Valency retention in Sakha derivational nominalization *

EBATA, Fuyuki
Research Fellow of JSPS (ILCAA, TUFS)

The present paper focuses on a particular type of Sakha nominalization known as "syntactic derivation". Sakha syntactic derivation exhibits a cross-linguistically rare phenomenon in that it can retain the valency of the base verb though the process is clearly derivational. This is an apparent counterexample to lexical integrity, a hypothesis which posits that no syntactic process may refer to parts of a word; thus here we can see the morphology-syntax mismatch.

Keywords: Sakha, nominalization, syntactic derivation, lexical integrity, morphology-syntax mismatch

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1. Introduction

This paper deals with three types of Sakha nominalization. There is a tradition of distinguishing between derivational action nominals and inflectional action nominals (see Chomsky (1970), Koptjevskaja-Tamm (2006), Comrie and Thompson (2007), etc.). For example, English *destruction* is a deverbal noun, whereas *destroying* is a gerund (i.e. non-finite verb). The distinction is shown in (1) and (2). A gerund *destroying* can take its object NP *the city* because it retains verbal properties.

(1) the enemy's destruction ***of*** the city
(2) the enemy's destroying the city

The central issue of this paper is nominalization by syntactic derivation, one of the three types of Sakha nominalization. Syntactic derivation in Sakha is cross-linguistically

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unique because it can retain the valency of the base verb though the process is clearly derivational. In other words, syntax and morphology clash in Sakha syntactic derivation.

2. Profile of the language and defining word

Sakha is a Turkic language spoken in Eastern Siberia, mainly in the Sakha Republic, Russia. The number of Sakha speakers is estimated to be approximately 450,000. Sakha shows a strong agglutinative morphology, and extensively uses suffixes in word formation. Case relations are marked by the case suffixes attached to NPs (Dependent-marking). On the other hand, possessive suffixes are attached to the possessed NPs and possessor NPs take no formal marking (Head-marking).

Because lexical integrity will be discussed later in Section 5, I would like to define the use of the term 'word' here. Word-boundaries are determined by considering the vowel-harmony rule and word stress. The vowel-harmony rule exclusively operates within a word, and word stress must be put on the word-final syllable.

The vowel-harmony rule consists of two sub-rules: 1) Front vowels and back vowels can never co-occur within a word; and 2) vowels in the subsequent syllables must harmonize with ones in the preceding syllables. The second sub-rule is easily comprehensible if we divide Sakha vowels into four groups. After vowels from group [1], vowels in the subsequent syllable are chosen from group [1] or [2]. After group [2], vowels are from group [2] or [3]; After group [3], vowels are from group [3] or [4]; After group [4], vowels are from group [4] or [3]. The rule is illustrated in Table 1 below.

Table 1. The vowel harmony rule

	[1] --> [2] --> [3] <--> [4]			
Front vowels	œ, œœ	y, yy, yœ	e, ee	i, ii, ie
Back vowels	o, oo	u, uu, uo	a, aa	ɯ, ɯɯ, ɯa

Because suffixes are parts of a word, vowels in suffixes must alter by the vowel-harmony rule and they bear word stress. Contrastively, enclitics never harmonize with the vowels in their hosts and never bear word stress. Therefore the distinction between suffixes and enclitics is clear on phonological grounds. Examples of the partitive suffix -TE and the enclitic =*da* are shown below.[1]

(3) xaar-dá oton-nó
snow-PART berry-PART

[1] In Sakha, partitive is used to refer to indefinite objects in the imperative mood. The clitic =*da* has an additive meaning. In this paper, suffix forms are written with small capital letters when they have several allomorphs.

(4) xáar =da otón =da
snow =CLT berry =CLT

3. The three types of nominalization

In Sakha, verbs or clauses are nominalized by attaching suffixes. In this paper "nominals" include what are traditionally regarded as nouns, adjectives, and adverbs because they all have nominal morphology in common. As mentioned above, Sakha has three types of nominalization. Two of them are by derivational suffixes. Here I distinguish lexical derivational suffixes and syntactic derivational suffixes. All of them are suffixes according to the criteria discussed in the previous section.

