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Kazakh complex verb structures: A Distributed Morphology analysis

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The aim of this paper is to investigate the complex verb structures in Kazakh which have the structure [V-Converb Aux-T-AGR]. With the discussion of those particular constructions, the study seeks for evidence for one of the general claims of Distributed Morphology (Halle & Marantz 1993, Embick & Noyer 2001): The syntactic structure is subject to morphological operations such as *merge, fission* and *fusion* in the PF (= Phonological Form) component of the grammar. For the status of the converb form, I argue that it is a *dissociated morpheme* which is added to the v head at the PF component and copies itself to the higher nodes in the derivation. I also argue for a *concord relation* between the converb form and the tense node, and extend it into the auxiliary elements in complex verb structures.

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1. Introduction

Complex verb structures in Kazakh[1] involve a particular converb form attached to the main verb, an auxiliary element which is attached by tense and agreement markers.[2] A typical example is illustrated in (1) below.

1 The complex verb structures studied here are those formed with converb markers (postverbial structures). Complex verb structures formed with light verbs such as *et-* 'do' are excluded from the analysis.

2 The term *complex verb structure* in this paper is used only for descriptional purposes. Similar constructions have been labeled in the literature as serial verb constructions, auxiliary-verb constructions, converb constructions and gerundial constructions. What is important is that these structures are present in many languages of the world which are not necessarily related to each other in genetic or typological ways, and these structures involve similar grammaticalization procedures and semantic functions. See Haspelmath (1995), Aikhenwald & Dixon (2006) for discussions from a typological point of view.

The term *converb* here is considered as referring to a linking morpheme which links verb roots in order to create a morphologically more complex verbal structure. The use of the term goes back to Gustaf John Ramstedt, a Finnish Altaicist. The linking morpheme

(1) *Axmet* *üniversitet-ke* *[bar-ıp* *qoy-dı].*
Axmet:NOM university:DAT go:IP.CONV AUX:PAST.3SG
'Ahmet has now arrived at the university.'

Example (1) above includes the main verb *bar-* 'go', which is attached by the converb form *-IP*. The auxiliary *qoy-* 'put' following the main verb is attached by the tense and agreement markers.

Despite the scarcity of theoretical analyses of these structures within the Generative Theory, there is a vast literature on the issue from the Turcological perspective, where the issue has been investigated from both synchronic and diachronic points of view. These studies devote particular focus to the comparative discussion of Turkic languages with respect to these constructions and to the aspectual interpretations and actionality (aktionsart) involved there (Arat 1928 (cited in Erdal 2004: 26), Johanson 1988, 1995 and 2004, Csató 2003 and Demirci 2006a and b). A generative account of similar structures in Turkic languages is provided by Bowern (2004), where the author argues that similar structures in Uzbek are light verb constructions.

The structure of this paper is as follows: In Section 2 I provide a morphological description for the different types of complex verb structures in Kazakh. Section 3 introduces the problem and raises the theoretical questions discussed in the article. In the fourth section, I provide some of the core assumptions of Distributed Morphology with respect to the organization of the grammar. Section 5 discusses the complex verb structures in Kazakh and the problems they pose for morphological theory. Section 6 summarizes the findings and discusses their theoretical implications.

(converb) is realized as *-E* and *-Ip* in Turkic languages and both has different realizations (*-e, -a* and *-ıp, -ip, -up, -üp* respectively) in accordance with vowel harmony. See Johanson (2004: 181–182) for a discussion of the different realizations of these converb forms in various Turkic languages and a distinction on the basis of aspectual interpretations. Johanson (2005) introduces the term *analytic relator* for those converb forms that are also present in Orkhon Turkic and represent less advanced stages of grammaticalization. See Johanson (1988: 136) and Erdal (2004: 309) for the etymology of this suffix and Erdal (2004) for a discussion of the converbs in Old Turkic.

On a similar line of reasoning, the term *auxiliary* here involves no theoretical claim but a descriptional convention. Following Johanson (1995, 2004), I use the term *auxiliary* for the second verbal head in complex verb structures although different labels for the same element have been used in the literature.

2. Data: complex verb structures in Kazakh:

In Kazakh a number of lexical verb roots are used as auxiliary items in order to give the actionality readings in verbal complexes.[3] These verb roots are *tur-* 'stand', *otır-* 'sit', *žat-* 'lie', *žür-* 'go', *šıq-* 'go out', *qoy-* 'put', *žiber-* 'send', *al-* 'take', *ber-* 'give', *qal-*, 'stay', *sal-* 'insert, put into', *tüs-* 'fall' among others. The different types of structures in which these auxiliary items occur are listed below.

