

PREFIXES AND SUFFIXES IN THE ADYGHE POLYSYNTHETIC WORDFORM:  
TYPES OF INTERACTION

Peter Arkadiev, Alexander Letuchiy<sup>1</sup>

*0. Introduction*

In the present article, we examine some intriguing properties of the polysynthetic wordform in Adyghe (West Circassian). This language belongs to the North-West Caucasian language family and is spoken in the Russian Federation, Turkey and some other countries. Among the most comprehensive descriptions of Adyghe, Rogava/Keraševa 1966, Kumakhov 1971, Smeets 1984, Paris 1989, and Testelets (ed) 2009 can be mentioned.<sup>2</sup>

The topic of this article has to do with the types of interaction between prefixes and suffixes in the morphological structure and semantic interpretation of the extremely complex polysynthetic Adyghe verbal form. As we show, the relationships between the elements of the different parts of the verbal form are both non-trivial and heterogeneous, which suggests that affix interaction can be an important parameter of morphological complexity in languages.

Though the problem of morpheme order and interpretation of affix combinations in morphologically rich languages has been extensively studied (see e.g. Rice 2000 on Athapaskan, Fortescue 1980 on Eskimo, Hyman 2003 on Bantu, and Mithun 2000 in general), the question of interaction of morphemes occurring on different sides of the root, as far as we know, has not been raised in the literature before.

The article is structured as follows. In Section 1, we point to the most relevant typological features of Adyghe. In Section 2, we briefly describe the structure of the Adyghe verbal complex. In Sections 3-5, we analyze types of constraints which are imposed on each other by the prefixal and the suffixal parts of the verb form. We show that though the structure and organization of the two parts of the word are different, they are not completely independent of one another either in terms of particular morphemes requiring or prohibiting the occurrence of some other morpheme on the other side of the root, or in terms of their relative semantic scope assignment.

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<sup>1</sup> Peter Arkadiev (Institute of Slavic Studies of the Russian Academy of Sciences and Russian State University for the Humanities, Moscow), Alexander Letuchiy (Higher School of Economics, Moscow).

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The data used in this paper comes mainly from the fieldwork materials on the Temirgoy dialect of Adyghe collected in the village Haqwerinehabl (Хакуринохабль), Republic Adygeya, in 2003-2006. We also use some data coming from the Shapsug dialect collected in the village Aguy-Shapsug (Агуй-Шапсуг), Krasnodar Region, in 2007, and from a variety of Temirgoy spoken in the village Hategwežweqwej (Хатажукай) collected in 2010. All of these field-trips were organized by the Russian State University for the Humanities.

### *1. Typological characteristics of Adyghe*

Let us first of all list some typologically unusual features which characterize Adyghe and, *mutatis mutandis*, its closest relative Kabardian.

First of all, in Adyghe one finds (almost) no distinction between nouns and verbs (Lander/Testeleets 2006). Though dictionaries, such as Šaov 1975, Tkharkakho 1991, Paris/Batouka 2005, translate some Adyghe words with Russian or French verbs and others with nouns, in reality, both “verbs” and “nouns” can appear in the predicative as well as in the argument syntactic positions without any dedicated marking. The morphosyntactic criteria which nevertheless allow to distinguish between the two major classes are subtle.

Second, Adyghe is a highly polysynthetic language, which means that the verb form contains pronominal affixes expressing all syntactic arguments of the predicate. The language also has a rich system of valency increasing operations (Smeets 1992, Letuchiy 2009a, 2009b), as well as a highly developed system of tense-aspect-mood related verbal morphology (Korotkova/Lander 2010).

Third, both dependent marking (case affixes on NPs) and head marking (cross-reference affixes on verbs) follow the ergative strategy.<sup>3</sup> The suffix *-r* (Absolutive) marks intransitive subjects and direct objects, whereas the suffix *-m* (Oblique) marks transitive subjects (agents), as well as indirect objects, certain adverbials, and adnominal possessors. However, the system of valency-changing mechanisms is not organized ergatively or at least is ambiguous with respect to syntactic alignment.<sup>4</sup>

Fourth, in terms of Nichols et al. (2004), Adyghe is a “transitivizing” language, i.e. it has a lot of morphosyntactic devices which allow to add an argument to the valency structure of the verb, such as causative and a variety of applicatives. However, it does not have as much grammaticalized means of valency decrease, such as anticausative. In addition, Adyghe possesses a rich system of locational preverbs (Paris 1995). All of them have a double function: semantically, they denote the type of localization of the situation with respect to some spatial reference point, whereas syntactically they add an indirect object to the valency structure of the verb.

<sup>3</sup> See Smeets 1992 and Kumakhov/Vamling 2006 for details.

<sup>4</sup> See Letuchiy 2007 on reflexives and reciprocals.