Lexical derivation simply creates a new lexeme, whereas syntactic derivation may contain the inflectional categories of the base. The distinction between the two types of derivation is discussed by Ebata (2011) in detail.[2] The third type of Sakha nominalization results from verbal inflection and is known as "verbal noun". Many studies show various criteria for distinguishing inflection from derivation, such as obligatoriness, productivity, regularity, applicability, and syntactic relevance (see Bybee (1985), Bauer (1988), Haspelmath (1996), Booij (2006), Dixon (2010), Haspelmath and Sims (2010), etc.). Among these criteria, this paper takes syntactic relevance as a criterion for inflection.[3]

3.1. Lexical derivation

Lexical derivation simply creates a new lexeme. There are more than a dozen lexical derivational suffixes which derive nouns from verbs. They have relatively low productivity as compared with syntactic derivational ones.

(5)	*kepsee-n*	'story'	<	*kepsee*	'speak'
	buh-ax	'knife'	<	*bus*	'cut'
	ord-uk	'extra, spare'	<	*ort*	'be left over'
	aj-umňu	'creation, work'	<	*aj*	'create'

Lexical derivational suffixes may (sporadically) change the stem forms: The stem final /j/ sometimes drops; and the stem final long vowel is replaced by a short one.

[2] The terms "lexical derivation" and "syntactic derivation" were coined by Vinokurova (2005), a native speaker of Sakha. She claims that, using a generative approach, the two types of derivation occur at different levels. It is very insightful that she first pointed out the differing properties among Sakha derivational suffixes. However, there are significant differences between Vinokurova (2005) and the author in the definition of syntactic derivation and regarding what particular suffixes are to be considered syntactic derivational. Ebata (2011) provides much evidence for discriminating Sakha lexical and syntactic derivations.

[3] Haspelmath and Sims (2010: 90) states that syntactic relevance means that "the grammatical function or meaning expressed by a morphological pattern is involved in syntactic agreement or syntactic government".

(6)	*dolgu-n*	‘wave’	<	*dolguj*	‘swing’
	žaha-bul	‘direction’	<	*žahaj*	‘give directions’
	kiste-leŋ	‘secrete’	<	*kistee*	‘conceal’
	xajʁa-l	‘praise’	<	*xajʁaa*	‘appreciate’

3.2. Syntactic derivation

Syntactic derivation not only creates a new lexeme, but retains some syntactic property of the base. There are four syntactic derivational suffixes which derive nominals from verbs. They are highly productive.

3.2.1. Action nominalization

Two of the syntactic derivational suffixes are for action nominalization: suffix -II and suffix -(EE)hIn. Here are some examples of action nominalization.

(7)	*yœret-ii*	‘education’	<	*yœret*	‘teach’
	uurat-ɯɯ	‘abolishment’	<	*uurat*	‘abolish’
	œl-yy	‘death’	<	*œl*	‘die’
	biller-ii	‘report, notice’	<	*biller*	‘inform’

(8)	*battaa-hun*	‘pressure’	<	*battaa*	‘press’
	atɯɯlaa-hun	‘sale’	<	*atɯɯlaa*	‘sell’
	ɯjaa-hun	‘measurement’	<	*ɯjaa*	‘mesure’
	belemnee-hin	‘preparation’	<	*belemnee*	‘prepare’

Sakha verb stems can be divided into two groups: verbal stems which end in long low vowels and consonant stems which end in consonants. The suffix -II is highly productive with consonant stems, whereas only six examples of -II with vowel stems are attested. In contrast, the suffix -(EE)hIn is highly productive with vowel stems but only four examples of -(EE)hIn with consonant stems are found. The suffix -II can retain its verbal valency only when it attaches to consonant stems, while the suffix -(EE)hIn can retain its verbal valency only when it attaches to vowel stems. Examples (9) and (10) are of the suffix -II, and (11) and (12) are of the suffix -(EE)hIn. Valency retention is evident because the nominalized nouns in these examples still govern accusative NPs. Governing the accusative is the best criteria for the valency retention, since an accusative NP can never be an adnominal modifier.

(9)	as kultuura-tɯ-n	yœret-**ii**	
	food	culture-POSS.3SG-ACC	study-NMLZ

'study of food culture'

(10) noluok-tar-ɯ ɯl-**ɯɯ**-nɯ uurat-**ɯɯ**
tax-PL-ACC take-NMLZ-ACC abolish-NMLZ
'abolishment of tax collection'

(11) ènergija-nɯ sie-**hin**
energy-ACC eat-NMLZ
'use of energy'

(12) brillian-nar-ɯ atɯɯlaa-**hɯn**
diamond-PL-ACC sell-NMLZ
'sale of diamonds'

The two suffixes show complementary distribution in terms of their productivity and valency retention (Table 2).

