

LING GU4120 Language Documentation and Field Methods Progress Report 3: Sakha verbal morphology and clausal syntax

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1 Introduction

In this paper, I describe Sakha verbal morphology and clausal syntax. Sakha is a Turkic language spoken by approximately 378,000 people in the Republic of Sakha, Irkutsk and Magadan provinces, Khabarovsk Krai, and Krasnoyarsk Krai in Russia. The exonym for the language is Yakut (Sakha 2023).

The consultant for this paper is Platon Shamaev, who is a native speaker of Sakha in his forties. Platon was born in and grew up in the Republic of Sakha. He moved to the United States last year and currently works as a lawyer in New York, where he is affiliated with Columbia University’s Human Rights Advocates Program. Platon also speaks English. All data referenced in this paper come from Columbia’s Spring 2023 Field Methods class’s elicitation sessions with Platon.

Topics covered in this paper include interrogatives (§2), verbs (§3), word order in simple declaratives (§4), adverbs (§5), coordination (§6), subordination (§7), evidentiality (§8), and (non-nominal) deixis (§9). I also expand upon my analyses of copular clauses (§10) and possessive constructions (§11) from Progress Report 2. Finally, in §12, I discuss open questions and potential future directions for investigation.

Please see my previous report on Sakha nominal morphology for an overview of the phonological rules which account for most of the morphophonemic alternations seen in the data.

2 Interrogatives

In this section, I describe how polar questions (§2.1) and content questions (§2.2) are constructed.

2.1 Polar questions

Polar questions are marked with the sentence-final question particle *du*. The word order for a polar question is the same as for a declarative, as illustrated by the following pair of examples.

(1) *en* *uf’utal-Ø-gum*
2SG.NOM teacher-SG-2SG
‘You are a teacher.’

(2) *en* *uf’utal-Ø-gum* *du*
2SG.NOM teacher-SG-2SG Q
‘Are you a teacher?’

2.2 Content questions

Content questions are formed using the question words listed in Table 1. For questions formed with the questions words “who,” “when,” “where,” “why,” and “how,” a question particle *-Ej* or *-Ij* (the height of the vowel is not predictable) is also affixed to the last word. Wh-fronting also appears to occur in cases such as (7), but is not obligatory.

The question words are illustrated in the following set of examples, which pair each question with a potential answer. In (4), the answer is probably infelicitous due to a tense-aspect mismatch with the preceding question, but is provided nonetheless because it is the most appropriate answer that I could find from our data.

English	Sakha	Meaning
who	kim	animate subject
what	tugu	inanimate object
what	tuɔχ	inanimate subject
when	ka:χan	time
where	χana	location
why	tɔɞɔ	reason
how	χajdaχ	manner
which	hanuk	generic

Table 1: Sakha question words. The descriptions in the “Meaning” column are adapted from Payne (1997: 300).

- (3) (a) *kim ta:h-uman buɔɔχ-but-aj*
 who rock-INS throw-PST-Q
 ‘Who threw a rock?’
 (b) *min ta:s buɔɔχ-puut-um*
 1SG.NOM rock throw-PST-1SG
 ‘I threw a rock.’
- (4) (a) *tugu ɔχsu-but-kun-uj*
 what hit-PST-2SG-Q
 ‘What did you hit?’
 (b) *min ehɛ-ni tabaɞ-um*
 1SG.NOM bear-ACC.DEF hit-1SG
 ‘I am hitting the bear.’
- (5) (a) *tuɔχ buɔɔ-but-aj*
 what happen-PST-Q
 ‘What happened?’
 (b) *min ta:s buɔɔχ-puut-um*
 1SG.NOM rock throw-PST-1SG
 ‘I threw a rock.’
- (6) (a) *en ka:χan ta:h-u buɔɔχ-puut-kun-aj*
 2SG.NOM when rock-ACC.DEF throw-PST-2SG-Q
 ‘When did you throw a rock?’
 (b) *berɛhe ta:h-u buɔɔχ-puut-um*
 yesterday rock-ACC.DEF throw-PST-1SG
 ‘Yesterday I threw a rock.’
- (7) (a) *χana ta:h-u buɔɔχ-puut-kun-aj*
 where rock-ACC.DEF throw-PST-2SG-Q
 ‘Where did you throw a rock?’