## 2. The structure of the Adyghe verbal complex

The verbal word in Adyghe consists of both prefixes and suffixes; fig. 1 represents the overall structure in terms of “positions” or “slots” (cf. Smeets 1984: Ch. 2, Paris 1989: 196-198, Arkadiev et al. 2009: 42). The “slots” in fig. 1 are given for convenience and do not always imply that any position can be filled by only one morpheme at a time (Lander/Letuchiy 2010). Usually one prefixal slot can be filled only by markers expressing one type of meaning: for instance, slot –9 is reserved for argument prefixes. This is not always true for suffixal slots.

Fig. 1. Structure of the Adyghe verbal complex

Prefixes							
Argument structure zone						Pre-stem elements <sup>5</sup>	
Absolutive	Directional prefix	Temporal prefix	Applicatives	Indirect object	Agent	‘Dynamic’ prefix	
						Optative	Negation
–9	–8	–7	–6	–5	–4	–3	–2

Prefixes	Root	Suffixes				
Stem				‘Endings’ <sup>6</sup>		
Causative	Root	Directional, inceptive, antipassive	Propositional operators	Plural	‘Dynamic’ suffix	Negation, illocutionary force, epistemic modality
–1	0	+1	+2	+3	+4	+5

The arguments of the verb are cross-referenced in the prefixal part of the verb form. The elements cross-referenced include the Absolutive argument (with the proviso that the 3<sup>rd</sup> person Absolutive markers are zero) and most participants expressed by the Oblique form of nouns. Only locative and temporal participants marked by the Oblique case are not obligatorily cross-referenced in the verb form.

Though the description in terms of “slots” is a convenient means of representation of the overall structure of the verb form in Adyghe, in reality, the organization of the prefixal and suffixal divisions of the Adyghe word follow quite

<sup>5</sup> The so called ‘dynamic’ prefix ( $\approx$  present tense) does not co-occur with the Optative and the Negative prefixes, and is therefore considered to occupy both of their slots.

<sup>6</sup> The difference between suffixes proper and “endings” is not important for the purposes of this article; see Smeets (1984: 206 and 282-287).



However, the order of prefixal elements is in most cases not sensitive to semantics. For instance, independently of whether the Causative (*ʁe-*) takes scope over the Benefactive applicative (*fe-*) or the other way round, the Benefactive (and the indirect object it introduces) appears in the slot –6, while the Causative occupies the slot –1. Not unexpectedly, this situation often gives rise to scope ambiguities, as the two interpretations of (3) clearly show:

(3) *jate* *čʼale-m* *meq<sup>wə</sup>* *s-fə-r-jə-ʁe-wəpčʼa-ʁ.*

father boy-OBL hay 1SG.IO-APPL-3SG.IO-3SG.A-CAUS-mow-PST

i. ‘The father made the boy mow the grass for me’ (Causative > Benefactive)

ii. ‘On my behalf, father made the boy mow the grass’ (Benefactive > Causative)

Bearing in mind the aforementioned peculiarities of the Adyghe morphology, it is legitimate to enquire about the possible types of interaction between prefixes and suffixes, and on possible constraints on such interaction. The subsequent discussion is fairly preliminary, since this domain has not been thoroughly investigated, and we are not aiming at a comprehensive treatment of all relevant phenomena.

### 3. *Hard and soft morphological constraints*

There are quite a number of instances when an element on the one side of the root requires (categorically or optionally) the presence of some element on the opposite side of the root. It must be noted that none of such situations can be properly treated as involving circumfixes, i.e. unanalyzable combinations of a prefix and a suffix, since the relevant prefixes and suffixes can in most cases occur independently, and though semantically the prefix+suffix combinations show varying degrees of idiomaticization, their co-occurrence is never completely unmotivated.

#### 3.1. *The Inceptive*

Perhaps the most circumfix-like prefix+suffix combination in Adyghe is the Inceptive, consisting of the suffix *-žʼe* and of the obligatory Indirect Object (glossed OPV, i.e. Oblique Preverb) prefix *je-*, as in example (4). The latter does not contribute either to the semantics or, more importantly, to the argument structure of the resulting complex predicate.

(4) a. *a-r* *ča-ʁe*  
DEM-ABS run-PST  
‘He ran’

b. *a-r* *je-če-žʼa-ʁ*  
DEM-ABS OPV-run-INC-PST  
‘He started running’

This morphological means of expressing inceptivity is, however, not productive (Say 2006). Usually, a periphrastic construction with a non-finite form governed by the verb *jež'en* 'start, begin' or its causative counterpart *jebež'en* is employed, cf. example (5):

(5) a. se we wə-qə-s-ŝ<sup>w</sup>e-ŝə-n-ew wə-j-e-ž'e  
 1SG 2SG 2SG.ABS-DIR-1SG.IO-APPL-know-INF-ADV 2SG.ABS-OPV-DYN-begin  
 'You begin to appear to me' (Say 2006: 8)

b. se we wə-s-š'e-n-ew je-s-e-ka-ž'e  
 1SG 2SG 2SG.ABS-3SG.A-lead-INF-ADV OPV-1SG.A-DYN-CAUS-begin  
 'I begin to lead you' (ibid.: 6)

The affixal and periphrastic expressions of inceptivity are obviously related: the former is the morphological counterpart of the latter, employing syntactic clause union and formal "incorporation" of the dependent verb into the matrix.

