

## FUTURE ORIENTATION IN ADVERBIAL TIME CLAUSES IN THE BALKAN LANGUAGES

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В статье обсуждаются возможности выражения события с будущей ориентацией в обстоятельственных придаточных предложениях времени в балканских языках с использованием корпусного подхода. В албанском, румынском и греческом языках можно выразить будущую ориентацию посредством морфологически маркированной формы будущего времени, в то время как в болгарском языке она выражается посредством формы настоящего времени. Данное явление проиллюстрировано аутентичными примерами из четырех корпусов.

The paper reviews the possibilities for expressing events with a future time orientation in subordinate temporal adverbial clauses in Balkan languages by applying a corpus-based approach to analysis. In Albanian, Romanian, and Greek future time orientation can be expressed through a form morphologically marked for futurity, while in Bulgarian such meanings are expressed through form marked for present tense. The phenomenon is analysed on the basis of authentic linguistic material excerpted from language corpora.

*Keywords:* temporal orientation, morphological marking, Balkan languages

### 1. Introduction

The study aims at analyzing adverbial time clauses with future orientation in the languages of the Balkan *Sprachbund* (Bulgarian, Greek, Albanian and Romanian) by applying a corpus-based approach. A time clause is a type of dependent adverbial clause describing events that are anterior, posterior or simultaneous to the event in the main clause. Time clauses are typically headed by the subordinator ‘when’, but also by other subordinators.

In the Indo-European languages, several models to express a future-oriented event in an adverbial time clause can be detected:

- Not marking future tense in the dependent clause, as in English where future in time clauses is ungrammatical and only present is allowed:

(1) *John will come when Mary leaves.*

\* *John will come when Mary will leave.*

- Explicitly marking the future orientation (with grammatical markers for future tense), as in French:

(2) *Je voudrais être là quand tu viendras.*

- Other marking to express a hypothetical event, e.g. use of subjunctive mood, as in Albanian:

(3) *Kur të vish, mos trokit.*  
when SBJV come-PRS.SBJV. 2SG NEG knock-PRS.IMP.2SG  
'When you come, don't knock'

In the first model the future orientation is not morphologically marked in any way and the future reading of the dependent clause is provided by the main clause in which the event is described as not having happened yet. The use of the so-called relative present tense [cf. Nitsolova 2017: 392] in the dependent clause whose reference can be contextually determined with respect to the reference point in the main clause occurs in three types of dependent clauses:

- time clauses:

(4) *When you come back, I'll have the hardware.*

- conditional clauses:

(5) *If you stay here, Hadad will very likely return for you.*

- noun clauses in subject position (free anaphoric clauses according to Holton et al. 1998, i.e. without antecedent in the main clause):

(6) *Whoever goes will need a backup way to return.*

The types of dependent clauses where the present is used instead of future have similar structure and semantics. The event in the dependent clause acquires future orientation, because the event in the main clause is presented as not having happened yet: it is expected to happen (expressed by the future tense) or it is possible/necessary to happen (with a modal linguistic expression – imperative, conditional, subjunctive, subjunctive-like constructions, modal verbs, etc.):

(7) *If you come to the excursion, I will come too.*

(8) *When you arrive, call us.*

(9) *Whoever remains the last should close the windows.*

(10) *When this happens, I would help with whatever I can.*

(11) *When you get to the crossroad you must turn left.*

(12) *When you do all the exercises, you can go home.*

In a 2000 paper, Eva Hedin presents the results of an investigation based on the EUROTYP questionnaire for future time reference containing eight sentences with conditional clauses and seven with temporal clauses to be translated by native speakers [Hedin 2000]. Data about future marking in time and condition clauses for 28 languages and language varieties are presented. Nearly half of the languages do not mark future time reference in the dependent clauses. Among the rest, at least two (French and Macedonian) use future markings systematically in time clauses, but not in condition clauses. The opposite possibility does not occur in the reviewed language material. Consequently, this is compatible with the hypothesis that future time reference marking in conditional clauses implies marking in time clauses (but not the other way around).

On the basis of the EUROTYP questionnaire the following trends in the Indo-European languages can be outlined:

- In the Germanic languages future orientation is expressed by present tense, future marking is not allowed;
- In the Celtic and the Baltic languages future marking is possible;
- The Romance languages do not form a consistent group with respect to future marking and make use of different strategies to express future orientation: future marking is frequent in Italian, Portuguese and Romanian; in French it is possible only in time clauses, but not in condition clauses; in Spanish present subjunctive is used;
- In the Slavic languages future marking is not allowed in Bulgarian; it is allowed in the other Slavic languages, but with different frequency; in Serbian the so-called second future is used, which is formed with the auxiliary 'be' and the past active participle (*бyдем падуo*). Macedonian differs from Bulgarian by allowing for future marking in time clauses.

## **2. Expressing a future-oriented event in adverbial time clauses in the Balkan languages**

The model with explicit marking of the future orientation is typical for the Balkan languages, except for Bulgarian. In Greek, Albanian and Romanian explicit future marking is optional so future orientation of the dependent time clause can be expressed both by present and future verb forms. Nevertheless, the future model seems quite frequent.

- (13) *Όταν θα λάβεις αυτό το γράμμα, εγώ θα είμαι*  
 when FUT take-2SG-PFV this DEF letter-ACC. I FUT be-1SG

*πολύ μακριά.*

very far

‘When you take this letter, I will be far away.’

- (14) *Kur do të vish, do të bisedojmë shtruar për të*  
 when FUT come2SG FUT discuss-1PL easily about ART

*gjitha.*

everything

‘When you come, we will discuss everything at ease.’

- (15) *Când vei veni, vom învăța unul*  
 when want-AUX.FUT.2SG come-INF want-AUX.FUT.1PL learn-INF one-DEF

*de la celălalt.*

from another

‘When you come, we will learn from each other.’

