρρήματα αποτελούν μεικτές προβολές, που περιλαμβάνουν τόσο ρηματικά όσο και ονοματικά λειτουργικά επίπεδα (με την έννοια των Borsley & Kornfilt 2000, Panagiotidis 2010). Στο άρθρο διατυπώνουμε την πρόταση ότι όλες οι προτάσεις που εξετάζονται διαθέτουν τον ίδιο λειτουργικό σκελετό, ενώ οι μορφοσυντακτικές διαφορές ερμηνεύονται από την αλληλεπίδραση των στοιχείων που πραγματώνουν τις κεφαλές αυτών των λειτουργικών επιπέδων.

KEYWORDS: *converb, converbial clause, Greek, Turkish*

1. Introduction*

In this article we attempt to take a close look at the properties of converbs and converbial clauses in Turkish and Greek. The grammatical category of converbs is a quite recent addition to the inventory of grammatical categories in the world's languages. As Haspelmath (1995) correctly observes, “the converb has hardly been recognized as a cross-linguistically valid grammatical category up to now [due] the fact that there are no converbs in Latin or Classical Greek”. Indeed, the converb is nowhere to be found as a grammatical category in most traditional grammars. However, the recognition of converbs as a grammatical category has been recently gaining ground both in linguistic encyclopaedias and in primary research in Greek (cf. Moser 2006), Turkish and other languages. Converbs are verbal adverbs, that is morphologically distinct non-finite types of a verb that mark adverbial subordination. As such, the converb is a distinct grammatical category from both the gerund (which is a verbal noun) and the participle (which is a verbal adjective) (cf. the discussion in Haspelmath 1995), although the reader should bear in mind that especially (but not exclusively) Greek converbs have been termed “participles” and “gerunds” in past research.

Greek and Turkish both have converbs, such as the words in bold in example (1):

- (1a) Bu kötü haber-i **duy-unca** çok üzül-dü-k.
this bad news-acc. hear-conv. very be.sorry.-past-1pl.
“We were very sorry when we heard this bad news”
- (1b) i maria irthe **jel-ondas**
the Maria.nom. arrive.past.3sg. laugh-conv.
“Maria arrived laughing”

Turkish also performs a number of adverbial functions by using nominalized verbal elements which are, in turn, embedded under postpositions. These adverbial clauses are quite many and have mixed properties (both nominal and verbal). Although not converbs in the strict sense, these phrases (or clauses) share with converbs both their function (i.e. they are both adverbial *vP*-adjuncts) and their (adverbial) distribution. Given that both prototypical converbs and adverbial postpositional phrases with a verbal

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core in Turkish have a similar makeup (i.e. they are mixed projections in the sense to be explained below), this study aims at examining them together.

The purpose of this paper is: a) to lay out the main properties of Turkish and Greek converbs/converbial/adverbial clauses/phrases, b) to find similarities and (possibly) attribute them to similar functional characteristics of the morphosyntax of the two languages, and c) to discuss intra-linguistic similarities and differences in the syntax of converbs as opposed to the syntax of other mixed constructions in each of the two languages.

The emerging picture will be one that explains both the similarities and differences of converbs (or converbial/adverbial clauses/phrases) of the two languages as stemming from respective similarities and differences in the functional makeup of the syntactic categories dominating the verbal head(s) that are the core of each converb or verb-headed PP. In this respect, the current study is a contribution to a) the cartographic approach to syntactic structure-building (in the spirit of e.g. Shlonsky 2010, Rizzi 2013) and b) the Distributed Morphology model of word-building (see, among many others, Sidiqi 2014 and McGinnis-Archibald 2016 for accessible recent overviews). According to this view, even fusional morphemes, such as the converbial suffixes *InCA* and *-ondas* in (1) above, might be the exponents of an elaborate series of distinct functional heads, which contribute their functional and grammatical characteristics. A difference in the order or the content of the same functional head would lead to either ungrammaticality or a different morphological exponent, as will be seen in the case of Turkish.

The rest of this paper is structured as follows. Section 2 presents the verbally-headed adverbial clauses or Turkish (traditionally called *ulaç*) and examines their broad characteristics. In section 3 we divide *ulaç* into seven different groups (called Type A-G) according to their morphosyntactic characteristics. Section 4 discusses the properties of converbs in Greek. In section 5, we adopt Borsley & Kornfilt's (2000) notion of mixed projection, as elaborated by Panagiotidis (2010) for Greek, and extend it to the case of Type A-B of Turkish converbs. In section 6 we show that the postulated schema can also accommodate Turkish converbs or Types C-G. Section 7 is devoted to pointing at some advantages of the proposed unification, while section 8 concludes the discussion.

2. Converbial (and/or verbal adverbial) clauses in Turkish: Broad characteristics

Turkish manifests a great number of converbial (or -more generally- verbally-headed adverbial) constructions, which are presented together with their translation below:¹

-*(y)Ip* (and), -*(y)ArAk* (-ing), -*(y)InCA* (when), -*(y)IncAyA kadar/dek/ değin* (until), -*(y)AnA kadar/dek/değin* (until), -*DIkçA* (as...as, each time that), -*(y)A ...-(y)A* (-ing), -*(I/A)r ...-mAz* (as soon as), -*mAdAn* (without, before), -*mAdAn önce* (before), -*mAksIzIn* (without), -*DIktAn sonra* (after), -*mAktAnsA* (instead of), -*mAkIa* (with), -*mAk yerine* (instead of), -*mAk varken* (instead of), -*mAkIa birlikte/beraber* (although), -*(y)All* (since),

¹ Note that, following the usual convention in Turkish linguistics, we are capitalizing archiphonemes, vowels that participate in vowel harmony processes and consonants that obtain their plus or minus voiced characteristic by assimilation to an adjacent sound. The list does not contain probably the most well-known *ulaç*, due to the fact that it is a coordinating (and not subordinating) affix with no adverbial content (but see Johanson 1975 and Brendemoen & Csató 1987).