### 3.2. Locative expressions

Locative preverbs very often, especially in combination with verbs not bearing a locative component in their lexical meaning, require presence of one of the directional suffixes (Smeets 1984: Ch. 9), as shown in examples (6)-(8), taken from Šaov (1975: 171, 266 and 177):

(6) a. q<sup>w</sup>e-teq<sup>w</sup>-e-n b. q<sup>w</sup>e-teq<sup>w</sup>-ə-n  
 LOC-pour-LAT-INF LOC-pour-ELAT-INF  
 'to pour smth. into the corner' 'to pour smth. out of the corner'

(7) a. pə-thač'ə-č'ə-n b. pə-thač'ə-ha-n  
 LOC-wash-ELAT-INF LOC-wash-CIRCUM-INF  
 'to wash smth. away' 'to wash smth. all around'

(8) a. də-n b. k<sup>w</sup>ečə-d-e-n  
 sew-INF LOC-sew-LAT-INF  
 'to sew smth.' 'to sew smth. into smth.'

The use of the Directional suffixes is not limited to situations involving motion, but sometimes extends to the domain of valency. The Lative *-e* and the Elative *-ə* can also serve to, correspondingly, antipassivize (see below) and transitivize the verb, and in some cases it is not entirely clear which of the two functions is present in the particular verbal form.

Some of the combinations of a locative prefix with a directional suffix have been idiomaticized and are employed as “circumfixes”, e.g. *de-...-je* ‘upwards’ (Šaov 1975: 87):

- |   |  |
|---|--|
| (9) a. <b>de-pλə-n</b><br>LOC-look-INF<br>‘to look through smth.’ | b. <b>de-pλə-je-n</b><br>LOC-look-UP-INF<br>‘to look up’       |
| c. <b>de-pč’e-n</b><br>LOC-jump-INF<br>‘to jump between smth.’    | d. <b>de-pč’e-je-n</b><br>LOC-jump-UP-INF<br>‘to jump upwards’ |

Note that in contrast to both simple locative prefixation and other locative + directional combinations, *de-...-je* does not behave like an applicative introducing a new Ground argument with reference to which the spatial configuration of the event is construed.

Other such cases are the combination of the Lative/Circumferential suffix *-ha* with the directional prefix *qe-* ‘hither’, which yields the meaning ‘motion around something’ and in addition transitivizes the verb (this is signaled by the use of the other Lative suffix, *-ə*), as in example (10), and the combination of the locative preverb *č’e-* ‘under’ with the Elative suffix *-č’ə*, which, together with the Refactive suffix *-ž’ə* (see also below), indicates a repetition of a previous action (usually in order to amend its results), as in example (11):

- |  |   |
|--|---|
| (10) a. <b>ķ<sup>w</sup>e-n</b><br>go-INF<br>‘to go’ | b. <b>qe-ķ<sup>w</sup>-ə-ha-n</b><br>DIR-go-TR-CIRCUM-INF<br>‘to walk around’ |
| (11) a. <b>txə-n</b><br>write-INF<br>‘to write’      | b. <b>č’e-txə-č’ə-ž’ə-n</b><br>LOC-write-ELAT-RE-INF<br>‘to re-write, copy’   |

In all these cases, both the prefix and the suffix have their own values in the system of spatial encoding in Adyghe. However, when they are combined together, they to a large degree lose their autonomy and behave like unanalyzable units with non-compositional meanings.

### 3.3. *Inadvertitive*

The Inadvertitive prefix *?eč’e-* denotes unintentional actions (Kumakhov/Vamling 2006: 174-178). It can combine with both transitive and intransitive predicates and has two different, though related functions. With transitive verbs, it

denotes an action which the agent carried out unintentionally. The resulting verb is a bivalent intransitive, as in (12b):

- (12) a. **se**      **məʔerəse-xe-r**      **s-šxə-ʁe**  
 1SG      apple-PL-ABS      1SG.A-eat-PST  
 ‘I ate the apples’
- b. **se**      **məʔerəse-xe-r**      **s-ʔeč’e-šxə-ha-ʁ**  
 1SG      apple-PL-ABS      1SG.IO-INADV-eat-LAT-PST  
 ‘I unintentionally ate the apples’

Besides that, with monovalent intransitive (13) and transitive (14) verbs, the Inadvertitive can add a new indirect object to the valency structure of the verb. The resulting verb denotes a situation unexpected for this new participant:

