# Semantic properties of participants and ordering of derivations in Adyghe

Keywords: causativization, agentivity, potential, negation, polysynthesis

Abstract
In my paper I analyze the semantic ordering of three operations (causativization, negation and potential) in the Adyghe language (a polysynthetic language of the West Caucasus). I show that although the morphological ordering of these markers does not admit any variation in Adyghe, the semantic ordering can be different. The ordering of causativization and negation is different for transitive and intransitive verbs. With transitive verbs, it is the ordering of derivations which accounts for the permissive reading of causative with negation. As for combinations of three derivations, the crucial point is agentivity / inagentivity of the subject. With non-agentive subjects, causative almost always applies above other derivations – which is not the case with agentive subjects. I will try to explain these asymmetries in terms of the structure of Adyghe causative constructions, on the one hand, and their semantic properties, on the other hand.

***Introduction***

The Adyghe language belongs to the West-Caucasian (Circassian) family. It is spoken in Southern Russia, Turkey and some other countries of the Near East. This language is described mostly in the Soviet and Russian grammatical tradition, (e.g., Kumakhov 1964, Rogava, Keraševa 1966, Gišev 1968). My data is collected during the fieldwork in the village Aguj-Shapsug and belongs to Shapsug dialect of Adyghe.

Let us mention some important features of Adyghe which are relevant for the present investigation. First of all, Adyghe is a polysynthetic language: the Adyghe verb includes a large number of cross-reference, derivational and other types of markers. Figure 1 represents the general make-up of the Adyghe verb:

Figure 1. Order of groups of affixes in the Adyghe verb form

| Argument structure zone | Pre-base elements | Base | Propositional operators | Endings |
|---|---|---|---|---|

The pre-base elements include a large system of derivations. Most of them introduce new arguments into the valency structure of the verb, for example, causative (*ʁe-*), benefactive (*fe-*), malefactive (*ŝ'we-*).

Adyghe is traditionally thought to have the ergative alignment (see Rogava, Keraševa 1966, Kumakhov 1964). However, the case system in Adyghe is reduced (only ergative and absolutive are expressed with grammaticalized case markers). The ergative suffix marks not only the agent of transitive verbs, but also recipients (see (1)) and possessors (see (2)):

(1) ç'ale-m pŝaŝe-m txələ-r r-jə-tə-ʁ
boy-OBL girl-OBL book-ABS 3SG.IO-3SG.AG-give-PST
'The boy (S, agent) gives the girl (IO, recipient) the book (DO, patient)'.

(2) çəfə-m četəw
man-OBL cat
'Man's cat'.

This is why we prefer to use the term "oblique" and the gloss "OBL" for the case which is traditionally labeled as "ergative"

***The main problem***

In Adyghe (as opposed, for example, to Turkic languages) one cannot change the order of derivational markers according to the semantic order of derivations: for example, the meanings 'I make him [go with you]' (causative after comitative) and '[I with you] make him go' (comitative after causative) are expressed with the same verb form:

(3) qe-b-de-z-ʁa-k̨$_w$e.
DIR-2SG.IO-COM-1SG.AG-CAUS-go
'I make him go with you.' / 'I with you make him go.'.

The same is obviously true for combinations of derivational markers, on the one hand, and tense / aspect / modality / polarity markers, on the other hand. Of course, all of them have a fixed order with respect to each other[1], since in Adyghe all derivational markers are prefixes, whereas TAM and polarity markers are suffixes.

This makes the problem of semantic scope very important for the description of Adyghe. If in a polysynthetic language the morphological ordering of some markers does not give any information about their semantic ordering, this makes almost each verb form polysemous.

In this paper I investigate if Adyghe has any additional mechanisms or restrictions (besides the morphological order) which help to distinguish between several readings of the same verb form. For example, in some cases it may turn out that some of theoretically possible scope combinations are impossible or extremely rare[2].

In the present article, I will analyze two combinations: "causative + negation" and "causative + negation + potential".

Let us say a few words about each of these three operations[3]. The causative meaning is expressed by the prefix *ʁe-*, which immediately precedes the verbal stem (or, in non-finite negative forms, the marker of non-finite negation). This causative marker is very productive and can modify stems of all semantic and syntactic classes, except for a few lexemes.