-*mAktAn başka* (apart from), -*mAk üzere* (in order to), -*mAk için* (in order to), -(y)*AcAk kadar* (so that), -(I/A)r/(I)yor/-ken (while, since), -*mİş/-ken* (since), -(y)*AcAk/-ken* (be about to), -*mAk şartıyla* (on the condition that), -*mAsI üzerine* (after), -*DIĞI/(y)AcAĞI halde* (although), -*mAsInA rağmen* (although), -(y)*AcAĞInA* (instead of), -*mAsI için* (in order to), -*DıĞIndAn/-(y)AcAĞIndAn dolayı/ötürü* (due to the fact that), -*DıĞIndAn /-(y)AcAĞIndAn* (due to the fact that), -*DIĞI kadarıyla* (than), -*DIĞI kadar* (as...as), -(y)*AcAĞI kadar* (so much that), -*DIĞI gibi* (as), -*DIĞIndA* (when), -*DIĞI sürece/müddetçe* (as long as), -(y)*AcAĞI gibi* (as compared to), -(y)*AcAĞI sürece/müddetçe* (as compared to), -(y)*AcAĞI yerde* (instead of), -*DIĞIndAn beri* (since), -*mAsIndAn itibaren* (henceforth), -*DIĞI takdirde* (in case that), -*DIĞInA göre* (since, on the condition that), -(y)*AcAĞInA göre* (since), -*DIĞI zaman/vakit/gün/an/sırada* (when, on the day that, in the moment that), -(y)*AcAĞI zaman/vakit/gün/an/sırada* (when, on the day that, in the moment that), -*DIĞI için* (because), -(y)*AcAĞI için* (because), -*mAsI durumunda* (in case that), -*mAsIyla beraber/birlikte* (although), -*mAsI yüzünden* (because of), -*mAsI şartıyla* (on the condition that), -*DIĞI nispete/ölçüde/oranda* (to the extent that), -*DI ...-(y)All* (since)

As can be understood from the above translations, Turkish converbial constructions (traditionally called *ulaç*) perform a number of different adverbial functions. Although the list is by no means exhaustive, the main among these are the following. They can be temporal modifiers, as in (2a):

(2a) Atina'-ya **var-inca** sen-i ar-ar-ım
Athens-dat. arrive-conv. you-acc. call-aor.-1sg.
“I will call you as soon as I arrive in Athens”

manner modifiers, as in (2b):

(2b) Hırsız **koş-arak** ev-den çık-mış
thief run-conv. house-abl. exit-evident.
“The thief exited the house running, it seems”

purpose modifiers, as in (2c):

(2c) Araba **al-ma-m için** dede-m bana 3000 Avro
car buy-nomin.-1sg for grandfather-1sg me.dat. 3000 Euro
borç ver-di.
loan give-past.
“My grandfather lent me 3000 Euros to buy a car”

conditional modifiers, as in (2d):

(2d) Bu kitab-ı ancak yarın geri
this book-acc. but tomorrow back
getir-me-n şartı-yla ver-ir-im
return-nomin.-2sg. condition-instr. give-aor.-1sg.
“I will give you this book only on the condition that you will return it tomorrow”

and causal modifiers, as in (2e):

(2e) Bana **kız-dığ-ın** **çin** öyle i konuş-uyor-sun.
 me.dat. be.angry-nomin.-. for like.that 2sg speak-imperf-2sg.
 “You are speaking like this because you are angry at me”

Not all elements in bold are converbs in the strict sense of the term, since not all are single words produced by affixation. So, while there is no doubt that (2a) is a converb (*varınca*), the same cannot be said for *kızdığın için* in (2e), for example. So, some *ulaç* are syntagms (i.e. analytic forms) consisting of a nominalized verbal core, of the sort that is familiar in Turkish (cf. George & Kornfilt 1981), and a postposition. This is the reason that most studies speak of Turkish converbial (or adverbial) clauses rather than converbs, as it is usually the whole syntagm that bears the adverbial meaning and is subordinated to the main verb, and not just a verbal adverb. However, a subsection of converbial clauses in Turkish are headed by a converb and –most importantly– we would like to claim that converbial/adverbial clauses in Turkish may be given a unified analysis whether they are headed by a converb or not. In other words, we will argue that both single-word converbs and multi-word verb-derived adverbial constructions in Turkish share roughly the same functional structure and might be amenable to a parallel linguistic description.

Let us now turn to the common characteristics of the converbial clauses, as discussed in Borsley & Kornfilt (2000). Specifically, converbial clauses:

- a) exhibit verbal properties of valency (they case-mark their objects as per the corresponding Vs),
- b) have the distribution of adverbs,
- c) are modified by adverbs rather than adjectives,
- d) are (sometimes) characterized by overt nominal agreement, plus they mark their subjects in genitive (or nominative or PRO).

All these characteristics apply to Turkish converbial clauses. So, in (3a-b) we can see that the converb *vererek* assigns dative and accusative to its two complements in the same way that the verb *verdim* does. So, the converb *vererek* retains the case-marking properties of its verbal root (*ver-*).

(3a) Anne-m-e kitab-ı ver-di-m
 mother-1sg.-dat. book-acc. give-past-1sg.
 “I gave my mother the book”
 (3b) Anne-m-e kitab-ı ver-erek
 mother-1sg.-dat. book-acc. give-conv.
 “Giving my mother the book”

The fact that converbial clauses in Turkish have the distribution of adverbs has already been addressed in (2). What is more, (3c) shows that the converb *gelerek* may be modified by the adverb *dün* but not the adjective *dünkü*.

(3c) [Dün/*dün-kü gel-erek] ben-i çok sevin-dir-di-n
 yesterday/ come-conv. I-acc. much be.happy-caus.-past-2sg.
 yesterday-adj.
 “You made me very happy by arriving yesterday”

This is, of course, the exact opposite of what normally happens with the corresponding noun, in (3d):

(3d) Dün-kü/*dün geliş-i ben-i çok sevin-dir-di
 yesterday-adj./ arrival-3sg. I-acc. much be.happy-caus.-past-2sg.
 yesterday
 “His/her arrival yesterday made me very happy”

As for Borsley & Kornfilt’s (2000) final point, (3e) shows that subjects on converb clauses that show nominal agreement may surface in genitive (as expected from subjects of nouns)

(3e) Biz bura-ya sen-in gel-diğ-in
 we.nom. here.-dat. you-gen. come-nomin.-2sg.
 kadar sık gel-mi-yor-uz
 as often come-neg.-prog.-1pl.
 “We are not coming here as often as you do”

However, this is not always the case:

(3f) Sen gel-ince-ye kadar Ahmet burada kal-acak
 you come-conv.-dat. until Ahmet here stay-fut.
 “Ahmet will stay here until you come”

We shall return to this issue later on, noting that the extent to which the subject of a verbally derived adverbial head in Turkish can appear in genitive or nominative varies depending on the choice of the nominalizing suffix.