- (13) a. **s-jə-kompjuter**      **ķ<sup>w</sup>esa-ʁe**  
 1SG.PR-POSS-computer      go.out-PST  
 ‘My computer switched off’
- b. **s-jə-kompjuter**      **s-ʔeč’e-ķ<sup>w</sup>esa-ʁ**  
 1SG.PR-POSS-computer      1SG.IO-INADV-go.out-PST  
 ‘My computer switched off unexpectedly to me’
- (14) a. **s-jə-hač’e-xe-m**      **zeč’e**      **məʔerəse-xe-r**      **a-šxə-ʁ**  
 1SG.PR-POSS-guest-PL-OBL      all      apple-PL-ABS      3PL.A-eat-PST  
 ‘The guests ate all the apples’
- b. **s-jə-hač’e-xe-m**      **zeč’e**      **məʔerəse-xe-r**  
 1SG.PR-POSS-guest-PL-OBL      all      apple-PL-ABS
- s-ʔeč’a-šxə-ha-ʁ**  
 1SG.IO-INADV-3PL.A-eat-LAT-PST  
 ‘The guests ate all the apples unexpectedly to me’

Interestingly, the Inadvertitive prefix behaves differently with verbal stems ending in *-e* and those ending in *-ə*. The former attach the prefix *ʔeč’e-* without any further change of the stem, whereas with the latter the Inadvertitive triggers obligatory suffixation of the Lative/Antipassive suffix *-e* (15) or of the Lative/Circumferential suffix *-ha* (12), (14):



- (15) a. **pisme be s-txə-ɸe**  
 letter many 1SG.A-write-PST  
 ‘I wrote a lot of letters’
- b. **pisme be s-ʔeč'e-tx-a-ɸ**  
 letter many 1SG.IO-INADV-write-LAT-PST  
 ‘I wrote a lot of letters (though I didn’t intend to write so many)’

Note that the Inadvertitive requires suffixation even with those verbs which do not have a regular Antipassive derivative (16):

- (16) a. **se s-jə-š'ewɸ<sup>wə</sup>-r sə-wəč'ə-ɸ**  
 1SG 1SG.PR-POSS-friend-ABS 1SG.A-kill-PST  
 ‘I killed my friend’
- b. **se səməʃaxew s-jə-š'ewɸ<sup>wə</sup>-r**  
 1SG unintentionally 1SG.PR-POSS-friend-ABS
- s-ʔeč'e-wəč'-a-ɸ**  
 1SG.IO-INADV-kill-LAT-PST  
 ‘I unintentionally killed my friend’
- c. **\*se sə-wəč'-a-ɸ**  
 1SG 1SG.A-kill-AP-PST  
 intended meaning: ‘I killed’

As we have said, the only verbs which on the surface do not show obligatory suffixation in the Inadvertitive construction are those whose stem ends in *-e* (13).<sup>8</sup> In principle, we might argue that such stems undergo a phonologically vacuous suffixation of *-e*, but such an account does not seem to accord with the fact that the other suffix going together with the Inadvertitive prefix, viz. the Lative *-ha*, does not attach to *e*-stems, either,<sup>9</sup> as in (17):

- (17) a. **se s-jə-š'ewɸ<sup>wə</sup>-r sə-wəʔa-ɸ**  
 1SG 1SG.PR-POSS-friend-ABS 1SG.A-wound-PST  
 ‘I wounded my friend’

<sup>8</sup> Instead of *-e*, *-a* may appear due to a regular morphophonological process (Smeets 1984: 206–211).

<sup>9</sup> There does not appear to be any real difference in productivity between *-e* and *-ha* in the Inadvertitive construction, neither is there any distribution of the two; the choice of the suffix depends, as it were, on the particular speaker.

- b. *se səməʃaxew s-jə-š'ewex<sup>wə</sup>-r s-ʔeč'e-wəʔa-ɤ*  
 1SG unintentionally 1SG.PR-POSS-friend-ABS 1SG.IO-INADV-wound-PST  
 'I unintentionally wounded my friend'
- c. \**se səməʃaxew s-jə-š'ewex<sup>wə</sup>-r*  
 1SG unintentionally 1SG.PR-POSS-friend-ABS

*s-ʔeč'e-wəʔe-ha-ɤ*

1SG.IO-INADV-wound-LAT-PST

The motivation for the use of the antipassivization and the Lative/Circumferential suffixation with the Inadvertitive prefix, as well as for their restriction to the stems ending in *-ə*, is far from being transparent. It is even not clear whether the suffix *-e* in the Inadvertitive is an instance of the Antipassive or rather that of the Lative. Though it might be argued that the appearance of the Antipassive in the Inadvertitive construction has to do with the reduced semantic and syntactic transitivity of the latter (Kumakhov/Vamling 2006: 177), such a hypothesis seems implausible for the simple reason that in its “canonical” use the Antipassive mainly affects the direct object of the verb, which remains intact in the Inadvertitive. Another hypothesis could be that in the Inadvertitive construction *-e* and *-ha* are used in their purely directional meaning ‘motion inwards’. Indeed, the Inadvertitive prefix *ʔeč'e-* goes back to the combination of the locative prefix *č'e-* ‘under, below’ with the body-part noun *ʔe-* ‘arm, hand’ (Kumakhov/Vamling 2006: 175). If we assume that the original meaning of wordforms like *s-ʔeč'e-šxə-ha-ɤ* ‘I unintentionally ate it’ was something like literally ‘it went into my hand by being eaten’, then the motivation for the use of the Lative suffix might become more apparent, though anyway not entirely clear.