Type 1: [V_{root}-*IP* Aux-T-AGR]. This structure has a verb root, is inflected by the converb form *–IP,* and an auxiliary verb, inflected by tense and agreement markers. Consider the examples in (2a-d) below which are used to express different actionality readings. Complex verb structures are indicated by square brackets.

(2) a. *Men* *dos-ım-men* *[söyles-*ip *žat-ır-mın].*
I:NOM friend:POSS1SG:COM talk:IP.CONV AUX:AOR:1SG
'I am talking to my friend.'

b. *Axmet* *kitap-tı* *[oqı-*p *šıq-tı].*
Axmet:NOM book:ACC read:IP.CONV AUX:PAST.3SG
'Ahmet has read/read the book.'

c. *Axmet* *üniversitet-ke* *[bar-*ıp *qoy-dı].*
Axmet:NOM university:DAT go:IP.CONV AUX:PAST.3SG
'Ahmet has now arrived at the university.'

d. *Qız* *tereze-den* *[qara-*p *tur-a-dı].*
girl:NOM window:ABL look:IP.CONV AUX:PRES:3SG
'The girl is looking from the window.'

The examples in (2a-d) include the complex verb structure [V_{root}-IP Aux-T-AGR] and involve different actionality interpretations. In (2a and d) the structures are used to express continuity while those in (2b and c) express completeness.[4]

Type 2: [V_{root}-*E* Aux-T-AGR]. Type 2 has a verb root that is inflected by the converb form *-E* and an auxiliary verb that is inflected by tense and agreement markers. Consider (3).

3 Johanson (2004: 182-183) lists the actionality meanings expressed by these auxiliaries as (i) *transformatives* including suddenness, thoroughness, unexpectedness, quickness, resoluteness and completion, which are referred to in the literature as *perfectives* or *inchoatives,* and (ii) *nontransformatives* including durativity, iteration, repetition, continuity, permanence, regularity, usualness, habituality, constancy, which are referred to in the literature as *imperfective, durative* and *habitual* constructions.

4 See Johanson (1995, 2004) for a detailed discussion of properties of these constructions with respect to actionality and viewpoint aspect.

(3) *Axmet* *šay-ya* *šeker* *[sal*-a *tüs-ti].*
Axmet:NOM tea:DAT sugar put:E.CONV AUX:PAST.3SG
'Ahmet added sugar to the tea (a sudden action).'

The part of the sentence (3) in square brackets involves 'a sudden action' interpretation, or it expresses that the subject did not have full control over the action carried out by the verb. Note that the only difference between (2a-d) and (3) is the different converb marker employed in the structure.

Type 3: [V_{root}-*IP* Aux-T *e*-T-AGR]. This type has a verb root which is inflected by the converb form *-IP*, an auxiliary verb which is inflected by a participle and a defective verb (copula) *e-* which is inflected by tense and agreement markers. Different from the first two types, two verb roots are available in this structure, one of which is the copula. Similar to the previous types, this structure is used to express continuity, completeness or resultant state readings. Consider the structures in (4a-b) exemplifying this type.

(4) a. *Men* *dos-ım-men* *[söyles*-ip *žat-ır* *e-di-m].*
I:NOM friend:POSS1SG:COM talk:IP.CONV AUX:AOR COP:PAST:1SG
'I was talking to my friend.'

b. *Axmet* *kitap-tı* *[oqı*-p *šıq-qan* *e-di].*
Axmet:NOM book:ACC read:IP.CONV AUX:P-PART COP:PAST.3SG
'Ahmet had finished reading the book.'

The complex verb structures indicated between square brackets in (4a-b) above involve continuity and resultant state readings respectively.[5] Different from those examples in (2a-d) and (3), the copula root is included in these structures. Note that the copula carries both tense and agreement markers while the auxiliary element has only the participle morphology in (4b).