Table 2. Stem types and productivity of action nominalization

	VOWEL STEMS	CONSONANT STEMS
suffix -II	only 6 examples unable to retain valency	highly productive able to retain valency
suffix -(EE)hIn	highly productive able to retain valency	only 4 examples unable to retain valency

3.2.2. Actor nominalization

Another syntactic derivational suffix is the suffix -(EE)ччI, which derives actor nouns. The suffix -(EE)ччI can be attached to both consonant stems and vowel stems (13).

(13) *aaʁ-aaччɯ* 'reader' < *aax* 'read'
činčij-eeччi 'researcher' < *činčij* 'research'
tæryttee-ччi 'founder' < *tæryttee* 'found'
ylelee-ччi 'worker' < *ylelee* 'work'

The derived nouns retain its verbal valency. When the base verb can take an accusative NP, the derived actor nouns can also take one. In (14), the nominalized VP (an accusative noun + a derived actor noun) is used as a possessor NP of *axsaan* 'number', and in (15) the nominalized VP serves as an NP.

(14) kinige-ni aaʁ-aaччɯ axsaan-a aʁɯjaa-ta
book-acc read-actor number-poss.3sg lessen-past:3sg
‘The number of book-readers has decreased in number.’

(15) bɯjɯlgɯ saŋa žɯl-ga **kyœʁ-y** **ket-eeччi**
this.year’s new.year-DAT green-ACC wear-ACTOR
elbex buol-su
many be-APPR:3SG
‘This new year there will be many people who are dressed in green.’

3.2.3. Nominalization of potentiality

The other syntactic derivational suffix is the suffix -ɪmtɪE, which derives nouns of potentiality. The suffix -ɪmtɪE has high productivity but is attached only to consonant stems.

(16) *tuluj-umtuo* ‘resistant’ < *tuluj* ‘bear’
salg-ɯmtɯa ‘boring’ < *salt* ‘be bored’
tost-umtuo ‘fragile’ < *tohun* ‘break down’
byter-imtie ‘diligent’ < *byter* ‘finish’

This suffix can also retain the verbal valency. The nominalized VP is usually used as an attributive phrase as in (17) and (18), but can be used also as an NP as in (19).

(17) tɯmnɯɯ-nɯ tuluj-umtuo yyneeji
cold-ACC bear-POT plant
‘a plant which can resist coldness / a cold-resistant plant’

(18) yœreʁ-i ɯl-ɯmtɯa oʁo
education-ACC take-POT child
‘a child who can (easily) get an education’

(19) ɯt **sɯt-ɯ** **ɯl-ɯmtɯa-tɯ-n** sɯana-lɯɯ-l-lar
dog scent-ACC take-POT-POSS.3SG-ACC value-VBLZ-PRES-3PL
‘They make an evaluation of a dog’s capacity for detecting a scent.’

3.3. Verbal nouns

Verbal nouns (hereafter ‘VN’) are inflected forms of verbs. Sakha verb stems must take either a finite suffix, a VN suffix, or a converb suffix. That is, a verb stem appears either

in a finite form, in a VN form, or in a converb form. Sakha verbal inflections are strongly related to their syntactic position. Finite forms are used only for the predicate of main clause, VNs are used for the predicate of an adnominal or nominal clause, and converbs are used for the predicate of adverbial clause. Ebata (2012) provides more detailed information on the verbal inflectional forms of Sakha.

A clause headed by a VN can function as an NP. In other words, clauses are nominalized by VN suffixes. For instance, a clause as in (20) can be nominalized by a VN suffix as in (21). The person/number of the subject is indicated by a possessive suffix attached to a VN.

(20) min balɯɯha-ʁa ylelii-bin
I hospital-DAT work:PRES-1SG
'I work in a hospital.'

(21) min balɯɯha-ʁa **ylelii-r-im**
I hospital-DAT work-VN.PRES-1SG
'that I work in a hospital'

A clause headed by a VN can also function as an adnominal clause (hereafter, AC). When the NP qualified by an AC is coreferential with the AC's subject, the NP has no person/number marking (22). When the NP and the AC's subject are not coreferential, the NP must take a possessive suffix that indicates the person/number of the subject of the AC (23).