### 3.4. *Reciprocal/Reflexive + Refactive*

Reciprocal and Reflexive in Adyghe are expressed by prefixes *zə-*, *ze-* and *zere-*<sup>10</sup> occupying the slots of the relevant arguments.<sup>11</sup> These markers do not indicate a valency-changing derivation which makes the verb intransitive or decreases the number of its syntactic arguments. One should rather speak of special “reciprocal/reflexive personal markers” which indicate that the corresponding argument is anaphorically bound by another one in the same verbal form.

In (18a), the direct object (Absolutive) slot is occupied by the 2<sup>nd</sup> person singular marker *wə-*, and the agent slot is occupied by the 1<sup>st</sup> person plural prefix

<sup>10</sup> Actually, as is argued in Lander/Letuchiy 2010, *zere-* is a complex prefix consisting of the Reciprocal proper *ze-* and the general oblique preverb *je-/re-*.

<sup>11</sup> See Letuchiy 2007 for a comprehensive description.

*tə-*. In (18b), the reflexive marker *zə-* occupies the Absolutive slot, whereas in (18c), the reciprocal marker *zere-* substitutes for *tə-* in the Agent slot:

- (18) a. **wə-tə-wəʔa-ɸ**  
2SG.ABS-1PL.A-wound-PST  
'We wounded you'
- b. **zə-tə-wəʔa-ɸ**  
RFL.ABS-1PL.A-wound-PST  
'We wounded ourselves'
- c. **tə-zere-wəʔa-ɸ.**  
1PL.ABS-REC.A-wound-PST  
'We wounded each other'

In addition to these dedicated markers, the Reflexive and especially the Reciprocal forms usually contain the Refactive ( $\approx$  repetitive) suffix *-ž'ə*.<sup>12</sup>

By itself, the Refactive can denote motion backwards (19) and a single repetition of the event (20). These meanings are evidently responsible for the occurrence of the Refactive in Reflexive (21) and Reciprocal (22) forms:<sup>13</sup>

- (19) a. **a-r kʷa-ɸe**                      b. **a-r kʷe-ž'ə-ɸe**  
DEM-ABS go-PST                      DEM-ABS go-RE-PST  
'He went'                                      'He went back'
- (20) a. **pče-r qʷəta-ɸe**                      b. **pče-r qʷəte-ž'ə-ɸe**  
door-ABS break-PST                      door-ABS break-RE-PST  
'The door broke'                              'The door broke again'
- (21) a. **s-jə-ɸʷəneɸʷə-m**                      a-r      ə-wəč'ə-ɸ  
1SG-POSS-neighbour-OBL                      DEM-ABS 3SG.A-kill-PST  
'My neighbour killed him'
- b. **s-jə-ɸʷəneɸʷə-m**                      z-jə-wəč'ə-ž'ə-ɸ  
1SG-POSS-neighbour-OBL                      RFL.ABS-3SG.A-kill-RE-PST  
'My neighbour killed himself' (Letuchiy 2007: 781)

<sup>12</sup> See Arkadiev/Korotkova 2005 for a preliminary description of this suffix.

<sup>13</sup> See Stoyanova 2009 for a typology of reflexive ~ reflexive polysemy.

- (22) a. **č'ale-m pšaše-r j-e-λeɤ<sup>wə</sup>**  
 boy-OBL girl-ABS 3SG.A-DYN-see  
 'The boy sees the girl'
- b. **zeč'e çəf-xe-r zer-e-λeɤ<sup>wə</sup>-ž'ə-x**  
 all man-PL-ABS REC.A-DYN-see-RE-PL  
 'All the people see each other' (ibid.: 785)

The Refactive, however, is not obligatory in the Reflexive and Reciprocal constructions, as is illustrated by examples (23) and (24), respectively (Letuchiy 2007: 799):

- (23) a. **a-r a-š' d-e-ʔepəʔe**  
 DEM-ABS DEM-OBL APPL-DYN-help  
 'He helps him'
- b. **a-xe-r ze-d-e-ʔepəʔe(-ž'ə)-x**  
 DEM-PL-ABS REC.IO-APPL-DYN-help(-RE)-PL  
 'They help each other'
- (24) **sabəjə-m psənžə-m zə-š'-jə-wəʂ<sup>wə</sup>ejə(-ž'ə)-ɤ**  
 child-OBL dirt-OBL RFL.ABS-LOC-3SG.A-soil(-RE)-PST  
 'The child soiled itself in the dirt'

As is noted in Gerasimov/Lander (2008), the use of the Refactive in Reciprocal and Reflexive constructions shows considerable and sometimes quite idiosyncratic intra-speaker variation, though superficially it seems that the Refactive is present more often than absent. This is probably in accordance with the reinforcing function that the Refactive plays in these constructions, where it does not retain much of its basic aspectual meaning.

