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TWO-FACED SUBORDINATION MARKER IN WEST CIRCASSIAN NECESSITY CONSTRUCTIONS

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This paper describes the behavior of a subordination marker *-n* in modal necessity constructions in West Circassian, a polysynthetic language belonging to the Northwest Caucasian family. We show that *-n* functions as a simple suffix in the non-epistemic construction and as a phrasal affix in the epistemic construction. Hence, this morpheme violates the principle according to which the formal characteristics of a linguistic element should remain the same in different contexts of its use. This violation is explained by the difference in the semantic contribution of the suffix under discussion in different patterns and by the typological specifics of West Circassian, which allows its speakers to manipulate with morphemes more freely.

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1. Introduction

It is often tacitly assumed that a meaningful linguistic element, be it a morpheme or a combination of morphemes such as a word or even a syntactic phrase, should be consistent in its formal behavior. In other words, normally the formal characteristics of such an element should remain the same in different contexts of its use. For example, we do not expect that something would behave as a complex phrase in some contexts and as a word in others, or as an affix in some contexts and as a word in others, otherwise we usually postulate different items.

This is not to say that there are no exceptions to this. For example, the Abkhaz negation marker and the Lithuanian reflexive marker can be prefixed in some contexts and suffixed in other contexts, and this is certainly remarkable (cf. Plungian 2003: 89). Haspelmath (1993) demonstrated how various affixes can be "externalized" by changing their position within the word, and the intermediate stage of this development may show the inconsistent use of an affix in various parts of the word form. In some languages (such as German and Dutch on the one hand but also Tanti Dargwa of the Northeast Caucasian family on the other hand), preverbs can be occasionally separated from verbal stems. Furthermore, the rise of simple clitics (in terms of Zwicky 1977), which can be considered allomorphs of full-fledged words, is normally described as grammaticalization and has been thoroughly studied in this perspective. But it seems safe to say that all such exceptions are of great interest.

In this paper, we consider a story of the West Circassian suffix *-n*, which also seems to violate the principle stated above, since it appears as a usual suffix in some contexts and as a phrasal affix in others. We will relate this to some typological characteristics of the language under discussion.

West Circassian (also known as Adyghe) belongs to the Circassian branch of the Northwest Caucasian family and in spoken by Circassians living in two Caucasians regions of the Russian Federation, namely in the Republic of Adyghea and the Krasnodar Krai, and in the diaspora in the Near East (primarily in Turkey). The data presented here are mostly from the Temirgoi dialect, as is spoken in Adyghea. It is worth noting that this language also became a basis for Standard West Circassian.[4]

In general, West Circassian can be characterized as an agglutinative language with the predominantly left-branching word order and ergative alignment. However, probably the most

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[4] The main reference grammar of West Circassian is Rogava and Kerasheva 1966 published in Russian. For general description of the West Circassian grammar in a typological perspective see also the sketches Paris 1989 (in French) and Arkadiev et al. 2009 (in Russian). The morphology of West Circassian is also described in detail in Smeets 1984 (in English). Some basics of the grammar of the Circassian languages in English can also be found in Kumakhov and Vamling 2009.

important typological feature of West Circassian is polysynthesis, which is related to its highly complex word structure (see Lander and Testelets, to appear). It is important for us that polysynthesis may also be associated with the highly developed morphology of the "productive noninflectional concatenation" type (de Reuse 2009), i.e. a kind of morphology that has multiple features of syntax and hence presumably allows speakers of such languages to actively construct words in the course of speech.

The structure of this paper is as follows. In Section 2, we provide some general information on the structure of the West Circassian word, which is relevant for our study of the suffix -*n*. In Sections 3 and 4, we discuss the use of this suffix in the non-epistemic necessity constructions and the epistemic necessity constructions respectively. In Section 5, we present an account of the behavioral differences of -*n* in these constructions. The last section is a conclusion.