Negation can be expressed either by the suffix *-ep* or by the prefix *mə-*. This distribution is traditionally supposed to reflect the opposition between finite (*-ep*) and non-finite clauses (*mə-*) (see Smeets 1984). In what follows, we will mention only the suffix *-ep*.

Finally, the suffix *-ŝ$_w$e* expresses the potential meaning. This marker shows virtually no restrictions on the syntactic classes of verbs it combines with, – although we will say a few words below about possible restrictions on the potential.

[1] The facts analyzed in (Korotkova and Lander 2007) are relevant for the respective order of elements of a single semantic / structural group, which can occupy different positions with respect to each other. On the other hand, structurally different elements like derivational prefixes and TAM suffixes have fixed positions.

[2] Our data is borrowed from Shapsug dialect of Adyghe. It was collected during the fieldwork in July 2007.

[3] I will use the terms "derivation" and "operation" as synonymous in the widest sense: I mean all types of operations, marked in Adyghe which affect the valence of the base verb or add to its meaning temporal, aspectual, modal or other semantic components, including negation.

***1. Causative + negation: "a permissive paradox"***

The combination of the causative prefix and the suffix of negation can theoretically have two possible meanings:

- caus (neg): 'I made him [not go to the cinema]';
- neg (caus): 'I did not [make him go to the cinema]'.

In the first case, the scope of the causative meaning includes the base verb and the negative meaning. In the second case, on the contrary, the scope of negation includes causative and the base verb.

Not surprisingly, Adyghe verb forms can, indeed, have both of these meanings – sometimes even with the same base verb:

(4) se a-r qə-s-ʁe-ʔ$_w$et-aʁ-ep.
I (s)he-ABS DIR-1SG.AG-CAUS-talk-PAST-NEG
'I made him not to talk about it.' (caus (neg));

(5) se aš' paje zjə-mjə qə-s-jə-ʁe-ʔ$_w$etə-š't-əp.
I (s)he-OBL for nobody-OBL DIR-1SG-3SG.AG-CAUS-talk-NEG
'Nobody will make me talk about it.' (neg (caus)).

In (4) and (5) the verb *ʔ$_w$eten* 'narrate' is modified by negation and causative, but the scope of these two modifiers is different in these two examples: (4) illustrates the variant with causative above negation, whereas in (5) we see the variant "negation above causative"[4].

However, we can observe a strange fact: in Adyghe negation of causative constructions of transitive verbs rarely means 'not to make smb. do smth.' (i.e. the meaning of factitive causation, in terms of (Shibatani (ed.) 1976) and (Shibatani, Pardeshi 2002). More frequently, native speakers interpret such constructions as permissive, i.e., they prefer the meaning 'not to let smb. do smth.'. See, for example:

(6) jate ç'ale-m čaške-r r-jə-ʁe-q$_w$əte-ʁe-p.
3SG.father boy-OBL cup-ABS 3SG.IO-3SG.AG-caus-BREAK-PST-NEG
'The father did not let the boy break the cup.'; #'The father did not make the boy break the cup (but the boy broke it nevertheless).'.

In (6) the factitive interpretation is semantically felicitous – i.e., in the situation when the boy broke a cup and is trying to prove that it was his father who made him to do it. However, this interpretation is regarded as impossible or unnatural by our consultants.

Below I discuss two possible accounts of this fact.

**1.1. Semantic interpretation of the causative marker**

The most obvious way to explain the tendency to the permissive meaning of (6) is to suppose that it results from polysemy of the causative prefix *ʁe-*: in (6) we find the permissive reading of this marker:

i. neg (caus$_{permissive}$): 'not let X to P' ("permissive")

In many languages of the world causative markers are not specialized for the subtype of the causative meaning. See, for example, Khakas (Turkic) where the causative marker *-tyr* can have both the permissive and the factitive interpretation in the same verb form:

(7) iže paba-ny tury püdür-t(y)r-š'e.
mother father-ACC house build-CAUS-PRS
'Mother makes / lets father build a house.'