3. Converbial clauses in Turkish: The different types

Let us now attempt a classification of the different kinds of converbial clauses in Turkish. We shall effectively split the list of *ulaç* (presented in the previous section) into seven distinct subtypes.

Type A

(4a) Eren ağla-yarak yan-ımız-dan ayrıl-dı
 Eren cry-conv. near-1pl.-abl. leave-past
 “Eren, crying, left us”
 (4b) Can koş-a koş-a ev-e dön-dü
 Can run-conv. run-conv. house-dat. return-past.
 “Can returned home running”

First of all, there are converb clauses that are headed by a true converb and their subject is obligatorily controlled by the matrix subject. These are *-(y)ArAk*, *-(y)A ...-(y)A*. The characteristics of type A are the following:

- i) they may not be followed by a postposition (contrary to what we shall argue is the case with other types of heads in converbial clauses) (see 5a),
- ii) Type A converbial clauses cannot surface in argument position; they are obligatorily adverbial adjuncts,
- iii) they do not exhibit nominal morphology on the converbial head (person, number, case) (see 5b),

- iv) they are not marked for morphological tense (and exhibit no semantic tense independence from the matrix clause, i.e. they inherit the time reference of the matrix),
 v) The subject of Type A converbial clauses is obligatorily controlled by the matrix subject (see 5c).

- (5a) *Eren ağla-yarak **ile** yan-ımız-dan ayrıl-dı
 Eren cry-conv. with near-1pl.-abl. leave-past
 “Eren, crying, left us”
 (5b) *Çocuk-lar gül-erek-**ler-i** soruy-a cevap ver-di-ler
 child-pl. laugh-conv.-pl.-3sg question-dat. answer give-past-pl.
 “The children answered the question laughing”
 (5c) *Can koş-a koş-a **Barış** ev-e dön-dü
 Can run-conv. run-conv. Barış house-dat. return-past.
 “By Can’s running Barış returned home”

Type B

- (6a) Murat İstanbul’-a **taşın-alı** biz-i unut-tu
 Murat Istanbul-dat. move-conv. we-acc. forget-past
 “Murat forgot us, since he moved to Istanbul”
 (6b) Bu şarkı-yı **dinle-dikçe** sen-i hatırl-ıyor-um
 this song-acc. listen.to-conv. you-acc. remember-progr.-1sg.
 “I remember you each time I listen to this song”
 (6c) Neriman kapı-yı **aç-mca** kayınvalide-si
 Neriman door-acc. open-conv. mother.in.law.-3sg.poss.
 ile karşılaş-tı
 with confront-past.
 “When Neriman opened the door, she saw her mother in law in front of her”

Converbial clauses of type B *-(y)All*, *-DI ...-(y)All*, *-DIkça*, *-(y)Inca* are similar to those of type A, in that they are headed by a true converb and in most other respects, but may exhibit a tense distinction from the main clause and, as expected, may take obviative subjects in nominative. They have the following characteristics:

- i) they may not be followed by a postposition (contrary to what we shall see is the case with other types of heads in adverbial clauses) (see 7a),
 ii) they cannot surface in argument position; they are obligatorily adverbial adjuncts,
 iii) they do not exhibit nominal morphology (person, number, case²),
 iv) Type B converbs may have difference semantic tense than that of the matrix predicate (see 7b),
 v) the subject of Type B converbial clauses may differ from the matrix one (see 7c).

- (7a) *Murat İstanbul'a taşın-alı **sonra** biz-i unut-tu
 Murat Istanbul-dat. move-convn. after we-acc. forget-past.
 “Murat forgot us for since he moved to Istanbul”

² Properties i) and iii) here do not readily apply to *-(y)Inca*, which can be found either in isolation or in its *-(y)IncaAyA kadar* variant, which obviously is introduced by a postposition and is case-marked. However, due to the fact that *-(y)Inca* is legitimate in isolation and has the properties mentioned in this section, as well as for lack of a more comprehensive classification, we will include *-(y)Inca* in this group, while we will argue that *-(y)IncaAyA kadar* is a Type D adverbial clause.

- (7b) Dün sabah-tan akşam-a kadar ayak-ta dur-unca
 yesterday morning-abl. noon-dat. till foot-loc. stand-conv.
 bugün bel-im ağrı-yor
 today back-1sg.poss. pain-progr.

“I have a backache today due to the fact that yesterday I was standing all day long”

- (7c) Osman bağır-arak konuş-tukça Zeynep sinirlen-iyor-du.
 Osman loud-conv. speak-conv. Zeynep get.irritated-progr.-past
 “Each time Osman spoke loudly, Zeynep was getting irritated”

Type C

- (8a) Tatil-e git-tiğ-im zaman yan-ım-a mutlaka birkaç
 vacation-dat. go-nom.-1sg. time near-1sg.-dat. definitely some
 kitap al-ır-ım.
 book take-hab.-1sg.

“Whenever I’m going on vacation, I definitely take some books with me”

- (8b) Düğün-ünüz-e katıl-a-ma-dığ-ım için üzgün-üm.
 wedding-2pl.-dat. join-necess.-neg.-nom.-1sg. for sad-1sg.