2. Endings vs stem affixes

The canonical word in West Circassian consists of several morphological zones occurring in a fixed order, some of which are prefixal, while others include suffixes (for details see Arkadiev et al. 2009, Lander, forthc.). For us, it will be important that suffixes may belong to one of the two zones: the stem and the endings (Smeets 1984). The suffixes belonging to the stem include mainly morphemes conveying various aspectual (including aktionsart), temporal and modal meanings. These suffixes are largely ordered according to their scope (Korotkova and Lander 2010). Most (but not all) endings convey syntactic information: in particular, almost all suffixes that mark subordination (e.g., case markers and markers of dependent clauses) are of this kind. In (1), for instance, the refactive/reversive suffix 'back, again' and the past suffix are parts of the stem, while the suffix marking plurality of the absolutive argument and the conditional suffix are endings. Note that tense markers usually close the stem: this is likely due to their wide scope with respect to other stem affixes.

(1)   ze-xe-fə-ž'ə-ʁe-xe-me
        REC.IO-LOC-investigate-RE-PST-PL-COND
        'if they are investigated (lit., within each other)'

It should be emphasized that most endings are not likely to be considered clitics, as they appear strictly on the syntactic head.[5] Despite this, as shown by Ershova (2011), some endings may attach to complex syntactic phrases, hence displaying *affix suspension*, or *group affixation*. An example of this phenomenon is given in (2):[6]

(2) a-r   a.pe-re=çəf-ew   se   [s-jə-qarəwə-re
     that-ABS   first-ADJ=person-ADV I   1SG.IO-POSS-power-COORD

     s-jə-λeč'ə-ʁe-re]-č'e   xe-z-ʁe-pč'e-š'tə-r   a-rə
     1SG.IO-POSS-strong-NMZ-COORD-INS   LOC-1SG.ERG-CAUS-jump-FUT-ABS   that-PRED

     'This is the first human whom I will make jump with my power and my strength.'

In this example, the instrumental ending, which is usually considered a case marker but has some properties of a postposition (e.g., it can be preceded by the oblique case marker), is added to the whole coordinating construction 'my power and my strength', as the brackets indicate.

Finally, the contrast between endings and other suffixes has not only a functional and morphological nature but is also based on morphophonology, as first formulated by Smeets (1984). In particular, there is a morphophonological rule (3) whose formulation must involve the notion of the right edge of the stem:

(3) If the two final syllables immediately preceding the right edge of the stem both contain the vowel /e/ in its underlying form, the penultimate vowel is changed into /a/ unless it is a part of the pre-stem zone.

Note that this rule relies upon an underlying form, which is based on various assumptions. For example, we assume that West Circassian normally has open syllables, so that, for example, for most structures of the form CVC we assume the underlying form CVCV, the last vowel being observed in specific contexts.[7]

The following example, where the second line presents the underlying form and || marks the right border of the stem, may help the reader understand how this rule works:

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(4)   ja-ʁʷəsa-ʁe-xe-ba

       a-jə-ʁʷəse-ʁe ‖ -xe-ba

       3PL.IO-POSS-companion-PST-PL-EMP

       'they were together with them'

       Here there are two open syllables /se-ʁe/ with the underlying vowel /e/ before the right border of the stem, which turn into /sa-ʁe/ in accordance with the rule given above.

       Interestingly, the /e/~/a/ alternation is sometimes related to stress, at least in the diachronic perspective (cf. Rogava and Kerasheva 1966: 25). However, the issue of stress in West Circassian is problematic. To the best of our knowledge, no firm minimal pairs with disambiguating stress have been known so far. Moreover, according to Kuznetsova (2006), the speakers asked for the position of stress show much variation (cf. also Smeets 1984: 128–129). On the basis of this, it could be concluded that the role of stress in West Circassian is not crucial, if any phonologically relevant stress can be postulated at all. We will return to this issue later.

       The contrast between endings and other suffixes is important for the protagonist of this paper, the suffix -n (with the underlying form -nə, which can be found in just a few contexts, though). While being glossed as MOD(al) throughout this paper, this suffix may have various functions such as marking the modal future (5), deriving action nominals / masdars (6), appearing in constructions typical of infinitives in other languages (7), among others; for discussion see Serdobolskaya 2009, to appear.

(5)   le.psə-r   se   ŝex-ew   qe-z-ʁe-ẑʷe-n,   aw   təʁʷəẑ=č'en   te

       broth-ABS I   fast-ADV   DIR-1SG.ERG-CAUS-boil-MOD but wolf=ankle   we

       q-jə-t-xə-n?