However, this account is hardly plausible for Adyghe. In this language, the permissive reading is almost marginal for causative constructions without negation. For example, in the most comprehensive grammar (Rogava, Keraševa 1966) we find no examples of causative constructions with the permissive meaning. The authors formulate the meaning of the causative construction as "action, which is induced by another person, i.e., it is carried out by his / her order, request or advice". This formulation does not mention permission, which also convinces us that the permissive reading is not characteristc for Adyghe. Example (8) can in principle get the permissive meaning, but the factitive one is much more natural for our language consultants:

(8) pšəmafe psə q-je-z-ʁe-ẑ$_w$a-ʁ
Pšəmaf.OBL water DIR-3SG.IO-1SG.A-CAUS-boil-PST
'I made / [rare]let Pšəmaf boil water'

Moreover, even if (8) could be interpreted permissively, this would not give an explanation for the lack of the factitive meaning of (6). Therefore, the permissive reading in (6) must be accounted for in terms of interpretation of the combination "NEG + CAUS".

**1.2. Scope of negation and causative**

I propose that the semantic difference between affirmative (8) and negative (6) causative construction is related to the relative semantic scope of the negative and the causative markers. More precisely, the semantic scope of the causative prefix almost always includes the negative suffix:

[4] Note that the pronoun *zjəmjə* 'nobody' in the oblique case in (4) forces the interpretation "negation above causative", since this pronoun in the subject position requires the construction as a whole to be negative (which is not the case with the reading "causative above negation", as in 'They made me not talk about it').

ii. caus (neg): ‘make X not to P’ = ‘do not let X P’ (“permissive”)
iii. [rare]neg (caus): ‘not make X to P’ (“factitive”).

The crucial point is that the permissive meaning of a negative causative construction can in principle result not only from real permissivity as in i., but also from the order caus (neg) with the meaning of factitive causation, as in ii – and this is the case in Adyghe. If our analysis in terms of semantic scope is true, this explains both the strangeness of the second reading in (8) and the lack of the factitive meaning in (6).

The picture becomes a bit more complicated when we turn to intransitive unaccusative verbs. They also tend to have the factitive meaning without negation. But contrary to transitive verbs they do not get the permissive meaning with negation:

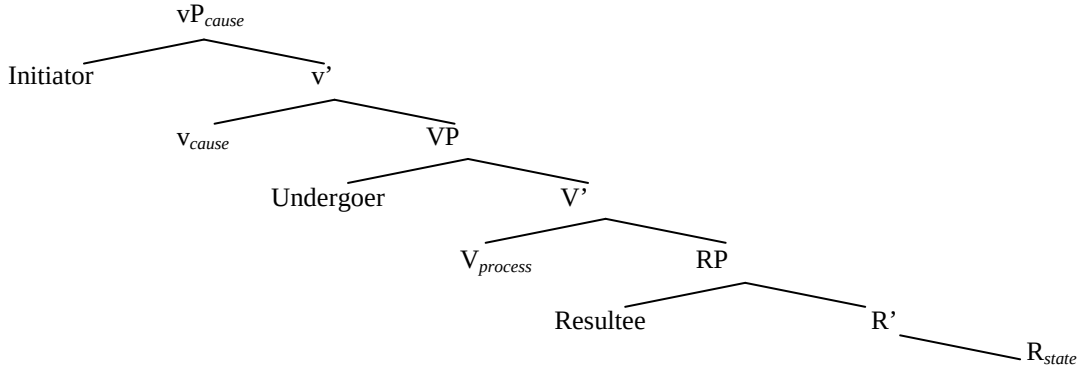
(9) nane ps-er ə-ʁe-$\hat{z}_w$a-ʁ-ep
mother(OBL) water-ABS 3SG.AG-CAUS-boil-PST-NEG
‘Mother did not boil the water’, #‘Mother did not let the water boil’.

Example (9) cannot mean ‘Mother did not let the water boil’ (for instance, if mother turned the oven off and the water could not boil).

Why do unaccusative verbs differ from transitive ones? The simplest answer is that the permissive reading is generally unnatural for unaccusative verbs. However, this could hardly be the case. What *is* really unnatural for unaccusatives is a subtype of the permissive meaning, which presupposes direct permission (for example, ‘My mother let me go to Moscow’ = ‘My mother told me that she agrees to let me go to Moscow’). But the permissive causation does not obligatorily include direct permission: sentences like *I let him go* could just mean that I don’t carry out any actions which would prevent him from going. Therefore, (9) is inexplicable in terms of semantic compatibility.