“I’m sorry I can’t join you at your wedding”

Contrary to Type A and B adverbial clauses, which are headed by a true converb, type C includes syntagms that are introduced by a postposition and contain a verbal root plus the nominalizer *-DIK* or *-(y)AcAk*. *-DIK* and *-(y)AcAk* are nominalizers that are also used in constructing (obligatorily nominal, in Turkish) complement clauses. They are usually called factive nominalizers and exhibit tense properties, with *-(y)AcAk* being [+future] (9a-b). Converbial clauses of the third kind allow for non-controlled subjects and show nominal agreement morphology (9c), as expected, due to their nominal core. They allow for obviative subjects in nominative or in genitive. Some members of this group are the following constructions: *-DIĞI kadarıyla*, *-DIĞI kadar*, *-(y)AcAĞI kadar*, *-DIĞI gibi*, *-DIĞI sürece/müddetçe*, *-(y)AcAĞI gibi*, *-DIĞI takdirde*, *-DIĞInA göre*, *-(y)AcAĞInA göre*, *-DIĞI zaman/vakit/gün/an/sırada*, *-(y)AcAĞI zaman/vakit/gün/an/sırada*, *-DIĞI için*, *-(y)AcAĞI için*, *-DIĞI nispette/ölçüde/oranda*, *-DIĞI sürece/müddetçe*, *-(y)AcAĞI gibi*, *-(y)AcAĞI sürece/müddetçe*, *-(y)AcAĞI yerde*, *-DIĞIndAn beri*, *-DIktAn sonra*, *-DIĞI / (y)AcAĞI halde* etc.

- (9a) Mehmet Bey oğl-u üniversite-den mezun
 Mehmet mister son-3sg.poss. university-abl. graduate
 ol-**duğ**-u için çok mutlu
 become-nom.-3sg. for very happy

“Mr. Mehmet is very happy that his son graduated”

- (9b) Mehmet Bey oğl-u üniversite-den mezun
 Mehmet mister son-3sg.poss. university-abl. graduate
 ol-**acağ**-ı için çok mutlu
 become-nom.fut.-3sg. for very happy

“Mr. Mehmet is very happy that his son will graduate”

- (9c) Böyle davran-ma-ya devam et-tiğ-in sürece
 this.way behave-nom.-dat. continue-nomin.-2sg. while
 sen-i affet-me-m mümkün değil.
 you-acc. excuse-nomin.-1sg. possible neg.
 “I can’t possibly excuse you while you continue behaving this way”

Type D

- (10a) Patron iş-ler-i erken bitir-me-m için bana
 Boss work-pl.-acc. early finish-nomin.-1sg. for me.dat
 baskı yap-ıyor
 press-progr.

“The boss presses me to finish work early”

- (10b) İki hafta iç-in-de geri öde-me-n
 two week in-3sg.-loc. back pay-nomin.-2sg
 şart-ı-yla sana borç ver-ebil-ir-im
 condition-3sg.-with you.dat. loan give-capabil.-habit.-1sg.

“I can give you a loan under the condition that you will return it to me in two weeks’ time”

Adverbial clauses formed with the *-mA* nominalizer and a postposition are similar to those of Type C. They are nominalized and, as a consequence, manifest nominal agreement. Their overt agreement marking may explain the fact that they allow a non-controlled subject (10b). Their sole difference is that they are [-tense], which is exactly the property of other *-mA* nominalizations (e.g. the same applies to nominalized complement clauses). Similar to Type C adverbial phrases, type D ones are introduced by a postposition and, thus, have the external distribution of a PP. Members of this group are the following: *-mAdAn önce*, *-mAsI durumunda*, *-mAsIyla beraber/birlikte*, *-mAsI yüzünden*, *-mAsI şartıyla*, *-mAsI için*, *-mAsI üzerine*, *-mAsInA rağmen*, *-(y)IncAyA kadar/dek/değın*, *-(y)AnA kadar/dek/değın* etc.

Type E

- (11a) Selim Nurdan’-ı gör-mek için İstanbul’-a gid-ecek
 Selim Nurdan-acc. see-inf. for Istanbul-dat. go-fut.

“Selim will go to Istanbul to see Nurdan”

- (11b) Kaan bu güzel hava-da ders
 Kaan this nice weather-loc. lesson
 çalış-maktansa arkadaş-lar-ı-yla buluş-ma-yı tercih et-ti
 work-conv. friend-pl.-3sg.poss.-with meet-nomin.-acc. prefer-past.

“Due to this nice weather, Kaan preferred meeting his friends to doing his homework”

Type E is parallel to the ones just mentioned, as its members are formed by annexation of the infinitival suffix *-mAk* and a postposition. As happens in normal infinitival complement clauses in Turkish, these clauses are [-Tense -Agreement] and, predictably, do not have an independent morphological time specification (12a) and allow only for controlled subjects (12). Members of this group are the following syntagms, among others: *-mAktAn başka*, *-mAk üzere*, *-mAk için*, *-mAktAnSA*, *-mAk yerine*, *-mAk varken*, *-mAkla birlikte/beraber*, *-mAk şartıyla*.

- (12) *Orçun hastaneye git-mek için biz taksi-ye bin-di-k
 Orçun hospital-dat. go-inf. for we taxi-dat. get.on-past.-1pl.
 “We got on a taxi so that Orçun will go to the hospital”

Type F

- (13a) Kapı-yı aç-tığ-ım-da köpek kaç-tı.
 door-dat. open-nomin.-1sg.-loc. dog escape-past.
 “As soon as I opened the door, the dog escaped”
 (13b) Ayakkabı-lar-ın-ı çıkar-madan ev-e gir-me
 shoe-pl.-3sg.poss.-acc take.off-conv. house-dat. enter-neg.
 “Do not enter the house without taking off your shoes”

What is interesting in Turkish is the existence of (so-called) *ulaç* that consist of no converbial markers and no postposition. These are nominalized clauses in oblique cases that merely occupy adjunct positions. These are formed with a nominalizer plus agreement or case suffixes e.g. *-mAdAn*, *-DIğIndA*, *-(y)AcAğInA*. The fact that oblique case-marked Ns may appear as adjuncts to Vs is a well-documented fact both in Turkish and a number of other languages. *Ulaç* such as these constitute type F. Its members are nominalized verbs that are not followed by a postposition:

- (14) *Sumru bakkal-dan makarna al-acağına yerine pirinç
 Sumru grocer-abl. pasta take-conv. instead rice
 al-mış
 take-evid.past.
 “Sumru bought rice from the grocery instead of pasta”

Type G

- (15) Yemek pişir-ir-ken radyo dinle-di-m.
 food cook-hab.-conv. radio listen.to-past.-1sg.
 “As I was cooking, I was listening to the radio”

Last, but not least, Turkish possesses a subordinating suffix or postposition, *-ken*, which may attach to a non-nominalized, fully formed TP which inflects for tense and aspect but not for agreement (15) and acts as a temporal subordinator. This is type G of converbial clauses.