       DIR-LOC-1PL.ERG-carry-MOD

       'I will manage to quickly boil the broth, but where will we take a wolf ankle?'

(6)   wered   qe-p-ʔʷe-nə-r   we   w-jə-č'esa-ʁ

       song   DIR-2SG.ERG-say-MOD-ABS   you.SG   2SG.IO-POSS-beloved-PST

       'You were fond of singing songs.'

(7) se wə-s-šxə-n-ew   sə-qe-ḳʷa-ʁ
     I   2SG.ABS-1SG.ERG-eat-MOD-ADV   1SG.ABS-DIR-go-PST
     'I have come to eat you.'

     In all these kinds of construction, the suffix *-n* seems to belong to the stem, as it blocks the /e/~/a/ alternation. Recall that the underlying form of *-n* is *-nə*: if it constitutes the final syllable of the stem's underlying form, the rule (3) should be non-applicable. If it were an ending, on the other hand, the form of the verb *qe-z-ʁe-ẑʷe-n* 'I will boil it' in (5), for example, would be *qe-z-ʁa-ẑʷe-n, which is not the case.

     We will see, however, that the picture is somewhat more complex. In particular, this paper discusses in this respect the modal constructions illustrated in (8) and (9).

(8) se sə-p-fe-gʷəmeč'ə-n   fa.je
     I   1SG.ABS-2SG.IO-BEN-worry-MOD must
     'I must worry about you.'

(9) setenaje zə-f-jə-ʔʷa-ʁe-r   a-rə-n   fa.je
     Seteney   REL.IO-BEN-3SG.ERG-say-PST-ABS   that-PRED-MOD must
     'It is likely that this is whom Seteney spoke about.'

     Both examples contain the verb *faj(e)* 'must'[8] and a subordinate clause whose predicate contains the suffix *-n*. Note that the verb 'must' in the necessity constructions lacks overt cross-reference morphology, which suggests that its subject is the subordinate clause. One clear difference between (8) and (9) is that the former expresses non-epistemic modality,[9] while the latter conveys the meaning of epistemic modality. We will see, however, that there are formal features that distinguish the two constructions as well.

3. Non-epistemic necessity construction

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[8] This verb consists of the benefactive suffix *fe-* and the bound root *-je*. For the sake of simplicity, we do not gloss them, though. A general description of the constructions with this verb in one of the West Circassian dialects (Bzhedug) can be found in Aksenova 2014.

[9] Non-epistemic necessity includes primarily deontic necessity but also some other kinds of necessity (cf. van der Auwera and Plungian 1998, Nuyts 2006 among others). In this paper, we do not pretend to give a precise description of non-epistemic meanings, though.

In the non-epistemic construction, it is clear that *-n* belongs to the stem. Below we present various pieces of evidence for this.

(i) The suffix *-n* blocks the /e/~/a/ alternation, as is shown in (10). If it were an ending, one would expect the form showing the alternation, which is infelicitous, though.

(10) psə-he   mašəne-r   z-ʁe-če-n / *z-ʁa-če-n   fa.j
      water-carry car-ABS   1SG.ERG-CAUS-run-MOD   must
      'I must send the car for water.'

(ii) The suffix *-n* in this construction precedes any endings. In (11) we find that it must occur before the plural ending *-xe*, which is the most leftward ending in other morphological forms.

(11) d-ʁebəλə-n-xe /   *d-ʁebəλə-xe-n   fa.j
      1PL.ERG-CAUS-hide-MOD-PL 1PL.ERG-CAUS-hide-PL-MOD must
      'We must hide them.'

(iii) If there are several coordinated verbs or clauses subordinated under the verb *faj*, all of them should be marked with *-n* (12)–(13). Clearly, the marker *-n* in this construction is not similar to those endings that show group marking.

(12) a.   je   wə-qe-ŝʷe-n   je   wered qe-p-ʔʷe-n   fa.j
           or   2SG.ABS-DIR-dance-MOD or   song   DIR-2SG.ERG-say-MOD must
      b.   *je wə-qe-ŝʷe   je   wered qe-p-ʔʷe-n   fa.j
           or   2SG.ABS-DIR-dance   or   song   DIR-2SG.ERG-say-MOD must
      'You must dance or sing a song.'