Bulgarian, on the other hand, does not follow the “Balkan” model: similarly to English, only present tense is possible in this type of dependent clauses, of both perfective and imperfective verbs. The hypothesis that future orientation is related to perfective aspect as a Slavic feature in Bulgarian (cf. Иванчев 1971; about future orientation of ‘until’-clauses: Пенчев 2001) is not entirely confirmed by language data, as imperfective may be interpreted as future-oriented too. The examples below show that the time clauses with perfective and imperfective verb differ in terms of event type, but not in terms of orientation:

- (16) *Когато дойдеш, ще ти разкажа.*  
 when come-PFV.2SG FUT you-DAT tell-PFV.1SG

‘I will tell you when you come.’

- (17) *Когато идваш, ще ядеш тук.*  
 when come-IPFV.2SG FUT eat-IPFV.2SG here.

‘(Every time) you come, you will eat here.’

As already mentioned, in Greek, where perfective aspect can also be used to express futurity, there are no restrictions for future marking in dependent clauses. In other Slavic languages (also distinguishing between perfective and imperfective aspect) future marking is allowed too, as in Russian:

- (18) *Захочешь это, когда **посмотришь** её.*

‘You will start wanting it when you take a look at her.’

- (19) *Когда ты **будешь смотреть** на небо, я буду там.*

‘When you look at the sky, I’ll be there.’

(20) *Когда ты будешь играть доброго, ищи где он злой, а в злом ищи где он добрый.*  
'When you play the good, look for his bad side, in the bad look for the good side.'

Therefore, the hypothesis that perfective aspect blocks the future marking in Bulgarian by making it redundant is disproved by other languages where perfective and future may occur together.

### 3. The corpora

To perform our study we used four corpora (one for each language) available online.

The Bulgarian National Corpus (BulNC), available at [search.dcl.bas.bg](http://search.dcl.bas.bg), is designed by a team of the Institute for Bulgarian language at the Bulgarian Academy of Sciences. It contains a large variety of texts of different size, media type (written and spoken), style, period (synchronic and diachronic), and languages, grouped in a monolingual part and parallel corpora, counting up to 5,4 billion words. The design of the corpus is based on the three classificatory features of style, domain and genre. Additionally, it is supplied with rich metadata. The linguistic annotation in the BulNC is divided into general monolingual annotation (tokenisation and sentence splitting), available for all languages, and detailed monolingual annotation, available only for Bulgarian and English, which includes morphosyntactic tagging (POS tagging and rich morphological annotation), and lemmatisation. The Bulgarian texts are automatically annotated using the Bulgarian language processing chain that integrates a number of tools: a regular expression-based sentence splitter and tokeniser, an SVM POS-tagger, a dictionary-based lemmatiser, a finite-state chunker, and a wordnet sense annotation tool (for details, see Koeva et al. 2012).

The Reference Corpus of the Modern Romanian Language (CoRoLa), available at [corola.racai.ro](http://corola.racai.ro), was launched in December 2017 by the Research Institute for Artificial Intelligence and the Institute of Computer Science at the Romanian Academy. The CoRoLa contains both written and oral parts. The written texts comprise 1 billion+ tokens and are distributed in an unbalanced way in several language styles (legal, administrative, scientific, journalistic, imaginative, memoirs, blogposts), in four domains (arts and culture, nature, society, science) and in 71 subdomains. The oral part consists of almost 152 hours of recordings, with associated transcribed texts. The written texts are automatically sentence-split, tokenized, part-of-speech tagged, lemmatized; a part of them are also syntactically annotated. The oral files are aligned with their corresponding transcriptions at word-phoneme level. The transcriptions are also automatically part-of-speech tagged, lemmatised and syllabified (Barbu Mititelu, Tufiş, Irimia 2018).

The Albanian National Corpus, available at <http://web-corpora.net/AlbanianCorpus/search/>, is built by a team of linguists from Moscow and Saint Petersburg. The first edition contained only 1 million tokens, but after being enlarged and improved, currently it comprises 20 million tokens. The main corpus includes a variety of texts: fiction, drama, memoir documentaries, journalism, scientific papers and textbooks, religious, official and legal texts. All the texts are subjected to normalisation according to the orthographic standard. The annotation is performed automatically by means of a morphological analyzer, including lemmatization, part-of-speech tagging and morphological marking (Morozova and Rusakov 2015).

The Corpus of Modern Greek, available at <http://web-corpora.net/GreekCorpus/search/>, is also created at the Russian Academy of Sciences. The corpus comprises 35,7 million tokens. The main text variety is journalism, additionally there are fiction texts of 50 authors of the 19<sup>th</sup> and 20<sup>th</sup> century, both Greek and translated. The search engine allows for searching by language variety (dimotiki or katharevousa) and by orthography (monotonic or polytonic) [Архангельский и Кисилиер 2018].

The corpora presented have different size, structure and annotation schemata, and, additionally, they use different search engines, except for the National Corpus of Albanian and the Corpus of Modern Greek, which are close in terms of volume, follow similar annotation model and use the same interface. The differences between the corpora do not allow for a uniform search approach. The biggest inconvenience is the difference in size, as the number of occurrences of a given language feature or phenomenon would be much higher in a larger corpus than in a smaller one, which makes the comparison between languages irrelevant. That is why in our study we would rather focus on ratios than on numbers. Nevertheless, corpora provide quantitative data that could support or reject a given hypotheses and, not less important, they are a source of authentic language examples.

#### 4. The languages

Some peculiarities of the languages under study (Bulgarian, Romanian, Albanian and Greek) turned out to hinder the corpus search and to increase the noisy results.