- (16) *Tam ev-den çık-acağ-ım-ken telefon çal-dı.
 as house-abl. exit-fut.-1sg.-conv. phone ring-past
 “As I was leaving the house, the phone rang”

4. Greek converbs

Before entering the discussion of the possible common core of adverbial clauses in Turkish, let us take a look at Greek converbs. Greek converbs (i.e. *-ondas* forms) have been traditionally termed active participles (Tzartanos [1946] 1989), gerunds (Holton et al. 1997, Tsimpli 2000, among many others), and converbs (Moser 2006). In this paper, we adopt Moser’s (2006) proposed term, as already discussed in the introductory section of this paper. Greek converbs are formed by suffixation of *-ondas* onto the imperfective stem of the active voice paradigm:

- (17) *trex-ondas*
run.imperf.-conv.
“running”

Greek converbs, as well as those in a number of other languages, cannot appear in argument positions (18), cannot be nominalized (19) and cannot be complements of prepositions (20).

- (18a) *[*akuyondas ðinata musici*] *mu efere ponocefalo*
listen.conv. loudly music cl.1sg.gen. bring.past.3sg headache.acc.
“Listening to loud music gave me a headache”
- (18b) **θelo [γرافοντας καθαρά γραμάτα]*
want.1sg. write.conv. clear letters
“I want to write clearly”
- (19) **to ðjavaz-ondas*
the read-conv.
“reading”
- (20) **kurastice apo [(to) ðjavazontas ena vivlio]*
get.tired.past.3sg. from the read-conv. a book
“(S)he got tired from reading a book”

Greek converbs function as adverbial modifiers and split into two distinct types: (a) manner converbs/gerunds and (b) absolute converbs/gerunds (also called temporal gerunds). The former, as their name suggests, are modifiers of manner, while the latter may have a number of different interpretations (most notably temporal, but also conditional, causal etc.). Apart from their semantic differences, the two types diverge in a number of syntactic respects. Manner converbs are incompatible with negation and cannot have a time reference that is independent from that of the matrix predicate/T. Absolute converbs are compatible with the negation particle *mi(n)* and can be modified by temporal adjuncts that denote different time than that denoted by the matrix predicate.

The control properties of Greek converbs have been discussed, among others, by Tsoulas (1996), Tsimpli (2000), Haidou & Sitaridou (2002), Panagiotidis (2010) and Kotzoglou (2016). The covert subject of Greek manner converbial clauses is necessarily controlled by the subject of the superordinate clause.

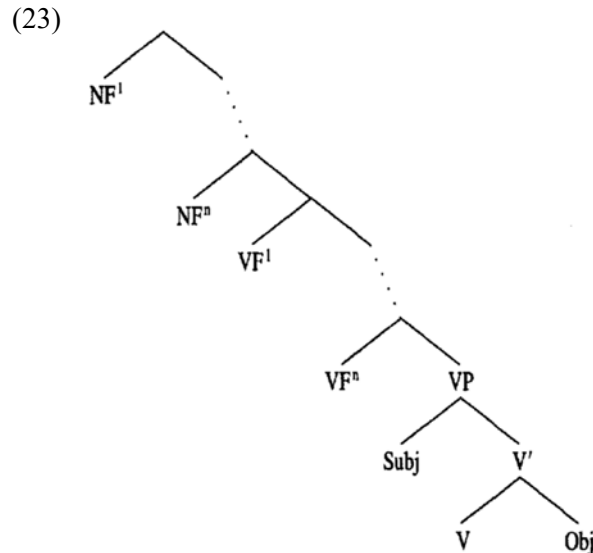
- (21) [*o nikos*]_i *citaze* [*ti maria*]_j
the Nikos.nom. look.past.3sg. the Maria.acc.
[*e_i/*_j/*_k kley-ondas*]
cry-conv.
“Crying, Nick was looking at Mary”

In absolute ones the requirement for obligatory control is laxer as can be seen in (22) (from Moser 2006: 50, but see Kotzoglou 2016):

- (22) [*vjenondas o nikos apo to mayazi*]
come.out.conv. the Nick.nom. from the shop
arçise na çonizi.
start.3sg.perf.past. subj rain.3sg.imperf.
“As Nick came out of the shop, it started snowing”

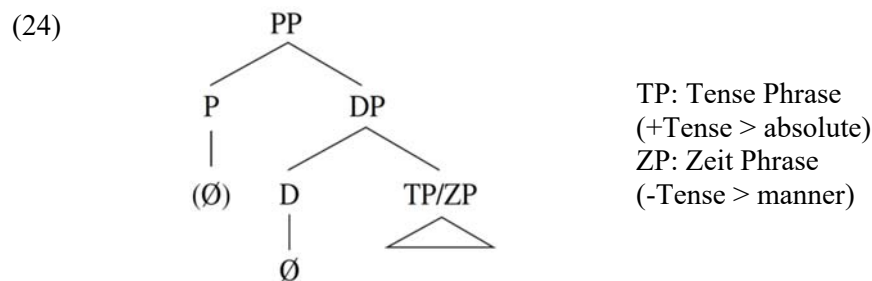
5. On mixed projections

Quite useful in our discussion of the morphosyntactic properties of Turkish and Greek converbial clauses will be the notion of mixed projection. Borsley & Kornfilt (2000), building on Grimshaw's work on extended projections, argue that gerunds (or converbs) in a number of languages are mixed projections, combining a verbal core with nominal functional structure, as seen in this phrase marker (from Borsley & Kornfilt 2000: 103):



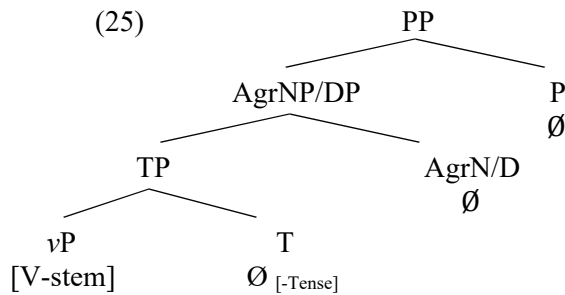
Indeed, as we saw in the examination of Turkish converbial clauses, the properties of the internal domain of converbial clauses (i.e. their valency and the fact that they are modified by adverbs) are verbal, whereas their peripheral properties (agreement and case marking of subjects) are nominal.