(13) a.   wə-qe-ŝʷe-n   əč'jə wered qe-p-ʔʷe-n   fa.j
           2SG.ABS-DIR-dance-MOD and   song   DIR-2SG.ERG-say-MOD must
      b.   *wə-qe-ŝʷe   əč'jə wered qe-p-ʔʷe-n   fa.j
           2SG.ABS-DIR-dance   and   song   DIR-2SG.ERG-say-MOD must
      'You must dance and sing a song.'

It is worth noting that in the non-epistemic construction the word marked with -*n* normally does not contain any markers that may be used for marking tense, i.e. proper tense markers or a dynamic marker that usually appears on dynamic verbs in the present tense. At first glance, this claim is contradicted by examples like (14), where -*n* follows the morpheme -*ʁe*, which is also used as a past tense marker:

(14) a-rə,   terez, s-jə-pŝeŝe-ẑeje=dəŝe   dež' psənč'-ew ḳʷe-ʁe-n   fa.je!
     that-PRED true   1SG.IO-POSS-girl-DIM=gold at   quick-ADV go-ʁe-MOD must
     'Yes, indeed, it is necessary to quickly go to my beloved (lit., golden) daughter.'

However, it is not clear to us whether in this construction -*ʁe* serves as a past tense marker. Not only no semantics of the past tense is found in such cases, but the word marked with -*n* has certain specific properties that preclude us to think of it as a normal verb. In particular, it cannot take cross-reference:

(15) *wə-ḳʷe-ʁe-n   fa.je
     2SG.ABS-go-ʁe-MOD   must
     ('It is necessary for you to go.')

Interestingly, West Circassian possesses another suffix -*ʁe*, which is used to derive abstract nominalizations (cf. Atazhakhova 2006; Lander, to appear), which cannot contain overt cross-reference prefixes with the exception of possessive ones. We hypothesize that examples like (14) show nominalizations of this kind rather than past forms. If this is the case, this construction is quite different from the non-epistemic construction discussed above, so we exclude it from consideration in this paper.

4. Epistemic necessity construction

At first glance, the main formal distinctive feature of the epistemic necessity construction is that the predicate of the subordinate clause may contain a marker indicating tense:

(16) zawər dež' wə-ḳʷa-ʁe-n   fa.j
     Zaur   at   2SG.ABS-go-PST-MOD must
     'It is likely that you visited Zaur.'

However, on a closer inspection, we find quite a number of differences, which are discussed below.

4.1. Even in the absence of (typical) endings, in this construction, the marker -*n* does not block the /e/~/a/ alternation, as is shown in (17).

(17) psə-ha   mašəne-r   j-e-ʁa-če-n / *j-e-ʁe-če-n   fa.j
       water-carry car-ABS   3SG.ERG-DYN-CAUS-run-MOD   must
       'It is likely that he is sending the car for water.'

This suggests that here the edge of the verbal stem is located before -*n*. This is confirmed by the fact that if there are any endings in the subordinate verb, -*n* follows them rather than precedes them, as in (18), where it follows the plural ending:

(18) a-xe-r   qe-z-gʷəpšəsə-ʁe-xe-n   fa.j
       that-PL-ABS   DIR-1SG.ERG-think-PST-PL-MOD   must
       'It is likely that I invented them.'

4.2. There is also evidence from stress that suggests that -*n* is not a part of the stem. Consider the following examples:

(19) a.   q-je-ӡ'é-n   fa.j
              DIR-DAT-call-MOD   must
              'She must call him.'
       b.   q-j-é-ӡ'e-n   fa.j
              DIR-DAT-DYN-call-MOD   must
              'It is likely that she calls him.'

(19a) represents the non-epistemic construction, while (19b) conveys the epistemic reading. According to the speakers' judgments, the two examples differ in stress. We thus see that these examples represent a good minimal pair.[10]

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[10] The dynamic prefix *e*- belongs to a prefixal pre-stem zone, where the /e/~/a/ alternation does not occur.

As said above, the rules assigning the stress are not elaborated on for West Circassian, partly for the reasons mentioned in Section 2.[11] However, several attempts have been made to formulate the rules governing the place of the stress in the closely related Kabardian language (Colarusso 2006: 7; Moroz 2012; Applebaum 2013: 97–98). While omitting some details and assuming that Circassian languages have underlying forms with open syllables (see Section 2), it can be said that by default, the stress should fall on the penultimate syllable of the underlying form of the stem.