3. The problem and theoretical questions

The above data seem to be related to a particular morphosyntactic property of the language which allows it to combine two or three verb roots in a complex structure in order to express some grammatical function. The problem raised in the data is related to the morphosyntactic functions of the particular morphemes in complex verb structures and the lack of selectional restrictions imposed by the verb roots on these morphemes. In other words, there seems to be no selection on the choice of the converb marker and the auxiliary elements. Moreover, the occurrences of tense

5 Kirchner (1998: 326) points out that [v+IP+Aux+e+Tense+Agr] structures are used to convey durative or habitual past, and [QAn+e+Tense+Agr] structures involve pluperfect readings in Kazakh.

markers and the position of the agreement markers in these structures constitute a problem for the *Lexical Integrity Hypothesis* of Anderson (1992) and the *Mirror Principle* of Baker (1985).[6]

More specifically, the choice of the converb form, *-IP* or *-E* is problematic with respect to the two assumptions cited above. In some constructions, there seems to be a dichotomy between progressive and non-progressive readings. However, the fact that a single element can be used in structures where different actionality readings are conveyed, and that the auxiliaries do not select a particular converb form, indicates that the choice of the converb form involves a sort of syncretism.[7] The unpredictability of the grammatical function of the converb form within the word domain indicates that syntactic principles can have access to word structure.

Moreover, the distribution of the auxiliary elements in complex verb structures is problematic for theories which assume a one-to-one correspondence between the grammatical form and grammatical function it carries. The same auxiliary element can be used in structures where different actionality readings are indicated, involving some sort of ambiguity which is problematic for both the *Lexical Integrity Hypothesis* of Anderson (1992) and the *Mirror Principle* of Baker (1985). Moreover, while some auxiliaries seem to be grouped with respect to the actionality readings they mark, there seems to be no restriction on the choice of a particular auxiliary item from the ones with the same aspectual feature.

As for the tense and agreement markers, a similar line of reasoning applies. The problem with tense markers is that the converb forms *-IP* and *-E* can also appear as tense markers in certain structures.

Based on the data and problems given above, we raise the following questions: How can we deal with the clashes above between morphology and syntax components? Can the complex verb structures be analyzed as involving post-syntactic morphological operations, and hence support the general claim of Distributed Morphology? What kind of morphological elements are converb markers? Why do partici-

6 The Lexical Integrity Hypothesis claims that "The syntax neither manipulates nor has access to the internal structure of words" (Anderson 1992: 84). Since the earliest days of Generative morphology, the Lexical Integrity Hypothesis has been reformulated by different morphologists (Lapointe 1980, Selkirk 1982, Di Sciullo & Williams 1987). It is a lexicalist approach to word structure in that its core idea is that syntactic structure is blind to the internal structure of words.

The Mirror Principle of Baker (1985), on the other hand, argues that a close parallelism occurs between morphology and syntax, and that syntax is not blind to the word structure but operates on both words and morphemes. In this view, complex words can be formed by morphological rules such as *incorporation* which resembles the syntactic rules such as head movement. The term *mirror* is used given that in this view morphological derivation reflects syntactic derivation and syntactic derivation reflects morphological derivation.

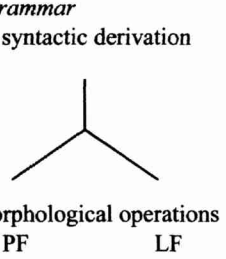
7 See however Johanson (2004: 182, 185) for an extensive discussion.

ples such as *-QAN* appear on the auxiliary element in contrast to the tense markers which appear on verb heads? The rest of the article discusses the possible solutions to these problems based on the theoretical apparatus of Distributed Morphology, whose basic assumptions are briefly given in the next section.

4. Theoretical background: Distributed Morphology

Distributed Morphology (Halle and Marantz 1993, 1994, Harley and Noyer 1998, 1999) is a non-lexicalist approach to morphology which adopts a Y-type model of grammar. The output of the syntax component is sent to LF (= Logical Form), where the sentence receives its interpretation and PF (= Phonological Form), where the sentence receives its pronunciation. According to Distributed Morphology, the syntactic structure is manipulable in a post-syntactic morphological component where the syntactic structure is further subject to some morphological operations such as *fusion, fission, impoverishment* and *concord* at the PF component before phonetic realization. The model assumed in Distributed Morphology is represented in (5) below.

(5) *The grammar*



Distributed Morphology assumes the model given above and argues that morphology is not restricted to a pre-syntactic lexicon module. The syntactic operations such as *Move* and *Merge* do not manipulate the lexical items. There are bundles of morphosyntactic and semantic features which are manipulated by the post-syntactic morphological operations.