(22) bɯhaʁ-ɯ **ɯl-bɯt** kihi
knife-ACC take-VN.PAST person
'the person who bought the knife'

(23) kihi **ɯl-bɯt** bɯhaʁ-a
person take-VN.PAST knife-POSS.3SG
'the knife which the person bought'

As is evident from example (24), a VN can contain the verbal inflectional categories of polarity, tense, and agreement with the clausal subject in person/number. In addition, a VN can take a case suffix since it functions as an NP of the main clause.

(24) saxa bɯhaʁ-ɯ-n **ɯl-batax-pɯ-ttan**
Sakha knife-POSS.3SG-ACC take-NEG:VN.PAST-1SG-ABL

olus　　kɯhɯj-an　　xomoj-o　　sanaa-bɯt-ɯm
very　　regret-CV　　sorry-CV　　think-PAST-1SG
‘I was very sorry that I didn’t buy the Sakha-style knife.’

4. Difference between lexical nominalization, syntactic nominalization, and verbal nouns

As the examples above show, Sakha has three nominalization strategies: lexical derivation, syntactic derivation, and VNs. In this section, I would like to show the systematic difference between the three strategies.

(A) Between lexical derivation and syntactic derivation

(A-1) Nominalization by syntactic derivation can retain an accusative NP (27), while nominalization by lexical derivation cannot (26).

[verb phrase]
(25) dojdu-nu　　taptaa
country-ACC　　love
‘to love the homeland’

[lexical derivation]
(26) *dojdu-nu　　tapta-l
country-ACC　　love-NMLZ
(intended meaning: ‘love for the homeland’)

[syntactic derivation]
(27) dojdu-nu　　taptaa-hɯn
country-ACC　　love-NMLZ
‘love for the homeland’

(A-2) A syntactic derivational suffix can be attached to a stem containing voice and aspect suffixes, while a lexical derivational suffix cannot. In (28), the actor nominalization suffix -(EE)ччI appears after a causative and an iterative suffix.

(28) sajɯla-t-alaa-**ччɯ**
spend.summer-CAUS-ITER-ACTOR
‘a person who repeatedly hosts people in his/her summer house’

(B) Between syntactic derivation and VNs

A VN can contain verbal inflectional categories of polarity, tense, and agreement in person/number as in (24), while in syntactic derivation no such categories can be expressed. The relevant part of (24) is repeated as (24)' below.

(24)'	saxa	bɯhaʁ-ɯ-n	**ɯl-batax-pɯ-ttan**
	Sakha	knife-POSS.3SG-ACC	take-NEG:VN.PAST-1SG-ABL

'[I was very sorry] that I didn't buy the Sakha-style knife.'

Malchukov (2006), dealing with nominalization across languages, claims that in transcategorial operations "the process of decategorization and recategorization are both independent of each other and gradual". In the light of Malchukov's idea, we can conclude that the three types of Sakha nominalization are different in the degree of decategorization. (A) VNs retain all the verbal inflectional categories except illocutionary force.[4] This is illustrated by example (24). (B) Nominalization by a syntactic derivational suffix retains valency, voice, and aspect but loses mood (polarity) and agreement. This is illustrated by examples (27) and (28). (C) Nominalization by a lexical derivational suffix loses all verbal inflectional categories.

Malchukov (2006) offers a hierarchy of verbal categories based on the functional-typological tradition. Furthermore, he argues that in transcategorial processes, outer verbal categories are more likely to be lost. This hierarchy is true for the three types of Sakha nominalization. Correlation between Malchukov's hierarchy and the degree of decategorization in Sakha nominalization can be set out in Figure 1.

	V - VAL - Voice - ASP - Tense - Mood - AGR - IF
Verbal noun	- ->
Syntactic derivation	- - - - - - - - - - - - - - - - ->
Lexical derivation	->

Figure 1. Degree of decategorization in nominalization

5. Lexical integrity and morphology-syntax mismatch

Sakha syntactic derivation is peculiar in that it deviates from the notion of "Lexical integrity". Lexical integrity is a hypothesis which refers to the property of words that "no syntactic process is allowed to refer to parts of a word" (Lapointe 1985: 8).[5] I shall

[4] In Sakha, illocutionary force is morphologically expressed by suffixes or enclitics, both of which are not marked on verbal nouns. WH-questions and exclamations are marked by sentence-final suffixes. Sentence-final enclitics are used for polar questions, hearsay, inference, and so on.