The examples just given obviously confirm this view. The underlying forms of the dependent verbs in these examples are given in (20), with the assumption that in the non-epistemic construction, but not in the epistemic one, -nə is a part of the stem.

(20) a. qe-je-ʒ'é-nə ‖
         DIR-DAT-call-MOD
         'She must call him.'
     b. qe-je-é-ʒ'e ‖ -nə
         DIR-DAT-DYN-call-MOD
         'It is likely that she calls him.'

4.3. If a subordinate proposition is expressed with several clauses, -n in the epistemic construction appears on the final predicate only:

(21) je qa-ŝʷe-š'tə-ʁe(*-n)   je   wered q-ə-ʔʷe-š'tə-ʁe-n   fa.j
     or DIR-dance-AUX-PST-MOD or   song   DIR-3SG.ERG-say-AUX-PST-MOD must
      'It should be that he was dancing or was singing a song.'

(22) qa-ŝʷe-š'tə-ʁe(*-n)   əč'jə wered q-ə-ʔʷe-š'tə-ʁe-n   fa.j
     DIR-dance-AUX-PST-MOD and   song   DIR-3SG.ERG-say-AUX-PST-MOD must
      'It is likely that he was dancing and singing a song.'

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[11] Rogava and Kerasheva (1966: 25 –28) provide the discussion of the stress in West Circassian but do not formulate any rules that are precise enough. Smeets (1984: 128) states that "one cannot predict with certainty which syllable will be the stressed one".

These examples demonstrate affix suspension, which we have already seen in Section 2. Similarly to other instances of affix suspension, they pose a question of whether the suspended affix is added to the whole coordinating construction, or is deleted on the first constituent, or marks the non-first coordinand (cf. Erschler 2012 on various approaches to the phenomenon). For West Circassian, we prefer the first variant, i.e. we assume that *-n* in (21)–(22) is added to the whole coordinating construction, partly because the affix cannot be recovered on the first part of the coordinating construction and partly by the analogy with the examples like (2) above.

4.4. The fact that may seem amazing if one relies on traditional grammars of West Circassian is that in the epistemic construction the suffix can be added to the forms that are usually described as finite. First, it can appear on verbs containing the "finite" dynamic prefix, as in (23). Second, it may be added to the "finite negation" *-ep* (24).

(23) bwew   me-gʷəš'əʔe-n   fa.j
      many+ADV   DYN-talk-MOD   must
      'It is likely that he is talking a lot.'

(24) č'eš'.re   wə-čəje-r-epə-n   fa.j
      at.night   2SG.ABS-sleep-DYN-NEG-MOD   must
      'It is likely that you don't sleep at night.'

Both facts are not uncontroversial as concerns the finiteness. In fact, the dynamic prefix is also found in the so-called relative clauses with the meaning 'when', and the negation suffix is observed at least in dependent consecutive forms, so both markers are not necessarily associated with the forms that can be used exclusively as the predicates of independent clauses. Nonetheless it is tempting to propose that in the epistemic construction the marker *-n* is added to finite clauses irrespectively of their verb forms.

5. Accounting for the position of *-n*

The simplest way to account for the different properties of *-n* in the non-epistemic construction and *-n* in the epistemic construction is to distinguish between two *-n*'s. However simple, this solution does not seem intuitively correct to us, since it does not get a trivial generalization that the verb 'must' requires the subordinate clause marked with *-n* in all of its uses.

Yet if it is the same *-n* that is used in both the epistemic and non-epistemic constructions, how can its different behavior be explained? Before we get into discussion, note that the effects related to the vowel alternation and stress may be related to the position of *-n*. No matter what the status of this marker in the epistemic construction is, the fact that it does not belong to the stem motivates its inability to affect the stress and the vowel alternation which are defined relative to the stem. Hence, we consider our main task at this stage to explain the position of the marker.

We propose that the place of *-n* is determined by its semantic scope and the role it plays in constructing the meaning of the subordinate clause.