Romanian and Albanian do not distinguish between relative and interrogative pronouns and adverbs. While in Bulgarian and Greek relative and interrogative pronouns and adverbs are expressed by different words (Bulg. *кога* ‘when<sub>interrogative</sub>’ / *когато* ‘when<sub>relative</sub>’, Gr. *πότε* ‘when<sub>interrogative</sub>’ / *όταν* ‘when<sub>relative</sub>’), in Romanian and Albanian one word is associated with both interrogative and relative meaning (Rom. *când*, Alb. *kur* ‘when<sub>interrogative</sub>’ / ‘when<sub>relative</sub>’). Subsequently, interrogatives could not be excluded from the results unless they

are annotated as such. Neither the Romanian, nor the Albanian corpus we used cover this type of annotation.

Bulgarian and Greek have morphologically marked verb aspect. In both languages perfective in dependent time clauses is related to future orientation and this feature does not have a correspondence in Romanian and Albanian. On the other hand, in Albanian subjunctive is possible in adverbial time clauses. Another peculiarity of Romanian is the use of three types of future tense that could occur in adverbial time clauses. This lack of full correspondence motivated the slightly different approaches to the respective languages.

Finally, even in the most restrictive languages, future marking is allowed if there is an antecedent in the main clause. Even though the same subordinator is used, the type of dependent clause is different, i.e. bound relative clause.

(21) *She looks forward to **the day** when she **will see** one of her titles on the big screen.*

As none of the annotation schemata of the corpora we use covers co-reference, sentences with an antecedent in the main clause could not be excluded from the results. In what follows, we will mention such sentences as part of the search results that are irrelevant for our study, but cannot be avoided.

### **Method of search and analysis of the data**

Provided that our aim is to detect adverbial time clauses with future orientation, the search method relies on a combination of a subordinator that introduces the clause and a verb form that indicates the future orientation. Among the possible subordinators in the four languages we included only the most frequent one – ‘when’, which typically introduces adverbial time clauses. All the corpora we use are supplied with morphological annotation and allow for searching by temporal form, future and present. For Albanian we added present subjunctive and for Bulgarian and Greek perfective and imperfective aspect.

Two types of search have been carried out consecutively: i. The general search is based on the formula ‘when’ + *present* vs. *when* + *future* and aims at indicating the ratio between two tenses used after the subordinator. ii. For the concrete search we chose a verbal lexeme with high frequency and neutral semantics and we replaced the temporal form with the lexeme in the respective tense: ‘when’ + *come<sub>present</sub>* vs. ‘when’ + *come<sub>future</sub>*. It aims at confirming (or rejecting) the results obtained by the general search and, additionally, due to the lower number of the results, it allows for manual counting.

Taking into account that we analyze a syntactic structure containing a morphological form, a number of usage-specific features cannot be captured, for example, present tense may have either present or future orientation, but it cannot be automatically detected in the search results. Therefore the next

step in our approach is to manually indicate the context-dependent meanings of the respective verb forms. We outline the most frequent temporal-aspectual readings of present and future marked forms, as well as examples of future reading of present forms and some specific occurrences. Sentences with relative clauses are included only to illustrate the respective feature.

#### 4.1. Romanian

For Romanian we considered both types of orthography of the pronominal adverb and the three most used types of future. The results of the two search sequences are presented below.

General search

*când/cînd* + present – 58 624

*când/cînd* + future (*voi cânta* type) – 8 417

*când/cînd* + future (*am să cant* type) – 16

*când/cînd* + future (*o să cant* type) – 0

present:future – 7:1

Concrete search

*când/cînd* + *veni*<sub>present</sub> – 1667 (22 out of 100 are with future orientation)

*când/cînd* + *veni*<sub>future</sub> – 452

present:future – 3:1

There are two important trends to be noticed with respect to the search results. The present-future ratio of the concrete search has much closer values as compared to the general search. This difference could be partially explained by the different behavior of certain verbs in the examined syntactic context.

Regarding the results containing future tense, among the three types of future, Romanian shows a clear preference for the *voi*<sub>auxiliary</sub> *verb*<sub>infinitive</sub> type in adverbial time clauses. The *am*<sub>auxiliary</sub> *să*<sub>conjunction</sub> *verb*<sub>subjunctive</sub> type occurs only accidentally, and the *o*<sub>particle</sub> *să*<sub>conjunction</sub> *verb*<sub>subjunctive</sub> type does not occur at all. Even in cases where colloquial type of future tense (*am*<sub>auxiliary</sub> *să*<sub>conjunction</sub> *verb*<sub>subjunctive</sub>) is used in the main clause, the *voi*<sub>auxiliary</sub> *verb*<sub>infinitive</sub> type appears in the dependent clause. However, native speakers we consulted confirmed that *o*<sub>particle</sub> *să*<sub>conjunction</sub> *verb*<sub>subjunctive</sub> is not unnatural in time clauses.

- (22) *Anul viitor, când voi veni în Statele*  
 year next when want-AUX.FUT.1SG come-INF in states-DEF  
*Unite, am să-ți fac și eu*  
 united have-AUX.FUT.1SG SBJV you-DAT do-SBJV.1SG and I  
*cadou un aparat la fel ca ăsta.*  
 present INDF machine same like this

‘Next year, when I come to the United States, I’ll make you a present, a device like this.’

In order to obtain an idea about the distribution of present and future orientation of the present tense, we manually counted the first 100 results of the concrete search and identified 22 examples of future orientation.

The present forms in adverbial time clauses cover most of the typical contextual meanings of the present tense in Romanian (cf. GLR I: 235–236): values that comprise all the moments of the temporal axis of orientation. i.e. habitual actions, general facts and gnomic use; iterative; historical present. Present forms with future orientation are preferred to indicate a single or a telic event.