[5] A similar idea to lexical integrity is referred as "atomicity of words" or "lexicalist hypothesis". See Chomsky (1970), Di Sciullo and Williams (1987: 49), and Spencer (1991: 49).

propose that there are two types of counterexamples to “Lexical integrity”. In one, the derivational process contains a modified noun, and in the other, the derivational process contains a syntactic relation between a verb and its argument.

5.1. Counterexamples to Lexical integrity

One type of alleged counterexample is the case of modified nouns. Shown here are English examples from Spencer (1988) and Japanese examples from Kageyama (1993: 327). Kageyama (1993) regards these Japanese affixes as targeting words but here they temporarily and extensionally target phrases. So these are not true counterexamples.

(29) atomic scient-***ist***
transformational grammar-***ian***

(30) *dai-kigyoo =no* *syatyoo-**kyuu***
big-company =GEN president-level
‘ “president of a big company”-level’

(31) *tonari =no* *oziisaN-**ate***
next.door =GEN old.person-addressed.to
‘[a letter] to the old person next-door’

There are a few examples in which Sakha lexical derivation targets a phrase. These examples are parallel to the English and Japanese ones above in that derivational process targets a phrase temporarily and extensionally.

(32) *kuhul* *oʁo-**msox***(< *kuhul oʁo* ‘baby’)
red child-fond.of
‘be fond of babies / one who likes babies’

(33) *kavkaz* *kihi-**tiŋi*** (< *kavkaz kihi-te* ‘Caucasian’)
Caucasus person-alike
‘like Caucasians / one who is like Caucasians’

The other type of counterexample involves derivation that maintains syntactic relations between a verb and its argument. There are no such examples in English. Kageyama (1993: 327) provides numerous examples from Japanese. Kageyama (1993) insists that these suffixes are “phrasal affixes”, which target phrases by nature.

(34) arubaito =o si-**nagara**
part.time.job =ACC do-CONCUR
‘while doing part-time jobs’

(35) denki =o tsuke-**ppanasi** [6]
light =ACC put-RESULT
'the light left on / left the light on'

Sakha syntactic derivation is clearly of this type. Though syntactic derivational suffixes are derivational by nature, they can retain verbal valency, i.e., they can contain a syntactic relation. In the following example of actor nominalization (identical to example (14)), the base verb *aax* 'read', which is a **part** of word, still govern an accusative NP *kinige-ni* 'book'. Thus here we can see that the morphology and the syntax clash. The same applies to examples (9) through (12) with respect to action nominalization, and to (17) through (19) with respect to potential nominalization.

(36) **kinige-ni** **aaʁ-aaччɯ** axsaan-a aʁɯjaa-ta
book-ACC read-ACTOR number-POSS.3SG lessen-PAST:3SG
'The number of book-readers has decreased in number.'

5.2. Derivation from verbal nouns

Sakha VNs can take derivational suffixes which nominal stems take. This fact itself is somewhat problematic because cross-linguistically derivational suffixes seldom occur outside inflectional suffixes. In this case also lexical derivation yields a single word, whereas syntactic derivation involves a syntactic relation, i.e. it goes against Lexical integrity.

5.2.1. Lexical derivation from verbal nouns

There are two lexical derivational suffixes that VNs can take.

(A) Actor noun derivation: suffix -SIt

The suffix -SIt derives actor nouns from nominals, for example, *baluk-sut* 'fisherman' from *baluk* 'fish' (note that this is different from the syntactic derivational suffix -(EE)ччI in Section 3.2.2). The suffix -SIt can attach to future VNs. In this case the derivative form is equivalent to a single word, and the original verb never takes its argument.

(37) *œl-yœx-syt* (< *œl* 'die')
die-VN.FUT-ACTOR
'the dead'

(38) *taŋnar-ɯax-sut* (< *taŋnar* 'betray')
betray-VN.FUT-ACTOR
'betrayer'

(B) Adverbializing suffix -TIk

[6] The suffix *-ppanasi* is clearly related to the verb *hanasu* 'to release, to let go, to take smth off'. So this example could be analysed as compounding. Nonetheless this goes against Lexical integrity.

The suffix -TIk derives adverbs from nominals, for example, *čepčeki-tik* ‘easily’ from *čepčeki* ‘easy’. The suffix -TIk can attach to VNs. In this case also the derivative form is equivalent to a single word, and the original verb never takes its argument.

(39) sɯñ̈ñ̈alaŋ-mɯ-n **umnu-llu-bat-tɯk** ataar-bɯt-ɯm
rest-POSS.1SG-ACC forget-PASS-NEG:VN.PRES-ADVLZ spend-PAST-1SG
‘I spent my vacation unforgettably [presantly].’