Distributed Morphology assumes *late insertion* in that only in the PF component, the *vocabulary items* are inserted (match the feature bundles associated with the morphosyntactic structure). PF rules linearize the hierarchical structure generated by syntax and add phonological material to the abstract morphemes, a process called *vocabulary insertion*. Note that the abstract morphemes are devoid of language-particular phonological and semantic content. Thus, abstract morphemes are spelled out during the vocabulary insertion. Vocabulary items are competing as a result of which the most fully specified item with compatible features is inserted into the node with the same features.

5. Discussion

The discussion will first consider the status of the converb form and move into the explanation of the different usages of the auxiliary elements. Finally, I will investigate the status of the tense and agreement markers in these structures.

5.1. The status of the converb form

Recall that there are two forms used as converbs in complex verb structures, *-IP* and *-E,* and there is no predictability on their choice within a certain structure. The verb which is inflected by these markers is in bare form while the one used as auxiliary element is inflected.

I assume that the converb form is a *dissociated morpheme* in the sense of Embick & Noyer (2001), Harley & Noyer (1998) and Embick & Halle (2005). It is a dissociated morpheme given that it is not inserted to a particular node to match any morphosyntactic feature present in the syntactic node. It is added to the syntactic structure at the PF component of the grammar in particular structural configurations (complex verb structures in this paper). The addition of these materials is done according to the particular well-formedness conditions of the particular language.

To see how well-formedness requirements work, let us compare the status of the *-IP* form in Turkish and Kazakh. Unlike Japanese and Chinese, it is not possible to incorporate/conjoin two lexical verbs in Turkic languages.[8] Instead, these languages employ some sort of grammaticalization of some functional readings via certain buffer elements (cf. Johanson 1998a and b). I argue that the converb forms in Kazakh are used for purely morphological reasons in complex verb structures where the second verbal root is used as an auxiliary. Consider the following structures in (6a-b), including the use of these forms in Turkish and Kazakh respectively.

(6) *Turkish*

a. *Ali* *[kitab-ı* *al-*ıp *]* *gel-di.*
Ali:NOM book:ACC buy:IP.CONV come:PAST.3SG
'Ali bought the book and came back.'

8 However, see Csató (2003), where the author discusses a different type of construction in which both lexical and auxiliary verb roots are inflected the same. Thus, in the Turkish example *yaz-dı dur-du* '(He) kept writing.' both verbs have past morphology and there seems to be no converb marker used to combine the two verb forms. These structures may seem at first glance a combination of two lexical verb roots in order to provide aspectual information. However, the second verbal element in those structures seems to be restricted to a few roots which are already used as auxiliary elements in other cases. I restrict the analysis here to post-verbial structures where the first verbal element is inflected with a converb marker.

Kazakh
b. *Axmet* *üniversitet-ke* *[bar-*ıp* *qoy-dı].*
Axmet:NOM university:DAT go:IP.CONV AUX:PAST.3SG
'Ahmet has now arrived at the university.'

In the Turkish example (6a) the converb form *-IP* is used to express the conjunction of two verbs, *al-* 'take' and *gel-* 'come'.[9] Unlike the one in Kazakh (6b), the converb form in Turkish is used to express conjunction of two events; hence it contributes to the meaning of the sentence.[10] Thus, its presence in the structure is not purely morphological in that it is inserted to match a particular morphosyntactic feature in the syntactic node. In (6b), on the other hand, the presence of the converb form *-IP* is purely morphological in that the whole structure conjoined by the *-IP* form ex-

9 See Kornfilt (1997), Csató & Johanson (1998), Özsoy (1999), Csató (2003), Demirci (2006b) for the discussion of structures with the converb markers in Turkish.

10 This does not mean that Turkish does not have structures where *-Ip* and *-E* are used in complex verb structures. Consider the following examples provided by a reviewer:

(i) a. *Sen* *Ali-nin* *söyle-dik-ler-in-i* *yaz-ıp* / **-a* *dur-du-n.*
you Ali:GEN say:PART:3PL:ACC write:IP.CONV -E.CONV stop/stand:PAST:2SG
'You kept on writing what Ali said'

b. *Sen* *Ali-nin* *söyle-dik-ler-in-i* *yaz-a* / **-ıp* *dur!*
you Ali:GEN say:PART:3PL:ACC write:E.CONV -IP.CONV stop.
Ben *hemen* *gel-iyor-um.*
I immediately come:PRES:1SG
'Start and continue writing what Ali says. I will come immediately'

Based on the examples given above, one can say that Turkish makes use of converb forms in complex verb structures as well as in verb conjunctions in (6a). Note that this use is restricted to a few verbal roots. What seems to be the problem for our analysis is that Kazakh has the same examples in that *-IP* and *-E* contribute to the meaning of the sentence. The reviewer provides the following examples:

men sayan χat jazïp/-a turdum*
'I kept writing letters to you',
sen χat jaza/-ïp tur men qazïr oralamïn*
'Start and continue writing the letter; I will be back soon'.