- habitual/general/gnomic

- (23) *Când vine noaptea, întreagă lume se cufundă*  
 when come- PRS.3SG night entire world REFL plunge

*un somn adânc.*  
 INDF sleep deep

‘When the night comes everybody falls into a deep sleep.’

- iterative

- (24) *De multe ori, când îi întrebi “Cum a fost la școală?”, vei primi un răspuns monosilabic: “Bine”.*  
 From many time-PL when him-DAT ask-PRS.2SG how have-AUX.PERF.3SG  
 be-PST.PTCP at school want-AUX.FUT. 2SG receive-INF INDF

*răspuns monosilabic: “Bine”.*  
 answer monosyllabic well

‘Many times when you ask him “How was at school?”, you will have a monosyllabic answer: “Ok”.’

- historical present

- (25) *Când îl strig se uită la mine încet, clipește și parcă-mi vine să plâng....*  
 when him-ACC call- PRS.1SG REFL look-PRS.3SG at me slowly  
 blink-PRS.3SG and as if me-DAT come-PRS.3SG SBJV cry-SBJV.1SG

‘When I call him, he looks at me slowly, blinks and I feel like crying...’

- future orientation

- (26) *După-amiază când vii ai să înveți.*  
 afternoon when come-PRS.2SG have-AUX.FUT.2SG SBJV learn-SBJV.2SG  
 ‘You’ll learn when you come in the afternoon.’
- (27) *Îmi aduci un cocktail când vii înapoi?*  
 me-DAT bring-PR.SG INDF cocktail when come-PRS.2SG back  
 ‘Would you bring me a cocktail when you come back?’

Examples with future, as expected, include numerous cases with antecedent in the main clause. The most frequent contextual reading of future is a single or telic event, but similarly to present, it may also have iterative or durative reading. In (32) two of the verbs in the dependent time clauses indicate telic events (*vei veni* ‘you will come’, *te voi vedea* ‘I will see you’), but the event in the third dependent clause is durative (*vei avea* ‘you will have’).

- with antecedent

- (28) *Având răspunsul voi ști cum să mă organizez și apoi voi comunica data precisă când voi veni la fiecare.*  
 have-GER answer-DEF want-AUX.FUT.1SG know-INF how SBJV REFL organize-SBJV.1SG and then want-AUX.FUT.1SG communicate-INF date exact when want-AUX.FUT.1SG come-INF to each one  
 ‘Having the answer, I will know how to organize myself and then I will communicate the exact date when I will come to.’

- single event / telic

- (29) *când va ajunge în țară, va începe să toarne tot...*  
 when want-AUX.FUT.3SG arrive-INF in country want-AUX.FUT.3SG begin-INF SBJV denounce-SBJV.3SG everything  
 ‘... when he arrives in the country, he will begin to denounce everything’
- (30) *Ce veți face voi când vor veni teroriștii?*  
 what want-AUX.FUT.2PL do-INF you-2PL when want-AUX.FUT.3PL come-INF terrorists  
 ‘What are you going to do when the terrorists come?’

- iterative

- (31) *Mereu când* **va** *veni* *soful* *va*  
 always when want-AUX.FUT.3SG come-INF husband-DEF want-AUX.FUT.3SG
- trebui* *să-* *i* *vorbească* *din*  
 need-INF SBJV her-DAT talk-SBJV.3SG from
- Sfintele* *Scripturi ...*  
 holy-DEF writings
- ‘Always when [her] husband comes he will have to quote the Holy Bible...’

• telic and durative

- (32) *Și când vei veni la mine cu trei sute de*  
 and when want-AUX.FUT.2SG come-INF to me with three hundred of
- galbeni de aur din cei zimțai, și când te*  
 coins of gold from ART.DEM.PL.M grooved and when you-CL.ACC.2SG
- voi vedea că ai cirezi mari de vite,*  
 want-AUX.FUT.1SG see-INF that have-PRS.2SG herds big of cattle
- și când vei avea casă mare și arătoasă*  
 and when want-AUX.FUT.2SG have-INF house big and beautiful
- și telegari la poartă, atunci să vii în*  
 and stallions at gate then SBJV veni-SBJV.2SG in
- casa mea.*  
 house my
- ‘When you come to me with three hundred gold coins with grooved edges, and when I see that you have big herds of cattle, and when you have a large and beautiful house with young stallions at the gate, then come to my house.’

## 4.2. Albanian

For Albanian we applied the same search model, detecting the number of present and future instances and forming the present-to-future ratio, with the only difference that in addition we included present subjunctive.

General search

*kur* + present – 11 100 (none of 100 with future orientation)

*kur* + future – 868

present:future – 12:1

*kur* + subjunctive – 2 440

Concrete search

*kur* + *vij*<sub>present</sub> – 517 (1 of 100 with future orientation)

*kur* + *vij*<sub>future</sub> – 53

present:future – 9:1

Unlike Romanian, in Albanian ratios of the general and the concrete search have close values. The corpus data suggest that present is not a preferred means to express future orientation in adverbial time clauses: manual search of the first 100 results of both general and concrete search results detected 1 such example.

The typical uses of present (cf. GGjSh 1: 306–307) are well represented in adverbial time clauses, according to the corpus data.

- present actual (durative)

- (33) *Unë vështroj buzët tuaja kur hapen dhe kur*  
 I look-PRS.1SG lips your when open-PRS.3PL and when

*mbyllen!*

close-PRS.3PL

‘I’m watching your lips opening and closing!’

- iterative

- (34) *Kjo ndodh çdo herë kur ka*  
 it happen-PRS.3SG each time when have-PRS.3SG.

*një ndeshje futboll.*  
 a match football-GEN

‘It happens every time when there is a football match.’