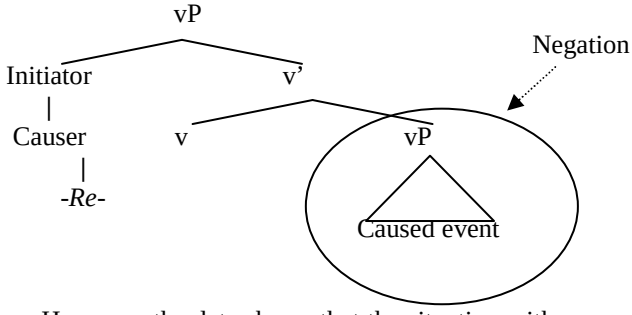
I think that this difference between two classes of verbs can be explained in structural terms. Perhaps, negation in Adyghe occupies the position above the lowest vP. In this case, as Figure 2 shows, intransitive unaccusative verbs do not have a vP (see (Ramchand 2003) on the phrase structure of intransitive and transitive predicates) – therefore, we suppose that the negation must be attached above the causative phrase ($vP_{cause}$). Thus, the negation has the widest scope above the causative marker (see (Ramchand 2003, Ljutikova et al. 2006) for formal analysis of causative constructions).

Figure 2. Syntactic structure of causatives of unaccusative verbs




Transitive and unergative intransitive verbs have a vP. Therefore, negation is attached above the vP of the base verb but below the second vP introduced by the causative marker:

Figure 3. Syntactic structure of causatives of unergative and transitive verbs

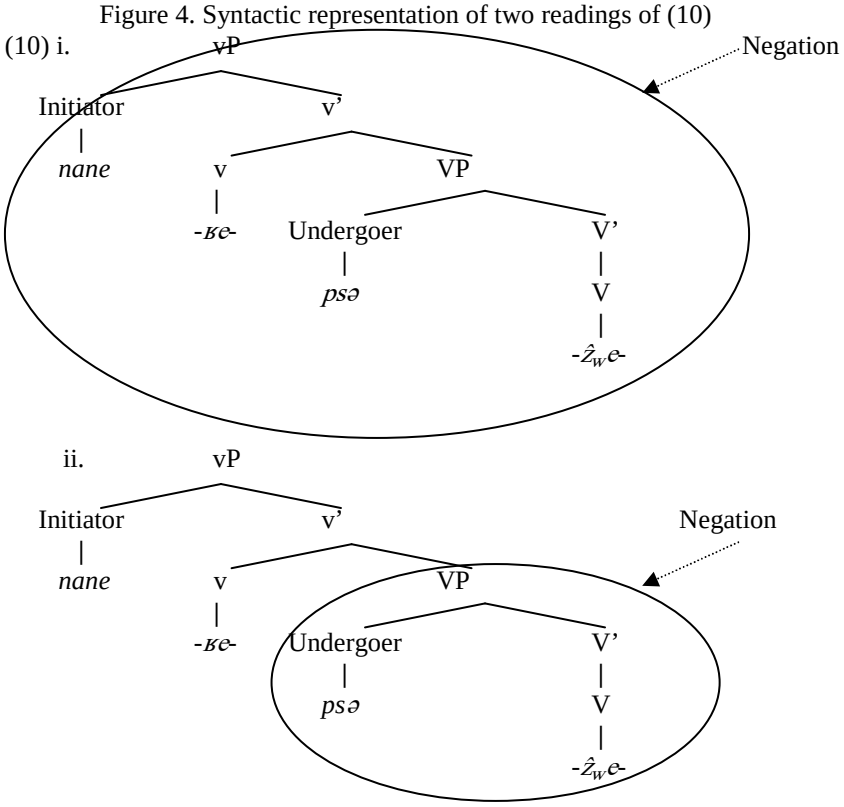



However, the data shows that the situation with unaccusative intransitive verbs is even more complicated. In example (10) negation may take both the widest scope (over vP) and the narrow scope (over VP only):

(10) nane ps-er ə-ʁe-$\hat{z}_w$a-ʁ-ep.
mother(OBL) water-OBL 3SG.CR-CAUS-boil-PST-NEG
i. ‘Mother did not boil the water.’ ii. ‘Mother did not finish boiling the water.’