Note that the relation between the Reciprocal/Reflexive prefixes and the Refactive suffix is close to the relation between dedicated reciprocal markers and what is called "reciprocal specifiers" in Geniušienė/Nedjalkov (2007: 387-388), such as English *mutually*, German *gegenseitig* 'id', Russian *vzaimno* 'id'. For instance, in Khakas (Turkic, Siberia) there is an adverbial *udur-tödir* 'hither and thither',<sup>14</sup> which can be optionally used in reciprocal constructions together with the dedicated verbal Reciprocal marker *-(y)s*:

<sup>14</sup> Note that its meaning is close to the spatial meaning of the Adyghe suffix *-ž'ə*.

## (25) KHAKAS (Alexander Letuchiy's fieldwork materials)

vas'a-nyŋ xade p'et'a (udur-tödir) tan-ys-š'a-lər  
 Vasja-INS with Petja hither.and.thither know-REC-PRS-PL  
 'Vasja and Petja know each other'

The difference between the Adyghe and the Khakas "reinforced" reciprocals lies in the fact that in Khakas the reciprocal specifier is an adverbial occurring outside of the verb form, in contrast to the Adyghe suffixal reciprocal specifier.

4. *Scope restrictions*

There are situations when a prefix and a suffix can stand only in a uniquely determined semantic scope relation to each other. This is nicely exemplified by the interaction between the Causative and the Antipassive.<sup>15</sup> The Antipassive suffix *-e* can attach to certain transitive verb roots ending in *-ə*<sup>16</sup> triggering the elimination of the Absolutive direct object, or its demotion to the status of the indirect object, and the reassignment of the erstwhile Oblique subject to the Absolutive (26):

- (26) a. č'ale-m pisme-r j-e-txə  
 boy-OBL letter-ABS 3SG.A-DYN-write  
 'The boy is writing a letter'
- b. č'ale-r ma-tx-e  
 boy-ABS DYN-write-AP  
 'The boy is writing'

The Antipassive forms can be further causativized. The resulting causative inherits the absence of the original patient from the antipassive verb, whose former subject becomes the direct object of the causative verb (27):

- (27) a. hač'e-xe-r ma-šx-e-x  
 guest-PL-ABS DYN-eat-AP-PL  
 'The guests are eating'

<sup>15</sup> See Arkadiev/Letuchiy 2008 for a discussion of the Adyghe Antipassive.

<sup>16</sup> The difference between verbal stems ending in *-ə* and in *-e* is treated by some researchers (see e.g. Kumakhov 1971: Ch. 7, Kumakhov/Vamling: 126ff) as involving ablaut rather than affixation. This issue is immaterial for our purposes.

- b. a-š' hač'e-xe-r j-e-**ka**-šx-e-x  
 DEM-OBL guest-PL-ABS 3SG.A-DYN-CAUS-eat-AP-PL  
 'He is feeding the guests'

Of course, transitive verbs ending in *-ə* can also be causativized in their initial form, which governs a semantic patient as a direct object (28):

- (28) a. hač'e-xe-m lə a-šxə  
 guest-PL-OBL meat 3PL.A-eat  
 'The guests are eating meat'
- b. a-š' hač'e-xe-m lə a-r-j-e-**ka**-šxə  
 DEM-OBL guest-PL-OBL meat 3PL.IO-OPV-3SG.A-DYN-CAUS-eat  
 'He is making the guests eat meat'

However, the reverse order of the two valency-affecting derivations is impossible, since the Antipassive cannot be applied to the Causative derivatives. This is illustrated by (29), where the agent of the causative verb *jəvežen* 'bake, fry' (the initial verb *žen* means 'be baked') cannot become a subject of the Antipassive (here the potential Antipassive cannot be marked by the suffix *-e* since the verbal stem already ends in *-e*; the only overt signal of detransitivization is the use of the Dynamic prefix *me-* instead of the Agentive prefix *j-* with the concomitant Absolutive case-marking of the subject). The only way to express the meaning of (29b) is to simply omit the direct object, like in (29c), without any other change in the morphosyntax; note the Oblique case-marking of the Subject and the Agentive rather than Absolutive agreement on the verb (Arkadiev/Letuchiy 2008: 92-93):

- (29) a. halə<sup>w</sup>ə<sup>ka</sup>že-m halə<sup>w</sup>ə-r j-e-**ka**-že  
 baker-OBL bread-ABS 3SG.A-DYN-CAUS-be.baked  
 'The baker is baking bread' (Arkadiev/Letuchiy: 2008: 92)
- b. \*halə<sup>w</sup>ə<sup>ka</sup>že-r njepe rjen-ew me-**ka**-že  
 baker-ABS today whole-ADV DYN-CAUS-bake(AP)  
 intended meaning: 'The baker bakes the whole day' (ibid.)
- c. halə<sup>w</sup>ə<sup>ka</sup>že-m njepe rjen-ew j-e-**ka**-že  
 baker-OBL today whole-ADV 3SG.A-DYN-CAUS-bake  
 'The baker bakes the whole day' (lit. 'bakes it the whole day') (ibid.: 93)

The motivation for the ban on the antipassivization of the Causative is not clear. It is possible that it has to do with the different degrees of lexicalization and productivity of the Causative and the Antipassive: the Causative in Adyghe is virtually unrestricted in its combination with stems, whereas the Antipassive is hardly productive, applying only to several dozens of transitive verbs. On the other hand, almost all non-causative verbs denoting agentive activities in Adyghe which do not have a morphologically marked Antipassive can be used intransitively without the direct object, forming an unmarked Antipassive construction, so it is unclear why this type of omission is impossible for causatives.