I propose that the semantic difference in the examples where *-IP* and *-E* are used cannot be attributed to the converbs alone. Rather, it is the whole verbal domain including TAM and AGR markers that causes meaning differences in these examples. Moreover, these forms cannot be used interchangeably in that *-E* seems to be restricted to imperative structure while *-IP* is used only with a number of TAM markers.

presses the single event *go*. In other words, the lexical interpretation of the second verbal root is not available and it is the complex verb structure which expresses the aspecto-temporal interpretation.[11, 12]

Embick & Halle (2005) points out that dissociated morphemes are not present in the syntactic part of the derivation. These morphemes are added to some functional heads at the PF module. At this point, following Embick and Halle (2005), I argue that the main verb root [*v*] combines with the auxiliary element [Aux] to form a complex predicate. Then at PF, the converb node is added to *v* for morphological well-formedness reasons. This process is illustrated in (7) below.

(7)	Syntactic derivation:	[[root	v]	Aux [aspect]][13]
	Morphological structure:	[[root	[v converb]]	[Aux [aspect]]]

The representation in (7) above indicates how the dissociated morpheme works in Kazakh. Accordingly, there is no syntactic node for the converb marker in syntactic derivation. The syntactic node involves only the verb and auxiliary heads. However, as noted above, the syntactic derivation is subject to morphological operations in a post-syntactic module in Distributed Morphology. Thus, in the morphological structure the converb form is hosted by the syntactic node *v*. Note that the use of the converb form is an instance of *late insertion,* by which the converb marker is added to the derivation at PF component in order to save the otherwise illicit structure.

I consider the lacking predictability of those two converb forms *-IP* and *-E* as an indication of being a dissociated morpheme. If those two forms were semantically non-vacuous and inserted into a particular node to match some morphosyntactic features, we would have different distributional properties for each one. Being a dissociated morpheme, the converb form is able to copy itself to some higher nodes in the derivation. This is in accordance with the fact that the converb forms *-IP* and *-E* can also appear on the auxiliary element in Kazakh, where they mark aspecto-temporal interpretations. Consider the following structures in (8a–b).

11 This is in line with Johanson (1998a: 42), where such structures are argued to involve strong semantic fusion. Also, Kirchner (1998: 327) points out that the *-IP* form in Kazakh is merely used for clause linking purposes.

12 A reviewer remarks that Kazakh has structures where the converb *-IP* is used to express conjunction as also noticed by Kirchner (1998: 327). Thus, there are ambiguous cases where *-IP* acts as a conjunction marker in one interpretation and a dissociated morpheme in another interpretation. Note that our analysis here focuses on the use of *-IP* in complex verb structures where the second verbal root is used as an auxiliary which has actionality interpretation. Our analysis has no prediction on the structures where *-IP* is used as a conjunction marker and the second verbal root retains its lexical meaning.

13 *Aspect* in this representation is meant to be a node in the syntactic structure.

(8) a. *Nurlan* *kitap-tı* *[oqı*-p *šıɣ*-ıp-*tı].*
Nurlan:NOM book:ACC read:IP.CONV AUX:I-PAST.3SG
'Nurlan has apparently read the book.'

b. *Axmet* *šay-ɣa* *šeker* *[sal*-a *tüs*-e-*di].*
Axmet:NOM tea:DAT sugar put:E.CONV AUX:PRES:3SG
'Ahmet adds sugar to the tea (a sudden action).'

In (8a-b) above the *-IP* and *-E* also appear on the auxiliary element and mark evidential and present interpretations respectively. This is problematic with respect to the analysis presented here since the analysis assumes that the converb form is a dissociated form, hence semantically vacuous. At this point, I argue that the second occurrence of *-IP* is also predicted by the fact that it is a dissociated form. Being a dissociated form, it is able to copy itself to the higher nodes in the derivation. Accordingly, it is not only the converb form which is responsible for the temporal interpretation, but the whole verbal complex expresses it. The copying process is represented in (9) below.