Although Greek converbs do not exhibit any nominal behaviour, Panagiotidis (2010) argues that Greek (and Hebrew) gerunds are TPs/ZPs headed by a null D head, which is in turn complement to a null P.³ The differences between manner and absolute ones are to be attributed to the existence or not of a Tense head. Absolute ones are Tense phrases while, in Panagiotidis' terms, manner ones are Zeit Phrases, as seen in (24) (from Panagiotidis 2010: 178):

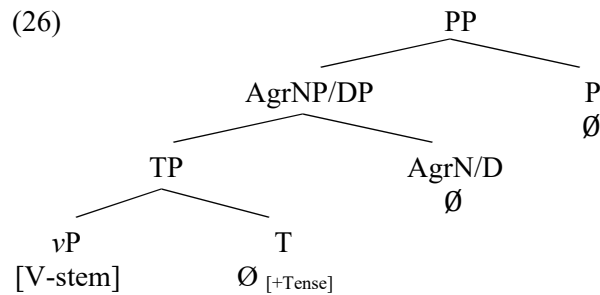


³ An anonymous reviewer asks for Panagiotidis' (2010) arguments in favour of positing both a null D and a null P in Greek converbs, which exhibit no nominal morphology and are never introduced by a preposition. Panagiotidis argues that in Greek, positing no D-layer would mean that converbial clauses are *v*P-chunks, but such a claim would not justify their distribution. What is more, the fact that Greek DPs may appear in adjunct positions (e.g. *o nikos irthe to proi* / Nick arrived the morning / Nick arrived in the morning), might be explained by the postulation of a null P on independent grounds in several occasions.

Extending Panagiotidis’ analysis to Turkish converbial clauses formed by a converb suffix, that is Type A and B above, we may argue that obligatorily controlled type A converb-headed converbial clauses might involve a [-Tense] TP being complement to a -Agr_N-headed AgrNP/DP, which is, in turn, complement to a null P(ostposition), as in (25). The claim, then, is that a null +Tense head which is complement to a null AgrNP/DP, which is complement to a null P gets morphologically realized as *-(y)ArAk*, *-(y)A ...-(y)A*:



In a similar fashion, we would like to claim that non-obligatorily controlled converb-headed converbial clauses of Type B *-(y)AlI*, *-DI ...-(y)AlI*, *-DIkçA*, *-(y)IncA* are the realization of a null [+Tense] TP being complement to a -Agr_N-headed Agr_NP/DP, which is, in turn, complement to a null P. This postulation explains their temporal independence from the matrix predicate and –to the extent that temporal independence is prerequisite for the possibility of obviation– the licitness of non-controlled subjects in Type B converbial clauses. Schematically:



This analysis of Type A and Type B true converbs (and not merely adverbial clauses) in Turkish brings forth the similarities between these and the two types of Greek converbial clauses. They both involve a TP – AgrNP/DP – PP series of projection with heads that are phonologically null. The difference between the two respective sub-kinds in each language depends on whether T is plus or minus tense. The [+Tense] variants allow for subject obviation, while [-Tense] gerunds in both languages come with obligatorily controlled subjects.

- (27) Greek converbs:
 [PP ∅ [DP ∅ [TP ∅_[-tense] [AgrP ∅ [vP ...]]]]] > manner *-ondas*
 [PP ∅ [DP ∅ [TP ∅_[+tense] [AgrP ∅ [vP ...]]]]] > absolute *-ondas*
 Turkish converbs
 [[[[... vP] ∅_[-tense] TP] ∅ AgrNP/DP] ∅ PP] > Type A converbs
 [[[[... vP] ∅_[+tense] TP] ∅ AgrNP/DP] ∅ PP] > Type B converbs

A question that may arise is the following: since both Greek *-ondas* (for both manner and absolute converbs) and Turkish *-(y)ArAk*, *-(y)A ...-(y)A*, *-(y)All*, *-DI ...-(y)All*, *-DikçA*, *-(y)IncA* are the late-inserted suffixes that, in a DM-fashion, realize a succession of three phonologically null heads, what does give rise to (a) their phonological difference and (b) their difference in meaning? The answer is simple: although phonologically null, the TP – AgrNP/DP – PP succession is by no means devoid of content. We saw that T, for example, might be [+/-Tense], a fact that explains the differing control properties of Type A vs. Type B. Similarly, the P head, although phonologically null before late insertion and although not realized by a specific independent morpheme, contributes a different meaning in, say, *-(y)ArAk* (manner) from *-DI ...-(y)All* (tense). In other words, both the final form and the ultimate meaning of Turkish Type A and B converbs depends on the choice of different silent Ps.

6. On Turkish Type C-G adverbial clauses and the relevance of the functional hierarchy

So far, we have argued for the existence of null/morphologically unrealized projections above *v*P. A legitimate question would be why we need to suggest that a temporal layer (TP) and a nominal/agreement layer (AgrNP/DP) and even a prepositional layer (PP) dominate the *v*-head, since independent exponents of these heads do not surface in Greek converbs or Turkish Type A/B ones. The postulation of their existence, well established in theoretical grounds, would be boosted if overt exponents of every single of these heads were visible at some point.