Let us assume that every clause should be characterized according to some parameter determining its relations with the context. Sometimes this characterization is provided by direct reference to a relation between the corresponding situation and some other known situation or the speech act. In other cases, the situation denoted by the clause must be related to some operator (e.g., an adverbial quantifier like *always* or even an existential quantifier like *once*), which probably itself mediates the relation to the context (in fact, to the restrictor of this operator). Technically this can be represented by introducing a dedicated variable, which gets its value anaphorically or deictically or is bound by some operator.[12] The proposition where this variable remains open is stated to be *incomplete*, while the proposition where it is bound is *complete.*

In the necessity constructions, the matrix verb 'must' may always serve as an operator relating a subordinate clause to some context. According to the relational approach to modality proposed by Kratzer (1977) (we use the version of this paper as it appeared in Kratzer 2012), modal operators take two arguments, namely a modal restriction and a modal scope. This is exemplified with the treatments of an epistemic necessity sentence (25) and a non-epistemic necessity sentence (26) (both examples are taken from the same paper). We assume that the modal restriction constitutes the context to which the subordinate clause is connected via the modal verb.

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[12] Cp., for example, Partee's (1973) early treatment of the temporal interpretation of clauses which introduced a variable for temporal localization. It should be noted, however, that (i) later Partee gave up this analysis (cf. Partee 1984), and (ii) this variable is by no means equivalent to what is briefly outlined here in all respects.

(25) a. The ancestors of the Maoris must have arrived from Taiti.

b. *Must in view of*

[what is known]$_{\text{RESTRICTION}}$

[the ancestors of the Maoris have arrived from Taiti]$_{\text{SCOPE}}$

(26) a. All Maori children must learn the names of their ancestors.

b. *Must in view of*

[what their tribal duties are]$_{\text{RESTRICTION}}$

[all Maori children learn the names of their ancestors] $_{\text{SCOPE}}$

Still, the subordinate clauses in the non-epistemic construction and in the epistemic constructions differ in important respects.

In the non-epistemic construction, the subordinate clause does not refer to a complete proposition (in our sense) unless it is related to the matrix modal. The suffix *-n* does exactly this and hence takes part in the construction of proposition. Note that this function of *-n* is exactly parallel to the function of tense markers, which explains the fact that it is not compatible with tense markers but occupies the same position within the word.

In the epistemic construction, the speaker evaluates an already complete proposition, whose relations to the context are already defined. Clearly, in this case *-n* does not take part in the construction of the embedded proposition and has scope over the whole of it. Taking it for granted that a proposition corresponds (minimally) to a clause, it is not surprising that *-n* is added to the whole clause or a combination of clauses.

6. The formal status of *-n*

It is clear that in the non-epistemic construction, the marker *-n* serves as a suffix. Assuming that the morphological and syntactic levels should be strongly distinguished and that *-n* is identical in the epistemic and non-epistemic constructions, it is not plausible to consider it a complementizer which occupies a separate node in syntax. We prefer to think of it as a phrasal affix, i.e. a morpheme that can be added to a complex syntactic phrase by means of a morphological rather than syntactic operation. It should be noted that there is independent evidence that West Circassian allows the application of morphological rules to complex syntactic objects (Lander 2015) and that this may be facilitated by the fact that the polysynthetic morphology is actively used for the construction of words in the course of speech.

The problem is, however, that if *-n* in the epistemic construction is the same as *-n* in the non-epistemic construction, it is not an ending and hence in the epistemic construction it occurs in an unexpected place. There are two possible approaches to this.

First, we may postulate a null stem to which *-n* is added. Interestingly, West Circassian possesses an auxiliary stem *š'tə-* (originally the combination of the locative preverb *š'ə-* and the root *-t* 'stand'), whose combination with *-n* expresses epistemic necessity. This is illustrated in (27)–(29).

(27) bwew   me-gʷəš'əʔe-š'tə-n

      many+ADV   DYN-talk-AUX-MOD

      'It should be that he speaks a lot.'

(28) č'eš'.re   wə-čəje-r-ep-š'tə-n

      at.night   2SG.ABS-sleep-DYN-NEG-AUX-MOD

      'It is likely that you don't sleep at night.'

(29) je   qa-ŝʷe-š'tə-ʁe   je   wered   q-ə-ʔʷe-š'tə-ʁe-š'tə-n

      or   DIR-dance-AUX-PST   or   song   DIR-3SG.ERG-say-AUX-PST-AUX-MOD

      'It should be that he was dancing or was singing a song.'