5.2.2. Syntactic derivation from verbal nouns

There are two syntactic derivational suffixes which VNs can take.

(A) Similative suffix -LII

The suffix -LII derives nominals from nominals, for example, *kihi-lii* ‘humanlike, humanly’ from *kihi* ‘person’. The suffix -LII can attach to VNs. In this case the derivative form contains a syntactic relation, and the original verb still retains its valency.

(40) kɯɯh-ɯ iteʁej-betex-tii kœr-œ kœr-œ
girl-ACC believe-NEG:VN.PAST-SIM look-CV look-CV
žeremej ɯjɯt-ta
PSN ask-PAST:3SG
‘As if he didn’t believe that girl, looking [her] repeatedly, Jeremey asked [her].’

(41) Sveta tug-u =ere tolkujdaa-bɯt-tɯɯ
PSN what-ACC =CLT think-VN.PAST-SIM
toxtoo-n olor-but-a
stop-CV sit-PAST-3SG
‘Sveta stopped and sat as if she was thinking about something.’

(B) Proprietive suffix -LEEx

The suffix -LEEx derives nominals from nominals, for example, *kyys-teex* ‘strong, one who is strong’ from *kyys* ‘power’. When the suffix -LEEx attaches to past VNs, it indicates an experiential meaning (42). When it attaches to present or future VNs, it indicates a debitive meaning (43). In this case also the derivative form contains a syntactic relation, and the original verb still retains its valency.

(42) min biir onnuk tybelte-ni isti-bit-teex-pin
I one such event-ACC hear-VN.PAST-PROP-COP.1SG
‘I have once heard of such an event.’
(literal meaning: ‘I am one who has once heard of such an event.’)

(43) œrœspyybylyke bečeet-in ejge-ti-n
republic print-POSS.3SG area-POSS.3SG-ACC

syrynnyœ-x-teex terilte-ler
lead-VN.FUT-PROP organization-PL
'organizations which must lead the publishing world of the [Sakha] Republic'

In lexical derivation from VNs, the original verbs never retain valency. In other words, the derivational process occurs within a single word. In contrast in syntactic derivation from VNs, the original verbs still retain valency and the derivational process contains a syntactic relation. Lexical integrity does not operate in the syntactic derivation from VNs, and thus here we can see the morphology-syntax mismatch.

6. Concluding remarks

This paper deals with three types of Sakha nominalization: lexical derivation, syntactic derivation, and verbal noun. There are three types of nominalization by syntactic derivation: action, actor and potential nominalizations. The most important consideration is that in syntactic derivation the base verb still retains its valency, in other words, the derivational process contains a syntactic relation. Sakha syntactic derivation deviates from the "Lexical integrity" hypothesis, and we can see a mismatch in the morphology and syntax. In the linguistic literature, derivational process is sometimes referred as 'word-formation', as in Aikhenvald (2007: 35)'s following remark: "Derivational morphology results in the creation of a new word with a new meaning." However, such a claim is not appropriate to Sakha syntactic derivation. Perhaps it is not appropriate also to other agglutinative languages like Japanese (recall examples (34) and (35)).

Koptjevskaja-Tamm (2006) points out that "it is precisely action nominals that in many languages pose serious problems for a clear-cut distinction between derivational and inflectional forms, in that the various criteria suggested for distinguishing inflection and derivation clash when applied to them". Sakha syntactic derivation is exactly the intermediate case. But also interestingly, Sakha syntactic derivation is not limited to action nominals but also involves actor nominals and potential nominals.

Abbreviations

ABL	ablative	GEN	genitive
ACC	accusative	IF	illocutionary force
ACTOR	actor nominalization	ITER	iterative
ADVLZ	adverbializing suffix	NEG	negative
AGR	agreement	NMLZ	nominalizing suffix
APPR	apprehensive	PART	partitive
ASP	aspect	PASS	passive
CAUS	causative	PAST	past
CLT	clitic	PL	plural
CONCUR	concurrent	POSS	possessive
COP	copula	POT	potential nominalization
CV	converb	PSN	person name
DAT	dative	PRES	present
FUT	future	PROP	proprietive

RESULT	resultative aspect	VAL	valency
SG	singular	VBLZ	verbalizing suffix
SIM	similative	VN	verbal noun
v	verb		

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