- habitual/general

- (35) *Zakonisht regjisorët kur punojnë për herë të parë*  
 usually directors when work-PRS.3PL for time ART first

*me një aktor, ndjehen shumë të sfiduar për*  
 with an actor feel-PRS.3PL very ART challenged for-PREP

*të udhëhequr si duhet ekipin.*  
 to-CNJ PTCP as must-PRS.3SG team-ACC

‘Usually when film directors work with an actor for the first time, they feel challenged direct the team in the right way...’

- gnomic

- (36) *Njeriu dyshon kur mendon.*  
 man-DEF doubt-PRS.3SG when think-PRS.3SG

‘People doubt when they think.’

- future orientation (the only example found)

- (37) *M'i*                      *sillni*                      *fëmijët*                      *e*                      *tij*  
 Me-DAT;them-ACC      bring-IMP.2PL      children                      ART                      his
- t'i*                      *shoh,*                      ***kur***                      ***vijnë***                      *te*                      *ju,*  
 SBJV;them-ACC                      see-SBJV.1SG                      when                      come-PRS.3PL                      to                      you-PL
- thosh.*  
 say-AOR.1SG  
 'Bring his children to me when they come into your home I said.'

Future may occur in a dependent clause when there is an antecedent in the main clause. Future forms most often express telic or iterative events, only a few examples are found where it denotes a process (durative).

- with antecedent

- (38) *Ermali*                      *duhet*                      *ta*                      *ketë*  
 Ermali                      must-PRS.3SG                      SBJV;it                      have-SBJV.AUX.PRF.3SG
- menduar*                      *tashmë*                      *momentin*                      *se*  
 PTCP                      already                      moment that
- kur*                      *do ta*                      *prezantojë*                      *atë*                      *këngë.*  
 when                      FUT;it                      present-3SG                      that                      song
- 'Ermali already must have thought about the moment when he will present the song.'

- (39) *Serbia*                      *do të*                      *veprojë deri në kohën*                      *kur*                      ***do të***                      ***krijohen***  
 Serbia                      FUT                      act-3SG until                      time                      when                      FUT                      create-REFL.3PL
- kushtet.*  
 conditions  
 'Serbia will act until the moment when conditions are created.'

- single event / telic

- (40) *do të*                      *sjellë*                      *një*                      *situatë*                      *të*                      *re*                      *kur*                      ***do të***  
 FUT                      bring-3SG                      a                      situation                      ART                      new                      when                      FUT
- ndryshojnë***                      (*ndoshta*)                      *pozicionet*                      *nismëtare*                      *të*                      *postmodernes.*  
 change-3PL                      maybe                      positions                      initial                      ART                      postmodern-GEN
- 'It will bring a new situation when the initial positions of the postmodern are changed (perhaps).'

- (41) *Kur*                      ***do të***                      ***kthehem***                      *në shtëpi –*                      *tha*                      *i*                      *pari –*  
 when                      FUT                      return-REFL.1SG                      in house                      say-AOR.3SG                      ART                      first
- do të*                      *martohem*                      *menjëherë.*  
 FUT                      marry-REFL.1SG                      right away
- When I come back home, – the first said – I'll marry right away.'

- (42) *Kur do të kemi ulje të temperaturave do të fillojmë ngrohjen për gjithë konsumatorët tanë, tha zëdhënësjat...*  
 when FUT have-1PL lowering ART temperatures-GEN FUT  
 start-1PL heating-ACC.DEF for all client our  
 say-AOR.3SG speaker-F.NOM.DEF  
 ‘When the temperatures go down we will start the heating for all our clients, the speaker said.’

- iterative

- (43) *çdo herë kur do të përmbushen këto kushte do të pranohen.*  
 every time when FUT fulfill-REFL.3PL these conditions  
 FUT accept-REFL.3PL  
 ‘... every time the conditions are fulfilled they will be accepted.’

- durative

- (44) *Ne nuk do ta lëshojmë sallën kur do të votohet për guvernatorin ...*  
 we NEG FUT;it leave hall-ACC.DEF when FUT vote-REFL.3SG  
 for governor-ACC.DEF  
 ‘We will not leave the hall when the vote about governor takes place.’

Interestingly enough, Albanian uses present subjunctive in adverbial time clauses, which has no correspondence in the other Balkan languages: subjunctive in Romanian and the respective syntactic constructions in Bulgarian and Greek cannot be used in that position. The orientation of subjunctive is context dependent and may be either present or future.

- present orientation

- (45) *Ndryshimet janë evidente edhe kur të krahasohet Shqipëria me Kosovën.*  
 changes-DEF be-PRS.3PL evident too when SBJV compare-REFL.3SG  
 Albania with Kosovo  
 ‘The changes are obvious even when we compare Albania and Kosovo.’

- future orientation

- (46) *I*      *bindur*      *në*      *fitore,*      *u shpreh*      *edhe*      *kandidati*  
 ART      convinced      in      victory      express-REFL.AOR.3SG      also      candidate-NOM.DEF
- Çeku,*      *i*      *cili*      *këtë*      *formë*      *të*      *komunikimit*      *me*  
 Cheku      ART      who      this      form      ART      communication-GEN      with
- qytetarë,*      *tha*      *se*      *do ta*      *mbajë*      *dhe*      *do ta*  
 citizens      say-AOR.3SG      that      FUT;it      keep-SBJV.3SG      and      FUT; it
- praktikojë*      *edhe*      *kur*      *të*      *qeverisë*      *me*      *Prishtinën.*  
 practice-SBJV.3SG      also      when      SBJV      govern-SBJV.3SG      with      Prishtina
- The candidate Cheku was also convinced in victory. He said he will keep and practice this way of communication with the citizens when he governs with Prishtina.’

### 4.3. Greek

For Greek the corpus search includes four forms that combine temporal and aspectual characteristics: present perfective, present imperfective, future perfective and future imperfective.