In the first reading negation modifies the whole situation: neither the causation, nor the caused situation took place. But in the second reading negation takes the narrow scope: the causation took place, although it was unsuccessful: the water did not boil. This can be illustrated by the following structures, where the circled area represents the semantic scope of negation:

Figure 4. Syntactic representation of two readings of (10)




In the second case it seems that negation is attached *below* the causative marker. Therefore, the purely structural explanation does not account for the fact that the (9) can mean 'Mother did not finish boiling water' but does not have a meaning 'Mother did not let water boil': these two readings seem to be structurally equal, since they presuppose that negation attaches below the causative marker – however, one of these readings is impossible while another one is possible.

Our decision is to make a difference between the *scope* and the *ordering of derivations*. Let us define the scope as a sub-tree which is modified by a marker on the semantic level. For example in (9), ii. VP (but not vP) is included into the scope of negation: the situation, expressed by VP, but not the causation, expressed by vP, are semantically negated – in other words, the causation took place and the base situation 'water boiled' did not.

At the same time, the negative operation occurs after the causative derivation. Therefore, the causative marker does not modify negation (this is why we do not get sentences like 'Mother did not let the water boil'). Negation can modify either the whole situation or the lowest part of the tree – but in both cases it is attached after causativization.

Another possible decision is to use the notions of assertion and presupposition. In this case we can suppose that in (10ii) the negation marker is attached above the causative marker. However, the causation subevent ('make') can form a presupposition – the part of the situation which is outside the scope of the negation. This decision agrees well with the fact that the causation subevent has the semantic and pragmatic properties, which are characteristic for presupposition (for instance, it belongs to "given", rather than to "new"). In the same time, the causation does not form a separate subevent with unaccusative verbs. Thus, the structure where the negation is attached below the causative marker is impossible with an unaccusative verb, which accounts for impossibility of readings like 'Mother did not let water boil'.

In any case, we have shown that the distinction between the "permissive" reading and the reading of "unsuccessful causation" of the type (10ii) cannot be accounted for in terms of subtrees. This distinction requires adding another parameter, such as presupposition / assertion distinction or ordering of derivations.

Note that for many languages our distinction between ordering and semantic scope is not useful: usually the scope and the ordering of derivations correspond each other. For instance, in English (see Siegel 1974, Hay, Plag 2004: 3) there are two strata of affixes. Stratum 1 affixes of the class (e.g., *-ity*) are less transparent, less productive and less semantically compositional than stratum 2 affixes (e.g., *-less*). Correspondingly, stratum 1 affixes cannot occur outside stratum 2 affixes, which rules out such theoretically possible combinations as *atomlessity*. We can formulate the abovementioned distinction either in the terms of scope ("the scope of stratum 1 affixes cannot include stratum 2 affixes") or in the terms of order ("stratum 1 affixes cannot be attached linearly after stratum 2 affixes") – for English these two formulations are synonymous. However, for Adyghe we need to distinguish the two parameters and think that the scope of the marker which is attached later does not obligatorily include the marker which is attached earlier. Thus, we can now formulate our principle for combinations of CAUS and NEG in another way: *Negation is attached to the verb which has one vP (causative of an unaccusative verb, base transitive verb)*

*after the causative marker, if there is one. On the other hand, the scope of negation can include the whole vP or (if the verb is a derived causative) the VP of the base verb.*

**1.3. Summary**

So far, we have shown that the permissive reading of negative causatives of transitive verbs is not a purely semantic phenomenon, related just to the polysemy of the causative affix, but rather has to do with semantic scope and syntactic ordering of the two operations: negation and causativization.

In the following section I will consider the combination of three operations (causative, negation, and potential), and will show that here also purely semantic factors – in this case it is the agentivity of arguments – are relevant for the ordering of derivations.