Another hypothesis concerning the impossibility of antipassives from causatives suggests that there is a special restriction having to do with semantic and syntactic properties of arguments of causative verbs. Causativization is a derivation adding a new agent or agent-like argument to the valency structure of the verb. With intransitive verbs, the subject of the original verb becomes the direct object of the Causative. It may be the case that the direct object which has acquired this syntactic status via a valency-changing derivation cannot be further demoted in Adyghe. For the moment, neither of these two hypotheses can be proven by any strict tests or criteria.

### 5. *No scope restrictions*

As we have already noted above, prefixal operators such as Causative and various applicatives follow a strict surface order but allow for different semantic scopes, as in example (3). This phenomena is so prominent that it even got reflected in the dictionaries of Adyghe (Šaov 1975). Similar situations can be observed with certain prefix+suffix combinations.<sup>17</sup>

#### 5.1. *Causative + Refactive*

When the Causative and the Refactive co-occur in one wordform, any scope relation between them is possible (Arkadiev/Korotkova 2005: 6):

(30) **je-~~ve~~-k<sup>w</sup>-ə-ž'ə-n**

OPV-CAUS-go-TR-RE-INF

i. 'make come back' (Causative > Refactive)

ii. 'again make go' (Reffective > Causative)

(31) **jate č'ale-m pisme-r r-jə-~~ve~~-txə-ž'ə-~~v~~**

POSS:father boy-OBL letter-ABS OPV-3SG.A-CAUS-write-RE-PST

i. 'Father made the boy reply to the letter' (Causative > Refactive)

ii. 'Father once again made the boy write the letter' (Reffective > Causative)

<sup>17</sup> See Letuchiy 2008 for a more detailed discussion of some of these combinations.

5.2. *Causative + Negation*

Normally, negation expressed by the suffix *-ep* takes scope over the whole proposition;<sup>18</sup> in particular, no suffix can take scope over Negation (Lander/Sumbatova 2007):

- (32) *nə-r*                    *g<sup>w</sup>əmeč'ə-š<sup>w</sup>e-r-ep*.  
 mother-ABS            worry-SML-DYN-NEG  
 i. 'Mother does not pretend to be worrying'            (Negation > Simulative)  
 ii. \*'Mother pretends not to be worrying'            (\*Simulative > Negation)

However, it seems that this restriction does not extend to the verbs formed with the Causative prefix: the latter can have scope both below (33a) and above (33b) Negation:

- (33) a. *se a-š' paje zjəmjə qə-s-jə-ʁe-ʔ<sup>w</sup>ete-š't-ep*  
 1SG DEM-OBL for nobody:OBL DIR-1SG.IO-3SG.A-CAUS-talk-FUT-NEG  
 'Nobody will make me talk about it'            (Negation > Causative)
- b. *se a-š' q-je-z-ʁe-ʔ<sup>w</sup>eta-ʁ-ep*  
 1SG DEM-ABS DIR-OPV-1SG.A-CAUS-talk-PST-NEG  
 'I made him not to tell it'            (Causative > Negation)

Examples like (33b) seem to occur rarely, but they are definitely not altogether excluded (Lander/Sumbatova 2007). However, we should note that in the Shapsug dialect, most negated causative constructions with agentive causees get the permissive reading ('not let'), not the factitive one ('not make'), as in (34):

- (34) *jat:e čale-m čašk:e-r r-jə-ʁe-q<sup>w</sup>əta-ʁ-ep*  
 father boy-OBL cup-ABS 3SG.IO-3SG.A-CAUS-break-PST-NEG  
 i. 'The father did not let the boy break the cup'  
 ii. ??'The father did not make the boy break the cup (but the boy broke it nevertheless)'

The permissive reading is not characteristic of causative constructions without negation. Thus, we propose that this interpretation results from the fact that in constructions with agentive causees the Causative tends to have scope above the Negation. Indeed, the meaning 'The father did not let the boy break the cup' (Negation > Permission) can be analyzed as 'The father made the boy not break

<sup>18</sup> See Lander/Sumbatova 2007 for details.



the cup' (Causative > Negation). In contrast to the Causative+Antipassive combination, here the scope restriction is softer and, moreover, is relevant only for a subclass of verbs where the causee is agentive.