General search

Present – 6875

*όταν* + present perfective – 1677

*όταν* + present imperfective – 5180

Future – 456

*όταν* + future perfective – 284

*όταν* + future imperfective – 172

Present:future – 15:1

Concrete search

Present – 301

*όταν* + *έρχομαι*<sub>present perfective</sub> – 189

*όταν* + *έρχομαι*<sub>present imperfective</sub> – 112

Future – 48

*όταν* + *έρχομαι*<sub>future perfective</sub> – 48

*όταν* + *έρχομαι*<sub>future imperfective</sub> – 0

Present:future – 6:1

The results show that present prevails considerably over future in adverbial time clauses. On the other hand, perfective is preferred in future forms.

Mozier defines the aspectual meanings in Greek by pointing out that perfective is most appropriately described as an aspect that identifies the internal boundary of an event. The imperfective is more difficult to be defined, since it has at least two main meanings – habitual and iterative. Therefore it

can be characterized negatively in contrast with the perfective as the aspect that does not represent an event as an inseparable whole [Μόζερ 1994: 57].

### Present imperfective

Present imperfective is mostly used to express events that include all the moments of the temporal axis of orientation (habitual, general or gnomic value) or events in the past (present historical).

- habitual/general/gnomic

(47) *Όταν υπάρχει καλή θέληση, όλα γίνονται.*  
 when exist-PRS.3SG good will everything become-PRS.3PL  
 'When there is a good will, everything is possible.'

- historical present

(48) *Όταν πηγαίνει στην Μπελγκράβια, ... πέφτει πάνω στην κόρη του υποψήφιου θύματος, την όμορφη Σάρα.*  
 when go-PRS.3SG to ART.DEF Belgravia fall-PRS.3SG upon  
 o; ART.DEF daughter ART.DEF.GEN candidate-GEN victim-GEN DEF.ACC.F  
 beautiful Sara  
 'When he goes in Belgravia, he meets the victim's daughter, the beautiful Sarah.'

### Present perfective

Present perfective usually has future orientation (supported by the context of the main clause, which presents the event as not having happened yet). When the main clause allows for a present reading (e.g. habitual or general meaning), the verb in the dependent clause most often denotes an iterative event. When expressed by perfective, iterative is interpreted as a single completed event occurring repeatedly.

- future orientation

(49) *Και όταν σωπάσουμε, όλοι, μικροί και μεγάλοι, χρήσιμοι και άχρηστοι, διάσημοι και άσημοι, τότε θα ζήσουμε το απόλυτο σκοτάδι.*  
 and when become silent-PFV.3SG all small and big usefull  
 and useless famous and unknown then FUT  
 live-1PL.PFV DEF.ACC absolute darkness  
 'And when we all remain silent, small and big, useful and useless, famous and unknown, then we will live the utter darkness.'

- (50) Όταν υπογράψω θα το μάθετε.  
 when sign-1SG.PFV FUT it-ART.DEF learn-2PL.PFV  
 'When I sign you will learn it.'

- iterative

- (51) Τα αρσενικά παράγουν ένα αναστεναγμό όταν βρουν ένα θηλυκό.  
 ART.DEF males produce-PRS.3PL one sigh when find-PFV.3PL one female  
 'Males sigh when they find a female.'

### Future imperfective

Future imperfective is used to focus on future orientation, as without any futurity marker imperfective, unlike perfective, combines better with present orientation. This is particularly relevant for the existential verbs, 'be' and 'have'. Morphologically marked future imperfective has the typical values of imperfective aspect, durative and iterative.

- 'be' and 'have'

- (52) Άκουσα τον Μάλφοι να λέει πως θα σε κάνει τσακωτό, όταν θα έχει μαζί σου  
 hear-PPFV.1SG ART.DEF Malfoy SBJV say-3SG.IPFV how FUT you do/make caught when FUT have-2PL with you

ένα δρ...  
 a drag

'... I heard Malfoy saying he was going to catch you, he said you had a drag...' [*Hc Potter*, Joanne Rowling]

- (53) Θα μιλήσω όταν θα είμαι έτοιμη.  
 FUT speak-PFV.1SG when FUT be-1SG ready-F  
 .. I'll speak when I'm ready.'

- durative

- (54) Όταν θα κοιτάξεις τον ουρανό, τη νύχτα  
 when FUT look-2SG.IPFV ART.DEF sky ART.DEF night
- κι αφού θα ζω σ'ένα απ'αυτά, και θα  
 and since FUT live-1SG.IPFV in:one from:them and FUT
- γελώ σ'ένα απ'αυτά για σένα τότε θα'ναι  
 laugh-1SG.IPFV in:one of:them for you then FUT;be-3SG
- σαν να γελούν όλα τ'αστέρια.  
 like SBJV laugh-3SG.IPFV all ART.DEF:stars
- ‘When you look at the sky at night, and since I live in one of them, and laugh in one of them, for you then it will be like all the stars are laughing.’ [*The Little Prince*, Antoine de Saint-Exupéry, transl. by Katherine Woods]

- (55) Τώρα που γράφονται αυτές οι γραμμές η  
 now that write-PRS.REFL.3PL these ART.DEF lines ART.DEF
- στήλη δεν γνωρίζει αυτό που θα γνωρίζετε εσείς  
 column NEG. know-PRS.3SG this that FUT know-2PL.IPFV you-2PL
- όταν θα τις διαβάζετε.  
 when FUT them-ACC.F.PL read-2PL.IPFV
- Now that these lines are written, the column does not know what you will know when you read them.’