(9) *The copying of the converb form*
[[Root [v **converb**]] [Aux [aspect]] [Tense [**converb**]]]

According to the copying process in (9), the converb form copies itself to the tense node where it contributes to the interpretation of the sentence with particular temporal interpretation. However, this seems to be problematic with respect to the assumption I made earlier in the paper. I have assumed that the dissociated morphemes do not correspond to any syntactic node in syntactic derivation, but are added at the PF part of the grammar for purely morphological well-formedness requirements. The tense node, on the other hand, is present in the syntactic derivation, and the feature bundle in the syntactic node has to be matched by a vocabulary item through vocabulary insertion in accordance with the general assumptions of Distributed Morphology. At this point, following Embick & Halle (2005), I suggest a *concord relation* between the converb and its second occurrence on the tense node.

Embick & Halle (2005:12) argue that the TH (= theme) node in Latin conjugation acquires the conjugation class feature of the root via a *concord process*. Then, the TH node is spelled out as one of the theme vowels. Similar to what Embick & Halle (2005) argued for the Latin TH nodes, I propose that the converb form enters into a concord relation with the feature bundle on the tense node. The whole complex then, expresses the temporal meaning of the sentence. [14]

14 A reviewer points out that examples such as *šıɣ-ıp-tı* 'went out' (13b in the text), where the converb *-IP* is used irrespective of copying from the Aux head and *qara-p tur-a-dı* 'is

To sum up so far, following Embick & Halle (2005), I argued that the converb form is a dissociated morpheme which is added to the *v* head at the PF component of the grammar and copies itself to the higher nodes in the derivation. I also argued for a concord relation between the converb form and the tense node in order to explain the second occurrence of the *-IP* form on the tense node. In the next section I will be concerned with the appearance of the auxiliary items in the same structure.

5.2. The status of the aux element: is it really an auxiliary or a *v* head?

Note that complex verb structures are one of the core properties of the Turkic languages, especially the North-West group in Johanson's classification.[15] The similar constructions in Uzbek led Bowern (2004) to assume that these structures are complex predicate structures rather than conjoined event structures. This section applies the tests used by Bowern (2004) to Kazakh data and discusses whether those forms are conjoined event structures or complex verb structures. This discussion is aimed to provide clues for the exact status of the second verbal element in these structures.

Bowern (2004) makes use of a number of tests in order to differentiate the conjoined event structures from the complex predicates. The first test in Bowern (2004) is related to the event structure. If the whole verbal complex describes the single event, it can be assumed that the structure is a complex verb structure where the second verbal element acts as a light verb head *v* rather than an auxiliary item. The

looking' (2d in the text), where a mismatch between the converb form *-IP* and the tense marker *-E* in terms of copying occurs are problematic for the analysis provided here. Thus, the question why there is no concord relation in (2d) should be answered. I leave the problem and further data for future studies at this point. However, the problem is only apparent if one considers the two occurrences of *-IP* form in (8a) as involving a type of syncretism as a result of which several abstract morphemes have the same phonetic exponent (cf. Embick & Halle 2005). The syncretism involved in complex verb structures in Kazakh is illustrated in (i) below.

(i)*Converb, tense and participle forms in Kazakh*

converb form	tense form
-IP	*-IP*
-E	*-E*
participle form	tense form
-QAn	*-QAn*

Thus, various occurrences of the same phonetic form *-IP* might be a result of syncretism as well as the concord relation. Note that the concord relation we provide between the two occurrences of the same phonetic element through a copying procedure takes place at the PF component of the grammar.

15 See Johanson (1998a and b) for a general discussion of the synchronic and diachronic aspects, and (2002) for the classification of Turkic languages.

examples in (6a–b), which illustrate the use of complex verb structures in Turkish and Kazakh respectively, are repeated here as (10a–b) respectively.

(10) *Turkish*

a. *Ali* *[kitab-ı* *al-*ıp*]* *gel-di.*
Ali:NOM book:ACC buy:IP.CONV come:PAST.3SG
'Ali bought the book and came back.'

Kazakh

b. *Axmet* *üniversitet-ke* *[bar-*ıp *qoy-dı].*
Axmet:NOM university:DAT go:IP.CONV AUX:PAST.3SG
'Ahmet has now arrived at the university.'

Turkish (10a) shows that the complex verb structure has a conjoined interpretation in that the converb element *-IP* is used to combine two lexical verbal heads *al-* 'take' and *gel-* 'come'. The Kazakh example in (10b), on the other hand, describes a single event rather than the coordination of two lexical verbal heads. The single event reading implies that the whole structure is a complex predicate where the first verbal root expresses the lexical interpretation while the second one expresses some actionality interpretation.