### 6. Conclusions

The relations between the prefixes and suffixes in Adyghe discussed above are summarized in Fig. 2. In the table, X!Y means that the relevant prefix or suffix X categorically requires the other morpheme Y in order for the wordform to be well-formed; "optional" means that the prefix and the suffix can but need not necessarily co-occur; X>Y means 'X has scope over Y':

Fig. 2. Interactions between selected prefixes and suffixes in Adyghe

Suffixes	Inceptive -ž'e	Directional	Antipassive -e	Refactive -ž'a	Negation -ep
Prefixes					
Indirect Object <i>je-</i>	INC!OPV				
Locative		often LOC!DIR			
Inadvertitive <i>ʔeč'e-</i>		INADV!LAT (with -a stems only)	INADV!AP (with -a stems only)		
Reciprocal/ Reflexive				optional	
Causative <i>ke-</i>			CAUS>AP, *AP>CAUS	CAUS>RE, RE>CAUS	CAUS>NEG, #NEG>CAUS

Though only a few of the possible prefix-suffix interactions have been dealt with in this paper, on the basis of the data at hand it is possible to conclude that the prefixes and suffixes in Adyghe do not follow any uniform pattern of interaction. While some of the prefix-suffix combinations are restricted (either by obligatory co-occurrence or non-co-occurrence or by invariable scope assignment), others display various degrees of freedom of interaction, be it optional co-occurrence or ambiguous scope assignment.

We propose to classify the types of interaction of prefixes and suffixes according to the following several parameters.

First of all, we distinguish prefix-suffix combinations on the basis of the **direction of restriction**. We have seen cases when a particular suffix requires the prefix to be present (e.g. the Inceptive suffix requires the Indirect Object prefix). Opposite cases also exist: Locative prefixes in some of their uses require the presence of Directional suffixes, and similarly the Inadvertitive prefix requires the Antipassive/Lative/Circumference suffixes.

Second, the **range of restriction** can be different for different prefix+suffix combinations. It can affect one particular suffix and one particular prefix, as

with the Inceptive+Indirect object or the Causative+Antipassive, one prefix and two suffixes, as with the Inadvertitive, or whole sets of morphemes, as with the Directional suffixes in combination with the Locative prefixes.

Third, **the semantic relation** between the two interacting elements also varies. If the meaning of the two elements belongs to the same semantic domain (e.g. the domain of spatial orientation), the resulting combination may sometimes be similar to an unanalyzable circumfix, like in the case of some combinations of Directional suffixes and Locative prefixes. If the meanings are different though close, the combination may yield a semantically vacuous “reinforcement” like in the case of the Reciprocal+Refactive (and possibly also Inadvertitive+Directional). Here one of the elements actually marks a particular morphosyntactic or morphosemantic operation, while the other is only indirectly related to the meaning of the construction and plays a subsidiary role. Finally, if the functions of the prefix and of the suffix are absolutely different, then either one of the elements plays a purely structural role devoid of meaning (cf. the Inceptive and the Indirect Object prefix), or their combination has compositional semantics (as with the Causative and the Antipassive or the Causative and the Refactive).

Finally, perhaps the most important parameter is the **force of restriction**. The following degrees of force can be distinguished:

1. The marker or the class of markers A cannot be used without the marker or the class of markers B (Inceptive+Indirect Object);
2. A cannot be used without B in particular meaning P (certain Locative preverbs+Directional suffixes);
3. A cannot be used without B in particular meaning P with particular class of predicates (Inadvertitive+Locative with verb stems in -ə);
4. A and B can be used without each other but if they are used together, their combination admits only one relative scope (Causative and Antipassive);
5. A and B can be freely used with or without each other, and when they are used together, they admit of any relative scope (Causative and Refactive).

It is an important fact that in the polysynthetic verbal complex affixes do not freely combine with each other and with verbal stems, and that the restrictions on the co-occurrence of affixes are not always purely semantic (Mithun 2000).

Also, though it may seem at first glance that the prefixal and the suffixal parts of the verbal complex express functions from different domains, it is not always the case. For instance, both the prefixal and the suffixal parts of the verb form in Adyghe may express meanings related to space or transitivity.

To conclude, Adyghe shows that a polysynthetic language can exhibit a dramatically non-uniform morphological makeup, whereby prefixal and suffixal parts of the word are organized by fairly divergent principles of form-to-function mapping, and where, moreover, different prefixes and suffixes interact in individual and not always predictable ways. An inquiry into the restrictions on affix combinations and possible cross-linguistic parallels to the Adyghe situation might deepen our understanding of the nature of the polysynthetic languages.

### *Abbreviations*

A – agent; ABS – absolutive; ADV – adverbial; AP – antipassive; APPL – applicative; CAUS – causative; CIRCUM – circumferential; DEM – demonstrative; DIR – directional; DYN – ‘dynamic’; ELAT – elative; FUT – future; HBL – habilitive; INADV – inadvertitive; INC – inceptive; INF – infinitive; INS – instrumental; IO – indirect object; LAT – lative; LOC – locative; NEG – negation; OBL – oblique; OPV – general oblique preverb; PL – plural; POSS – possessive; POT – potential; PR – possessor; PRS – present; PST – past; RE – refractive; REC – reciprocal; RFL – reflexive; SG – singular; SML – simulative; TR – transitivizer; UP – ‘upwards’ directional

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