• iterative

- (56) Όταν θα μπαίνουμε πλέον σε ταξί, το πιο πιθανό  
 when FUT enter-3PL.IPFV more in taxi ART.DEF most plausible
- θα είναι ο οδηγός να δίνει φωναχτά  
 FUT be-PRS.3SG ART.DEF driver SBJV give-3SG.IPFV by voice
- τη διεύθυνσή μας στο MLS Destinator και  
 ART.DEF address our to; ART.DEF MLS Destinator and
- να μην την ψάχνει με το  
 SBJV NEG it-ACC.FEM search-3SG.IPFV with ART.DEF
- πληκτρολόγιο.  
 keyboard
- When we take a taxi, the driver will most likely give the address to MLS Destinator by voice command and he will not look for it on the keyboard.’

**Future perfective**

Future perfective forms in adverbial time clauses seem to be redundant, considering the fact that present perfective (i.e. without additional temporal marking) has the potential to express futurity. Nevertheless, they are neither

unusual nor rarely occurring in the corpus. Future perfective typically expresses telicity.

- with antecedent

(57) *Θα είναι και πάλι εδώ το Σάββατο 16 Μαΐου*  
 FUT be-3SG and again here ART.DEF Saturday 16 May

*όταν θα διευθύνει το σύνολο Idee Fixe σε έργα*  
 when FUT conduct ART.DEF. band Idee Fixe in works

*σύγχρονης μουσικής.*  
 contemporary-GEN music-GEN

He will be here again on Saturday, May 16, when he will conduct the Idee Fixe band of contemporary music.'

- telic

(58) *Κι όταν θα βγουν έξω από την εκκλησιά,*  
 and when FUT go out-3PL.PFV out of ART.DEF church

*δε θα κοιτάζουν τους ανθρώπους σαν*  
 NEG FUT look at-3PL.PFV ART.DEF.ACC.M.PL people like

*αδερφούς ...*  
 brothers

'And when they go outside the church, they will not look at people like brothers ...' [Nikos Kazantzakis]

(59) *θα σας τα πω όλα αυτά όταν θα*  
 FUT you-DAT.PL them-ACC.PL tell-1SG.IPFV all-N.PL that-N.PL when FUT

*ηρεμήσετε...*

calm down-2SG.PFV

'I will tell you all that when you calm down.' [Dostoevsky, Crime and punishment]

#### 4.4. Bulgarian

Bulgarian, as already mentioned, is an exception to the Balkan trend of morphological marking of future orientation in adverbial time clauses. The present-to-future ratios show that future marking is untypical in the studied syntactic structure. In almost all the examples future is related to an antecedent in the main clause, with a few exceptions that will be commented further on.

General search

Present – 105 866

*когато* + present perfective – 59 404

*когато* + present imperfective – 46 462



- iterative

- (62) *Чувствам го всеки път, когато е тук.*  
 feel- PRS.IPFV. 1SG it every time when be-PRS.3SG here  
 ‘I feel it every time he is here.’

- future orientation

- (63) *Елате, когато искате.*  
 Come-PRS.IMP.2PL when want-PRS.2PL  
 ‘Come whenever you want.’

- (64) *Всичките ви вещи ще бъдат върнати,*  
 All-PL.DEF your-PL things FUT be-PFV.3PL returned- PST.PTCP.PASS  
  
*когато получавате чека.*  
 when receive-PRS.IPFV.2PL check-DEF  
 ‘You will take all your stuff back when you receive the check.’

- (65) *Ще ти изпратя вест, когато мога.*  
 FUT you-DAT send-PRS.PFV.1SG message when can-PRS.1SG  
 ‘I’ll inform you when I can.’

## Present perfective

Present perfective is used to denote telic events with future orientation if the event in the main clause is marked for futurity or modality, but if the main clause is with present orientation, its meaning is habitual or iterative.

- habitual/iterative

- (66) *Когато поправим нещо, то наистина работи.*  
 when fix-PRS.PFV.1PL something it really work-PRS.IPFV.3SG  
 ‘When we fix something, it really works.’

- future orientation

- (67) *Когато свършиш, намери съдията.*  
 when finish- PRS.PFV.2SG find-IMP.2SG judge-DEF  
 ‘When you finish, find the judge.’

- (68) *Ще* *бъда* *по-* *добър,* *когато* *порасна.*  
 FUT be-PFV.1SG COMP good when grow up-PFV.1SG  
 ‘I’ll be better, when I grow up.’
- (69) *Ще* *бъдеш* *ли* *там,* *когато* *лумнат* *пламъците?*  
 FUT be-PFV.2SG INT there when flare-PFV.3PL flame-DEF.PL  
 ‘Will you be there, when the fire starts?’
- (70) *Надигна* *се* *и* *се* *добра* *до*  
 stood up-AOR.PFV.3SG REFL and REFL get- AOR.PFV.3SG to-PREP  
*недостътна* *пещера,* *та* *никой* *да* *не* *го* *съгледа,*  
 inaccessible cave so nobody CNJ NEG him notice-PFV.3SG  
*когато* *почне* *за* *победа* *на* *боговете*  
 when start-PRS.PFV.3SG for victory to god-DEF.PL  
*да* *се* *моли* ...  
 CNJ REFL pray-PRS.IPFV.3SG  
 ‘He stood up and he went into a deep cave so that nobody can see him when he starts praying gods for victory...’

## Future

Future marking in the dependent clause is mostly used when there is an antecedent in the main clause – noun, adverb or adverbial that indicates the precise moment to which the future form refers, thus transforming the type of dependent clause into relative. Additionally, future marking is possible with existential verbs, which do not have a perfective counterpart and a future form is a means to emphasize the orientation. Apart from these two cases that allow for future marking, there is one pragmatically motivated context in which future form may appear: when the speaker has previous knowledge that makes him/her confident of the event’s realization. Similar contexts in Greek adverbial clauses of condition have been underlined by Hedin (2000: 335). Nevertheless, future marking in Greek is not restricted to this specific context.