The selection of the auxiliary element is used as the second test in Bowern (2004). Accordingly, if the auxiliary element occurring in those structures is syntactically or morphologically selected, it has to be concluded that it is not a separate lexical verb head, but a light verb or an auxiliary in a complex predicate structure. The contrast we have observed in (11a–b) between Turkish and Kazakh is at work here too. Those constructions in Turkish employ any verbal heads as the second verbal element, as the example (11) below shows.

(11) A*li* *[kitab-ı* *al-*ıp*]*
Ali:NOM book:ACC buy:IP.CONV
gel-di/oku-du/sat-tı/ kaybet-ti/at-tı/ gönder-di.
come/read/sell/lose/throw/send:PAST.3SG
'Ali bought the book and came back/read/sold/lost/threw away/sent (it).'

As the example (11) shows, there is no restriction on the use of the second verbal element in Turkish. That is to say, any verbal element can be added to the syntactic node in Distributed Morphology terminology. However, a kind of restriction seems to occur in Kazakh as illustrated in (12) below.

(12) *Axmet* *üniversitet-ke* *[bar-*ıp *qoy-/*šıq-tı].*
Axmet:NOM university:DAT go:IP.CONV AUX:PAST.3SG
'Ahmet has now arrived at the university.'

The example in (12) indicates that the second verbal element in complex predicate structures in Kazakh obeys some restrictions as illustrated by the ungrammaticality of the use of the auxiliary items *šıq-* 'go out'.[16]

To see the exact nature of the second verbal element in these constructions, we are dealing with the two phenomena discussed in Bowern (2004) here: (i) defective paradigms, (ii) independent status. It is interesting to note that the second verbal element in complex verb structures shows both auxiliary and light verb head like properties with respect to (i and ii) above. Having a defective paradigm, we have to assume that the second verbal element is an auxiliary element. However, different from the auxiliaries in European languages, the auxiliaries in complex verb structures in Kazakh have an independent status in that they are able to act as a verbal head in non-complex verb structures. The examples below indicate this property.

(13) a. *Nurlan* *kitap-tı* *[oqı-*p *šıq-tı].*
Nurlan:NOM book:ACC read:IP.CONV AUX:PAST.3SG
'Nurlan has read/read the book.'

b. *Nurlan* *üy-den* *šıɣ-ıp-tı.*
Nurlan:NOM house:ABL go.out:I-PAST:3SG
'Nurlan has apparently left/left the house.' *(Indirect past reading)*[17]

Example (13a) above involves the auxiliary use of the second verbal element *šıq-* 'go' in a complex verb structure. In (13b), on the other hand, the same verbal element is used as an independent verbal expression, as a finite verbal head. This indicates the light verb status of the second verbal element.

As the discussion above shows, the second verbal element in complex verb structures can be considered both as an auxiliary like element and as a light verb head. I assume that it is an auxiliary head at least in complex predicate structures and that it is specified for the actionality interpretation. The implication of this assumption in terms of Distributed Morphology is that there is a particular node in the syntactic derivation and the auxiliary element is inserted to that node through vocabulary insertion. I assume that that the Aspect node is a good candidate in Kazakh phrase structure for the insertion of Aux. This vocabulary insertion is illustrated in (14) below.

(14) Vocabulary insertion
Aspect [NONTRANSFORMATIVE] ↔ žat-, tur-

16 A reviewer remarks that *bar* 'go' can combine with the auxiliaries *jat-* and *şıq-* in its 'conjoined verbal roots' use. The restriction I discuss here is at work only when it is used in complex verb structures where the second verbal root is used as an auxiliary form.

17 Kirchner (1998: 326) points out that [v+IP+DI] structures convey indirect past reading.

Aspect [TRANSFORMATIVE] ↔ šıq-, qoy-, tüs-

The representation above does not predict the choice of a particular auxiliary for the aspect node in the syntactic derivation. For instance, we cannot predict which of the vocabulary elements specified for the insertion to the aspect node will be employed in the structure since the Asp [TRANSFORMATIVE] node can be filled by three different vocabulary items. At this point, I assume that membership of the particular node is an arbitrary property of the auxiliary root. This implies that each auxiliary root is specified for a feature encoding the membership of a particular class. This is illustrated in (15) below.