Luckily, they are in Turkish. Type C, D, E clauses are P(ostpositional)Ps with an overt P and a nominalized DP complement, their differences stemming from the kind of nominalizer:

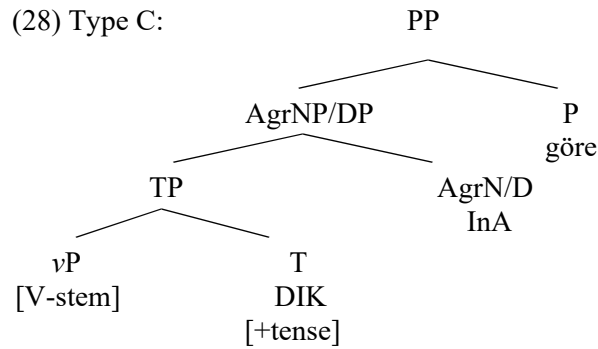
a) *DIK/(y)AcAk* show a [+/-future] distinction and bear nominal morphology (Agreement & Case) and are [+Tense, +AgrN],

b) *mA* is [-Tense]. It can bear nominal morphology. So: [-Tense, +AgrN],

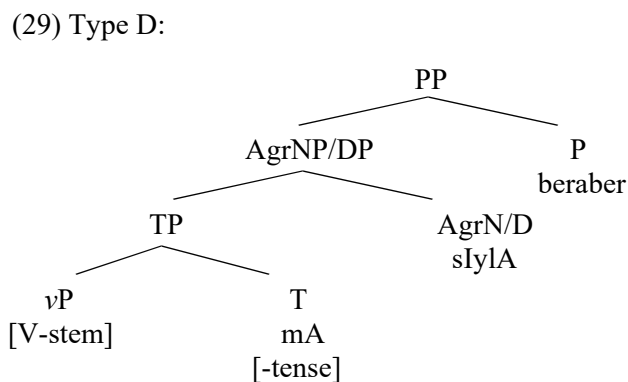
c) *mAk* is the infinitival suffix. The infinitive may be case mark (in case it appears in a position where structural case can be assigned), but does not inflect for Tense or Agreement (either verbal or nominal). So: [-Tense, -Agr].

Note that the above-mentioned differences between the three nominalizers are not *ad hoc*. These are also the differences found in the corresponding nominalized complement clauses, where it is established that *-DIK/-(y)AcAk* is a realis/factive nominalizer, *-mA* is an irrealis nominalizer, and *-mAk* is an infinitival suffix (actually, the nonfinite allomorph of *mA*) (cf. the discussion in Lees 1963, George & Kornfilt 1981, Kennelly 1987, Kornfilt 2001, 2007, among others).

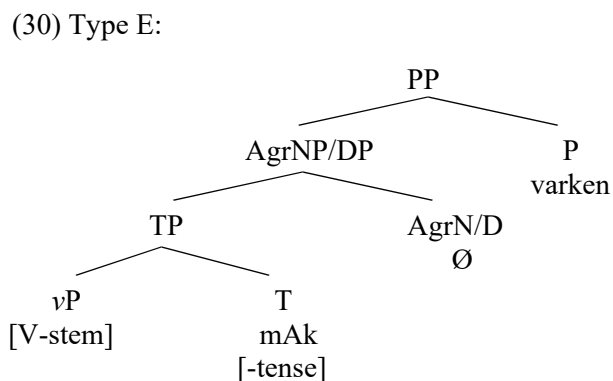
This means that type C Turkish adverbial clauses, the ones formed by *-DIK/-(y)AcAk* and followed by a postposition, is a case where both AgrN/D and P do get realized, as seen on (15), for, for example, *-DIğInA göre*. So, our proposal is that they have the same phrase structure as type A and B.



The same applies to *mA*-nominalized adverbial clauses introduced by a postposition. Their only difference is that they are [-Tense]:

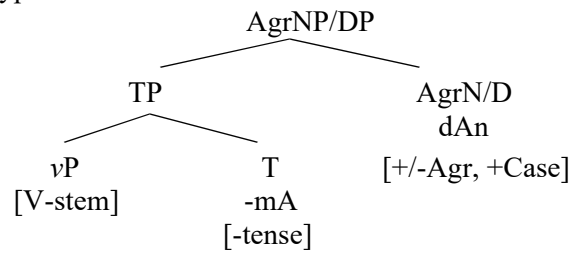


And, of course, the nominalizer-postposition sequence can also be spotted in Type E infinitival adverbial clauses. The difference here is that these are both [-Tense] and [-Agreement], hence their PRO subject and the requirement for obligatory control. (Note that *-mAk* actually realizes both [-T, -Agr]).



Type F converbial clauses are neither headed by a converb nor introduced by a postposition. They are nominalized clauses that get an oblique case and perform an adverbial function by means of their case-marking. So, we may argue that, in comparison to the rest, they lack the PP-layer:

(31) Type F:



Finally, type G adverbial clauses (those formed by the suffix *-ken*) are neither headed by a converb nor introduced by a postposition. They are normal clauses lacking Agr, but fully specified for verbal tense and aspect. So, we may argue that, in comparison to the rest, they lack the AgrNP/DP-layer. We remain agnostic as to the true nature of *-ken*. Suffice it to say that it behaves as an affixal postposition/complementizer. (A dual status that comes as no wonder as Ps and Cs are related functional elements, cf. the dual nature of English *for*).

(32) Type G:

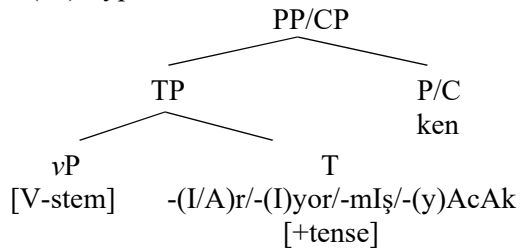


Table 1 summarizes our claim so far and brings forth the common features of superficially unrelated structures. It can be seen that adverbial clauses in the two languages are uniformly either DP or PPs and their differences are to be found in the featural makeup of the head of the TP, DP and PP projections that form them.

Table 1. Types of converbs in Turkish and Greek

Type	Tense	AgrN/D	Postposition	Example
A	-	-	covert	-(y)ArAk / Greek manner <i>-ondas</i>
B	+	-	covert	-(y)AlI / Greek absolute <i>-ondas</i>
C	+	+	overt	<i>-DIğI kadar</i>
D	-	+	overt	<i>-mAsıyla beraber</i>
E	-	-	overt	<i>-mAk için</i>
F	-	+/-	No PP layer	<i>-DIğIndA</i>
G	+	No DP layer	overt	<i>-(I/A)r/-(I)yor/-mIş/-(y)AcAk/-ken</i>

7. Advantages of the proposed analysis

Let us now turn to the benefits of the proposed analysis. We would like to claim that decomposing converbial clauses into their morphosyntactic features brings forth a number of both cross- and intra-linguistic similarities. For example, it can be seen that Turkish Type C-D converbial clauses (the ones that are finite by virtue of their [+Agr]

specification) are similar to corresponding nominalized complement clauses *modulo* the existence of a postposition in the former. So, in (33) the similarity between the converbial *onun istediği gibi* and the verb's complement *onun istediğini* is more than obvious.