***2. Causative + negation + potential: semantic roles or scope of markers***

The combination of the causative prefix, the suffix of negation and the potential suffix is, in principle, much more polysemous than the combination of just two markers. Let us list only some of the six logically possible meanings:

- caus (neg (pot)): 'I made him (caus) not (negation) be able (potential) to go to the cinema';
- caus (pot (neg)): 'I made him (caus) be able (potential) not (negation) to go to the cinema'
- pot (caus (neg)): 'I managed (potential) to make him (caus) not (negation) go to the cinema' etc.

However, the restrictions on possible combinations of scopes are here even more strict than in the previous case. We will analyze constructions with agentive and with non-agentive causers separately, since they behave differently with respect to scope.

**2.1. Agentive causers**

When the causer is agentive, native speakers always choose the ordering of derivations NEG(POT(CAUS)), cf.:

(11) ҫ'ale-m pŝaŝe-m psə r-jə-ʁe-ẑ$_w$ə-ŝ$_w$ə-ʁe-p.
boy-OBL girl-OBL water 3SG-3SG-CAUS-boil-PSB-PST-NEG
i. 'The boy did not manage to make the girl to boil water'; ii. #'The boy made the girl not be able to boil water'; iii. #'The boy managed to make the girl not boil water'.

(12) azamat-e fatime pče qə-ʔ$_w$ə-r-jə-ʁe-xə-ŝ$_w$ə-ʁe-p.
Azamat-OBL Fatima door INV-LOC-3SG-3SG.AG-CAUS-$open$-PSB-PST-NEG
'Azamat did not manage to make Fatima open the door'.

Both in (11) and (12) negation has the scope above potential, and potential, in its turn, is above causative: NEG (POT (CAUS)).

Note that this semantic ordering of derivations is not motivated by pragmatic naturalness of one of the meaning NEG (POT (CAUS). The same variant is chosen even in those cases where another ordering seems to be even more pragmatically natural:

(13) bajə-m t$_w$əʁakᷦ$_w$e-m axče qə-r-jə-ʁe-təʁ$_w$ə-šʷə-ʁe-p.
richman-OBL thief-OBL money DIR-3SG.IO-3SG.AG-CAUS-steal-PSB-PST-NEG
i. 'The rich man did not manage to make the thief steal (his) money.' (neg (pot (caus)); ii. #'The rich man managed to make the thief not steal his money.' (pot (caus (neg)); iii. #'The rich man made the thief not be able to steal his money' (caus (neg (pot)).

The last two variants are much more natural for 'malefactive' actions, such as 'steal'. Nevertheless, native speakers prefer the first one, which presupposes that the rich man wanted to make the thief steal the money, but did not succeed.

**2.2. Non-agentive causers**

The picture entirely changes when we turn to non-agentive causers. In Adyghe, causative constructions are not restricted to agentive causers, although in most cases the causer is agentive. When negation and potential are applied to the causative with a non-agentive causer, native speakers tend to prefer ordering reflected in (13) and (14):

(14) wəzə-m ҫ'ale školə-m jə-ʁe-kᷦ$_w$e-ŝ$_w$ə-ʁe-p.
illness-OBL boy school-OBL 3SG.AG-CAUS-go-PSB-PST-NEG
'The boy couldn't go to school because he was ill.', literally 'The illness made the boy not be able to go to school.'

(15) wajem tə-g'eg$_w$ə-n-ew t-jə-ʁe-kᷦ$_w$e-ŝ$_w$ə-ʁe-p.
rain-OBL 1PL.S-play-MSD-CONV 1PL.S-3SG.AG-CAUS-go-PSB-PST-NEG
'The rain made us not be able to play.'

In (14) and (15) the variant CAUS (NEG (POT)) is chosen.

Note that (14) and (15) are not accepted by all native speakers. While young native speakers believe constructions like this to be perfectly grammatical, some older native speakers regard them as strange, if not ungrammatical. This can be a result of one of the two restrictions: either the older speakers extend the rigid hierarchy NEG (POT (CAUS)) to all constructions (in this case (14) and (15) acquire deficient readings like 'The rain did not manage to make us play'), or they do not admit non-agentive uses of the causative. As far as I can judge,

the second variant is implausible, since at least in some cases without the potential marker the older speakers judge causative constructions with non-agentive causers to be felicitous:

(16) wəzə-m pet'e abɤe-m qe-x-jə-ʁe-teg'ə-ʁe-p
illness-OBL Petja-OBL bed-OBL DIR-LOC-3SG.CR-CAUS-rise-PST-NEG
'Petja couldn't rise from his bed, because he was ill' (lit. 'The illness made Petja not rise').