(15) √ Aux $_{[I]}$
√ Aux $_{[II]}$

(15) shows the feature specification for the auxiliary root via the indexes shown as subscripts. According to the representation above, a particular auxiliary item is specified with a diacritic feature encoding its class membership. At this point, following Embick and Halle (2005), I assume a concord relation between the auxiliary item and the main verb root similar to the one I assumed for the converb marker above. According to this assumption, the aspect node in the syntactic derivation will be filled by the insertion of a particular auxiliary element with a diacritic feature specification which is in accordance with the same diacritic feature specification on the main verb root. Let us look at the representation below to see how this assumption works.

(16) Auxiliary insertion
Aux → Aux $_{[X]}$ / √ VERB $_{[X]}$

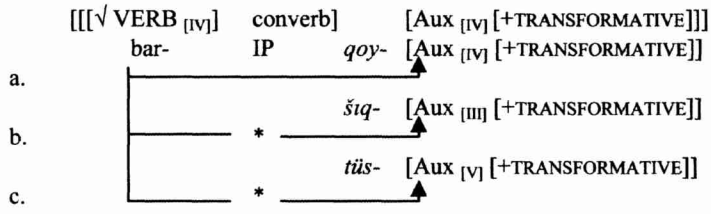
According to example (16) above, the auxiliary enters into a concord relation with the verb root and is inserted into the syntactic aspect node. It should be noted that the features in the aspect node and the features in the auxiliary should match before the concord relation takes place. Below are the different auxiliaries and their features.

(17) a. žat- + NONTRANSFORMATIVE
b. tur- + NONTRANSFORMATIVE
c. šıq- + TRANSFORMATIVE
d. qoy- + TRANSFORMATIVE
e. tüs- + TRANSFORMATIVE

The auxiliary in (17c) above has a [+TRANSFORMATIVE] feature and can be inserted into the aspect node in syntactic derivations having the same feature. However, note that there are two more auxiliaries with the same feature competing for the insertion.

At this point, concord relation comes into play and blocks the insertion of the other two, which do not have the right diacritic feature.[18] (18) shows this concord relation and how the other auxiliaries are blocked from insertion.

(18) *The concord relation*



According to the representation above, among the three auxiliaries with the same feature [+TRANSFORMATIVE], only *qoy-* is inserted into the syntactic node since only it can enter into the concord relation with the main verb as the ungrammaticality of the second and third concord relations in (18) above indicates. This is in accordance with the core assumptions of Distributed Morphology in that among the vocabulary items competing for the insertion, only the one which is the most specified among others is inserted.

To sum up this section, we discussed the status of the auxiliary element and argued that it exhibits both auxiliary like and light verb like characteristics. We further argued that membership of the particular node is an arbitrary property of the auxiliary root. For the choice of a particular auxiliary element, I assumed a concord relation with the main verb and the auxiliary.

6. Conclusion

The paper provided a brief theoretical discussion of the complex verb structures in Kazakh within the Distributed Morphology framework. The study is limited to the discussion of two main problems that appear in complex verb structures: (i) the converb marker, and (ii) the auxiliary item. For the status of the converb form, the paper claimed that it is a dissociated morpheme in that it is added to the derivation for morphological well-formedness requirements. For the double occurrence of *-IP* in some constructions, I have provided a concord relation between the converb and the tense markers. The second problem discussed in the article was the status of the second verbal element in complex verb structures. I proposed that the second verbal

18 Some native speakers find (18c) grammatical as one of the reviewers states. I assume that there is a dialect split for the grammaticality status of this example. For those who accept (18c), there might be additional interpretations alongside the 'arrived' meaning.

element is an auxiliary item whose occurrence is another manifestation of the concord relation with the main verb.

The discussion of the problems in the data and the explanations provided here supported one of the main claims of Distributed Morphology: the syntactic structure is subject to post-syntactic morphological operations at the PF component of the grammar. The paper also contributes to the theoretical description of Kazakh in that it helps to explain the nature of grammatical relations occurring within the complex verb structures in the language. However, the article suffers from limited data and acknowledges that there may be additional data which possibly include counter examples for the argumentation here. We hope to draw attention to the theoretical description of complex verb structures in language in order to understand the exact nature of grammatical relations.

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Abbreviations:

ABL	ablative	COP	copula	PAST	past
ACC	accusative	DAT	dative	PL	plural
AGR	agreement	GEN	genitive	POSS	possessive
AOR	aorist,	I-PAST	indirect past	PRES	present
AUX	auxiliary	NOM	nominative	SG	singular
COM	commutative	PART	participle	V	verb
CONV	converb	P-PART	past participle		

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