- with antecedent

- (71) *Искам* *да* *остана* *при* *теб* *до* *деня,*  
 want-PRS.1SG CNJ stay-PRS.PFV.1SG with you till day-DEF  
*когато* *ще* *ми* *го* *дадеш.*  
 when FUT me-DAT it-ACC give-PFV.2SG  
 ‘I want to stay with you till the day you will give it to me.’

- ‘be’

(72) *Смятам, че ще ми го кажете, когато*  
 think-PRS.1SG that FUT me-DAT it-ACC tell-PRS.IPFV.2PL when

*ще е важно да го знам.*  
 FUT be-PRS.3SG CNJ it-ACC know-IPFV.1SG

‘I think you will tell me when it will be important for me to know it.’

• knowledge/confidence

(73) *Тъй като не беше много наясно каква точно*  
 because NEG be-PST.3SG very clear-ADV what exactly

*трябва да е роклята ти, когато ще*  
 need-IMPERS CNJ be-PRS.3SG dress-DEF your when FUT

*получаваш предложение за брак от страна на един*  
 receive-IPFV.2SG proposal for marriage from one

*виконт, тя бе избрала най-новата*  
 viscount she be-AUX PLPERF.3SG chosen-PST.PTCP.ACT SUPL new

*си рокля.*  
 her-REFL dress

‘As she didn’t know what dress is one supposed to wear when receiving a marriage proposal from a lord, she chose the newest one.’

(74) *Не се ли появяваш лично, когато ще*  
 NEG REFL INT appear-PRS.IPFV.2SG personally when FUT

*умира магьосник?*  
 die-IPFV.3SG magician

‘Don’t you go personally when a magician is going to die?’ [Sourcery, Terry Pratchett.]

## 5. Conclusions

If we can outline a Balkan model to express future orientation in adverb clauses of time, that would be the free choice of present or future marking in three of the languages – Romanian, Albanian and Greek, and the additional possibility for modal (subjunctive) marking in Albanian. The corpus approach allows to a certain degree to provide quantitative data and to ascertain that future marking is most frequent in Albanian and with moderate use in Romanian and Greek. Our observations of the corpora data show that future occurs in different text registers, mainly colloquial speech, media texts and fiction, and subsequently the speaker’s choice is not motivated by the register type.

Bulgarian is an exception in both areal and genealogical aspects. The restriction of future marking is traditionally attributed to verb aspect: the perfective may express potential or hypothetical events and therefore is related

to future orientation without additional temporal marking. Greek data disprove the exclusive role of verb aspect, as the perfective may express futurity, but future marking is still allowed, of both perfective and imperfective verb forms. It is interesting to note that in Romanian and Albanian, despite the lack of morphological aspect, all the aspectual meanings are covered, but their interpretation is contextual. The sentences we analyzed show an inclination of the present to relate to imperfective meanings, while future is mostly connected with perfective meanings.

In linguistics there is not a convincing explanation as to why languages choose different strategies to express future orientation in dependent clauses. The situation we described in the Balkan languages seems to contradict two existing hypotheses related to morphology. According to Bybee and Dahl [Bybee, Dahl 1989], inflectional markers for future are more likely to occur than periphrastic forms in redundant context such as condition and time clauses, because inflection is more grammaticalized than a periphrastic form. Contrary to this claim, future in the Balkan languages is formed with a particle in Greek and Albanian and with an auxiliary in Romanian and is allowed in the respective dependent clauses. The other claim regards verb aspect that we already discussed. The Balkan languages prove that aspect is an important, but not an exclusive reason for restricting future marking.

Beyond morphological explanations, there are pragmatic and syntactic reasons for using future in dependent clauses. In Bulgarian, which may be defined as a future-restrictive language, pragmatic context is a premise for future marking. It is somewhat relevant in Greek, but not in Albanian and Romanian. Another factor to consider is the syntactic relationship between the main and the dependent clause and, more precisely, one of its manifestations, tense agreement. Among the Balkan languages, the strongest trend to tense agreement may be found in Albanian, it decreases in Romanian and Greek and is lacking in Bulgarian. The decreasing role of tense agreement corresponds to an increasing restriction on future marking in dependent clauses.

The future marking in dependent time, condition and noun clauses should be considered an areal syntactic feature, which is not shared by Bulgarian only. On the other hand, the fact that Macedonian differs from Bulgarian in using future in time clauses supports the assumption of an areal, most likely Albanian influence.

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БЪДЕЩА ОРИЕНТАЦИЯ В ПОДЧИНЕНИ  
ОБСТОЯТЕЛСТВЕНИ ИЗРЕЧЕНИЯ  
ЗА ВРЕМЕ В БАЛКАНСКИТЕ ЕЗИЦИ

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В статията се прилага корпусен подход към анализирането на подчинени обстоятелствени изречения за време в балканските езици от гледна точка на бъдещата ориентация на събитието. Както е известно, бъдещата ориентация в няколко вида подчинени изречения, включително обстоятелствените за време, в някои езици не е морфологично маркирана и се изразява от сегашната форма на глагола, а в други морфологичното маркиране е възможно и в този случай в подчиненото изречение се употребява форма за бъдеще време. В балканските езици морфологичното маркиране на бъдещата ориентация е позволено, но е с различна честота в гръцки, румънски и албански. Изключение от тенденцията прави българският, в който бъдеще време може да се появи в подчиненото изречение само в специфичен контекст. В изследването е направен опит да се установи закономерност на употребата на сегашна или бъдеща форма в обстоятелственото изречение за време според типа на събитието, изразено от глагола, като е взета предвид и връзката на глаголния вид с ориентацията на събитието в български и гръцки. Показани са и някои проблеми, свързани с корпусния анализ на подобни езикови явления.