As these examples demonstrate, the complex marker *š'tə-n* may be added to clauses containing the "finite" markers of negation and dynamicity as well as to complex coordinating constructions, just like the epistemic *-n*. Moreover, as (30) shows, *š'tə-n* may appear in the epistemic construction exactly in the place of *-n*. However, *š'tə-n* cannot be identified with the epistemic *-n* because the latter but not the former requires a modal verb (31).

(30) zawə-r   dež'   qe-ḳʷa-ʁe-š'tə-n   fa.j

      Zaur   at   DIR-go-PST-AUX-MOD   must

      'It is likely that he went to Zaur.'

(31) č'eš'.re   wə-čəje-r-ep-š'tə-n /   *wə-čəje-r-epə-n

      at.night   2SG.ABS-sleep-DYN-NEG-AUX-MOD   2SG.ABS-sleep-DYN-NEG-MOD

      'It is likely that you do not sleep at night.'

Still, these examples show that in the epistemic construction a combination of a verb unmarked for subordination with an auxiliary stem is indeed possible. We have no objections against the postulation of a null stem to which *-n* is added, then (with the exception of Occam's Razor).

Alternatively, we may hypothesize that the position of *-n* in the epistemic construction is indeed "wrong", but it is forced by the rules of the semantic composition described above, which turn out to be stronger than the rules that place *-n* into this stem. This picture looks especially plausible given the fact that there are other fragments of the West Circassian morphology where the semantic motivation of the placing of a morphological element struggles against the formal motivation. For example, as shown in Lander 2015, in nominal complexes there is variation in whether to place the negation marker in the position required by the zone template or the position motivated semantically. In fact, it may be that a similar variation exists with *-n* as well. For example, the following instance of the epistemic construction taken from our text corpus does not show the /e/~/a/ alternation expected for this meaning:

(32) se sə-xe-wəqʷe-ʁe-n fa.je

    I 1SG.ABS-LOC-blunder-PST-MOD must

    'It is likely that I have blundered.'

We suspect that this may also reflect the struggle between the formal constraints requiring *-n* to serve as part of the stem and the semantic requirements requiring it to appear after the stem is constructed.

Both analyses, i.e. the null base analysis and the "wrong place" analysis have shortcomings. The "wrong place" analysis allows for some inconsistency but the null base analysis has to postulate an invisible entity. The choice between the two analyses should depend on certain assumptions which here we abstract away from.

7. Conclusion

In this paper, we have described the behavior of the subordinating marker *-n* in the constructions denoting epistemic necessity and non-epistemic necessity. It has been shown that the behavioral difference that this marker shows in these constructions may be attributed to its semantic contribution. In particular, unlike in the non-epistemic construction, in the epistemic construction *-n* does not take part in constructing the subordinate proposition and has scope over the whole subordinate clause. Because of this, *-n* in the epistemic construction occurs in the "wrong place"

being added to the whole subordinate part. This is presumably also made possible by the specifics of the polysynthetic morphology which makes it easier to operate with affixes in the course of speech and does not restrict the paradigm of word forms.

Thus, while serving as a simple suffix in some constructions and as a phrasal affix in other constructions, *-n* indeed violates the principle formulated in the beginning of our paper, which requires consistent formal behavior. Yet this violation is well-motivated.

In order to give an account for the semantic contribution of *-n*, we have also outlined the contours of a semantic model which is intended to relate the meaning of a clause to its context. The elaboration of this model is left for future work.

Abbreviations

ABS − absolutive, ADJ − adjectivizer, ADD − additive, ADV − adverbial, AUX − auxiliary stem, BEN − benefactive, CAUS − causative, COND − conditional, COORD − coordination, DAT − dative, DIM − diminutive, DIR − directive, DYN − dynamic, EMP − emphasis, ERG − ergative, FUT − future, INS − instrumental, IO − indirect object, LOC − locative preverb, MOD − modal, NEG − negation, NMZ − nominalizer, PL − plural, POSS − possessive, PRED − predicative form, PST − past, RE − refactive/reversive, REC − reciprocal, REL − relative, SG − singular.

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