In (16) a causative construction with a non-agentive causer was considered as fully grammatical, even by older native speakers.

**2.3. Economy principle?**

In fact, the impossibility of the second reading in (11), i.e., of the variant CAUS (NEG (POT)), could be explained by appeal to the economy principle. Almost the same meaning as in (11), ii. – 'make smb. not be able to P' – is expressed by causative constructions without the potential marker, which were examined above. The meaning 'make smb. not P' is almost synonymous to 'make smb. not be able to P'. Therefore, we could hypothesize that the second reading in (10) is prohibited, because it is synonymous to the main reading of non-potential causative constructions.

However, the same logic predicts the first reading of (11) and (13) ('not to be able to [make X P]') to be ruled out under synonymy with 'not to make X P' ('The boy did not manage to make the girl boil water' ≈ 'The boy did not make the girl boil water') – however, the first reading is grammatical. Therefore, the economy principle does not explain impossibility of the variant CAUS(NEG(POT)).

**2.4. Strange hierarchies and the "reason causative"**

Intuitively speaking, the difference in ordering in (11)-(13) and (14)-(15) seems to be unnatural. (11)-(13) and (14)-(15) differ only by animacy / agentivity of causers. Why do these distinctions influence ordering of derivations, which seems to be a purely structural phenomenon?

In fact, this is not the case. We think that the difference in the semantic scope results from the differences in the causative meaning, depending on agentivity of the causer. Constructions with agentive causers are interpreted as "prototypical causatives" in terms of (Lakoff 1987): the agentive causer acts volitionally, and its actions affect the cause. Constructions with non-agentive causers get another interpretation, which we call "reason causative". This difference is very clear in Adyghe.

In this language the causative constructions with non-agentive causers express meanings which are often coded by non-causative reason constructions with markers such as *because* or *of* in European languages:

(17) ruslane jə-teteẑ žəʁe-m jə-ʁe-λa-ʁ
Ruslan 3SG-grandfather old.age-OBL 3SG.AG-CAUS-die-PST
'Ruslan's grandfather died of old age';

(18) azamat gwəxeč̣ə-m jə-ʁe-ʁə-ʁ
Azamat grief-OBL 3SG.AG-CAUS-weep-PST
'Azamat wept of grief'.

Moreover, as was shown in Letuchiy 2006, causative constructions are often the main device to express this meaning. Cf. the English construction, corresponding to (17), which is not natural:

(19) *The old age killed Ruslan's grandfather / The old age made Ruslan's grandfather die*;

The most natural way to express these meanings is *Azamat wept of grief* or *Ruslan's grandfather died of / because of old age.* For instance, the Google system returns thousands of examples for "died of old age" and only about ten examples for "old age killed".

In (17) and (18) the causative construction does not presuppose any separate situation of causation. These sentences rather express the cause-effect relation between the two situations.

We can explain the distinction between constructions with agentive and non-agentive causers in the following way. Perhaps the non-agentive causer in sentences such as (15) and (16) is a peripheral argument, and not an agent. This is very probable, since the semantic properties of causes in (17) and (18) are not those of prototypical subject / agent. In this case the situation of causation is also peripheral – it occupies a high position in the tree, which is characteristic for peripheral situations.

This analysis is confirmed by the fact that potential can be attached between the causative marker and the caused situation only in constructions with non-agentive causers. When the causee is agentive, it must occupy the position close to the caused situation. The potential operator, which is historically a separate modal predicate, cannot be attached between them. However, in constructions with non-agentive causers the causative marker and the situation of causation are structurally higher – and the potential operator can occupy the position between the causative marker and the caused situation.