- (33a) Yemeği [o-nun iste-diğ-i gibi] yap-tı-m
 meal.acc. s/he-gen. want-nomin-3sg. like make/do-past-1sg.
 “I made the meal the way s/he wanted”
 (33b) [O-nun iste-diğ-in]-i yap-tı-m
 s/he-gen. want.nomin.-3sg.-acc. make/do-past-1sg.
 “I did what s/he wanted”

Similarly, type E *ulaç*, the ones formed by the infinitival suffix and a postposition, are quite similar to corresponding infinitival clauses *modulo* the existence of a postposition in the former (see the adverbial *üniversitede okumak için* versus the direct object *üniversitede okumak*):

- (34a) Üniversite-de oku-mak için kredi al-dı-m
 university-loc. study-inf. for loan take-past.-1sg.
 “I took a loan to study at the university”
 (34b) Üniversite-de oku-mak iste-di-m.
 university-loc. study-inf. want-past.-1sg.
 “I wanted to study at the university”

The proposed analysis of postpositionless adverbial clauses, namely the postulation that they are plain nominalized DPs, makes them similar to nominalized complements. Indeed, there does not seem to be any formal difference between Type F converbial clauses (as in 35b) and the corresponding complement clauses (as in 35a) other than the configurational position of the clause (argument vs. adjunct). So, here adverbiality arises not due to some morphological property of the clause but rather due to its position. (And, therefore, it is quite questionable whether these should be called adverbial clauses at all).

- (35a) [Ev-e gel-eceğ-i-ne] çok sevin-di-m
 home-dat. come-nomin.-3sg.-dat. much be.happy-past-1sg.
 “I was glad that s/he will come home”
 (35b) [Ev-e gel-eceğ-i-ne] ofis-e git-miş
 home-dat. come-nomin.-3sg.-dat. office-dat. go-evident.
 “S/he went to the office, it seems, instead of coming home”

A further intra-linguistic similarity that we would like to draw attention to is that between *ulaç* and plain postpositional PPs in adjunct positions. As seen in (36), the sole difference between postpositional adverbial clauses and PPs with a “plain” DP complement is the fact that the former have a clausal internal structure. Their external distribution is the same, as expected by the fact that they are PPs.

- (36a) [[Niko'-nun dön-me-si_{DP}] için_{PP}]
 Nick-gen. returnV-nomin.-3sg. for
 “for Nick to return”

(36b) [[dönüş_{DP}] için_{PP}]
 return for
 “for the return”

Other intra-linguistic similarities of different types of Turkish adverbial clauses, similarities which can be explained once the decomposition we are proposing is taken into account, are the following:

a) Type C, D, E converbial clauses (that is *-DIK/-(y)AcAk*, *-mA*, and *-mAk*, respectively) exhibit parallel tense and control properties with those of the corresponding complement clauses. These are attributed to the TP-layer and to the choice of the nominalizer and neither to P nor to the configurational position of the converbial clause.

b) Type A and E (infinitives) show obligatory control properties due to their [-Tense, -Agr_N] specification.

c) Type B, C, D allow for non-coreferential subjects due to their being either [+Tense] or [+Agr_N] feature (or both).

Now, some of the similarities and differences between Turkish and Greek converbial clauses are the following:

a) As we indicated in section 4, Greek converbs and Turkish Type A, B converbs have parallel structures, which is a fact that explains their similar tense and control properties.

b) Greek converbs uniformly lack an overt preposition, unlike some (but not all) of the Turkish converbial syntagms which contain a postposition.

c) Greek converbs are more limited in possible meanings than Turkish converbial clauses, as Turkish performs a great number of functions through *ulaç*.

d) Greek converbs never manifest overt nominal (or verbal) morphology.

e) Greek and Turkish Manner converbs have similar control properties to type E (infinitives), while Greek and Turkish absolute converbs allow obviation (as type C, D) due to their respective parallel [+/-T, +/-Agr] properties.

We should note here that Greek has a kind of nominalized clauses. Roussou (1991) has shown that in Greek CPs may be introduced by a D head so as to appear in the subject position of clauses. This makes them similar to Type G Turkish converbial clauses:

(37) to [oti pandreftike o sotiris]
 the that get.married.past.3sg. the Sotiris.nom.
 enoxlise tus filus tu
 bother.past.3sg. the friends.acc. his
 “Sotiris’ getting married annoyed his friends”

However, some differences also obtain:

a) In Greek D takes a fully-fledged CP as its complement, while in Turkish Type G converbial clauses P selects a TP.

b) Greek nominalized clauses bear no other nominal morphology apart from D.

c) Turkish type G clauses do not inflect for subject agreement, while Greek nominalized subordinates do.

8. Conclusion

To summarize our findings so far, especially as regards the rich Turkish adverbial landscape, Turkish *ulaç* do not form a structurally homogeneous category. Some are headed by converbs, in which case they are parallel to Greek manner and absolute converbs, but most of them are nominalized clauses that are simply complements to certain postpositions.

In this paper we attempted to bring to the fore the underlying similarities both between Turkish and Greek converbs and between Turkish/Greek converbs and Turkish adverbial phrases with a verbal core that are complements to a postposition. We proposed a new typology of Turkish and Greek adverbial clauses, according to which Turkish exhibits seven distinct types of verbal adverbial clauses, of which Greek manifests only the first two. We further argued that these types roughly share the same clausal skeleton with the intricate morphosyntactic properties of each getting explained by its functional makeup (i.e. with the features realizing –or not– the heads of these functional projections).

Some of the desiderata for future research are:

- a) the further unification of the categories (e.g. all postposition-formed *ulaç*), if possible,
- b) the discussion of the case properties of the subjects of obviative converbial clauses (possibly in the spirit of the Nom/Gen discussion in Kornfilt 2006 and Aygen 2002), and
- c) the discussion of the observation that some *ulaç* are in the process of language change, moving from either an analytic to a synthetic (and possibly grammaticalized) form, or towards a (cf. Öztürk's (2003) proposal that *-(y)InçA*, *-DIKÇA*, *-ken* are aspect markers).

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