Of course, there exists a purely semantic explanation: perhaps, the potential derivation is compatible only with agentive arguments only: for example, sentences like *I cannot open the door*, but not *The wind cannot open the door* are possible. This seems to be partially true – at least up to now we haven't met any examples of potential constructions with a non-agentive subject. However, this analysis accounts only for grammaticality of (11)-(13). It does not explain impossibility of the reading CAUS (NEG (POT)) for constructions with agentive causers. Furthermore, it does not explain why constructions like (14) and (15) get the reading CAUS (NEG (POT)) and are not simply ungrammatical.

### *3. Paradoxes of scopes*

Let us now compare the situation with the combination CAUS + NEG and that with CAUS + POT + NEG. The comparison shows that the situation is paradoxical:

- For CAUS + NEG the variant CAUS (NEG) is usually chosen;
- For CAUS + POT + NEG the variant NEG (POT (CAUS)) is chosen with agentive causers and the variant CAUS (NEG (POT)) for non-agentive causers.

The most frequent variants CAUS (NEG) and NEG(POT(CAUS)) contradict each other: in the former causative includes negation in its scope; in the latter the opposite situation takes place. If we try to establish a uniform ordering for all derivations in Adyghe, we end up by being unable to define the mutual order of negation and causative.

To solve this problem, we assume that not all restrictions on the ordering of derivations are equally strict. In our second example, the most important rule is NEG(POT), which is never violated. The other two restrictions – NEG(CAUS) / CAUS(NEG) and POT(CAUS) / CAUS(POT) can be violated under some semantic and pragmatic conditions.

However, we must add another rule: orderings of derivations in Adyghe are organized in *pairs* – the derivations do not form a chain with the fixed order of each derivation with respect to all others. The idea of a chain adopted in templatic morphology (McCarthy and Prince 1990) is inappropriate for the description of Adyghe verb. If we dealt with a chain, we would have (had) to propose something like NEG (POT (CAUS)) which would also imply NEG (CAUS), which is false for most cases, such as (6). We propose that the ordering operates on *pairs* of derivations, like NEG (POT), CAUS (NEG), POT (CAUS). In combinations of three or more derivations, the ordering in some pairs can be irrelevant.

### *4. Conclusions*

We have analyzed two combinations of verbal markers in Adyghe. The first conclusion is that even if the markers under analysis belong to different groups of affixes and their order does not reflect the ordering of derivations, the possible semantic orders of markers are restricted. Sometimes these restrictions are independent of semantic properties, as the rule CAUS(NEG). In other cases they are regulated by semantic properties of arguments – in such cases we have variance like CAUS(NEG(POT)) with non-agentive causers vs. NEG(POT(CAUS)) with agentive causers.

The second case is particularly interesting: in general, we do not expect semantic properties to affect the ordering of derivations. However, we have shown that some cases, where the ordering seems to be related to semantic properties, are in fact more complicated. Causative constructions with non-agentive causers in fact have another syntactic structure than those with agentive causers. The structure directly affects the ordering of derivations.

Noteworthy, the rule of ordering of two operations, expressed by suffixes (negation and potential) (NEG(POT)) has turned out to be the strictest one. This means that the linear order is, nevertheless, relevant for semantic ordering of derivations: the fact that the negative marker always follows the potential suffix cannot be accidental.

Adyghe data poses some more general questions, for example, whether ordering of derivations is the same thing as scope of derivations. Our answer is negative. We have shown that if we had used these terms as synonymous, we would not have been able to distinguish the "permissive" reading (8) from the reading where negation modifies only the lowest part of the structure (VP). We suppose that this opposition results from the difference between the scope and the ordering. In other words, if the marker A is attached after the marker B (ordering of derivations), this does not mean that the scope of A necessarily includes B (scope of markers).

Finally, Adyghe data makes us revise the idea of chain, adopted in templatic morphology. The combination of negation, causative and potential cannot get any fixed order in this approach. We must suppose that the ordering is relevant for pairs of operations, for example, in Adyghe we have two restrictions: NEG(POT) and CAUS(NEG). The first one outranks the second one.

### *Abbreviations*

1, 2, 3 – first, second, third person; ABS – absolutive case; AG – agent; CAUS – causative; COM – comitative; CONV – converb; CR – causer; DIR – directional prefix; IO – indirect object; LOC – locative prefix; MSD – masdar; NEG – negation; OBL – oblique case; PSB – potential, PST – past tense.

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