- (b) *min ta:h-w kyæł-ge buɾax-pwt-um*
 1SG.NOM rock-ACC.DEF lake-DAT throw-PST-1SG
 ‘I threw a rock by the lake.’
- (8) (a) *en tɔkɔ ta:h-w buɾax-pwt-kurn-aj*
 2SG.NOM why rock-ACC.DEF throw-PST-2SG-Q
 ‘Why did you throw a rock?’
- (b) *min χɔmɔj-but-um ɔlihin ta:h-w buɾax-pwt-um*
 1SG.NOM upset-PST-1SG that.is why rock-ACC.DEF throw-PST-1SG
 ‘I threw a rock because I was upset.’
- (9) (a) *χajdaχ en-εj*
 how 2SG-Q
 ‘How are you?’
- (b) *min yfjygej-bin*
 1SG.NOM good-1SG
 ‘I’m well.’
- (10) (a) *hanuk kinige-ni talawan*
 which book-ACC you.want
 ‘Which book would you like?’
- (b) *bu man:a tala-bun*
 this here want-1SG
 ‘I choose that one.’

3 Verbs

In this section, I describe agreement marking (§3.1), tense and aspect marking (§3.2), mood (§3.3), and negation (§3.4) on verbs. In §3.5, I also briefly summarize the uses of the auxiliary verbs we have found so far, and in §3.6 I discuss verbal derivational morphology.

3.1 Agreement

Verbs are marked for agreement with the person and number of the subject. The form of the agreement marking depends on the tense and aspect of the verb. For example, Table 2 lists the person-number agreement suffixes used for present continuative verbs and present tense copular constructions (see Progress Report 2 for more on the present tense copula). See the paradigm for the verb “to bathe” in the present continuative (§3.2) for an illustration of the agreement affixes. A second, distinct set of agreement affixes, used for most other tense-aspect combinations, is introduced in Table 3.

Person	Singular	Plural
1	-BIn	-BIt
2	-GIn	-GIt
3	∅ or -r	-LAr

Table 2: Underlying representations of Sakha person-number agreement suffixes used for present-tense copular constructions and the present continuative. Capital letters denote archiphonemes.

Person	Singular	Plural
1	-Im	-BIt
2	-In	-GIIt
3	-(t)E	-LErE

Table 3: Underlying representations of Sakha person-number agreement suffixes used for most tenses/aspects. Capital letters denote archiphonemes. The forms of these suffixes are identical to the person-number agreement markers used to mark nominative case possessives for agreement with the possessor.

3.2 Tense and aspect marking

Sakha distinguishes between past, present, and future tenses and various aspects within each tense. In this section, I first describe how the combinations of the continuative (§3.2.1), habitual (§3.2.2), inceptive (§3.2.3), iterative (§3.2.4), and perfect (§3.2.5) aspects with the present tense are expressed. Then, I describe the past perfective (§3.2.6) and past continuative (§3.2.7). Finally, I describe the simple future (§3.2.8), near future (§3.2.9), and future continuative (§3.2.10).

3.2.1 Present tense, continuative aspect

The present continuative is used to describe situations that are currently developing over time (Payne 1997: 240). The present continuative is expressed by affixing the person-number agreement markers listed in Table 2 to the verb stem. The following set of examples gives the paradigm for the verb “bathe” in the present continuative.

- (11) *min suna-bun*
 1SG.NOM bathe-1SG
 ‘I am bathing.’
- (12) *en suna-bun*
 2SG.NOM bathe-2SG
 ‘You are bathing.’
- (13) *kini suna-r*
 3:SG:NOM bathe-3SG
 ‘He/she is bathing.’
- (14) *bihigi suna-but*
 1PL.NOM bathe-1PL
 ‘We are bathing.’
- (15) *ehigi suna-but*
 2PL.NOM bathe-2PL
 ‘You are bathing.’
- (16) *kini-ler suna-lar*
 3-PL:NOM bathe-3PL
 ‘They are bathing.’

3.2.2 Present tense, habitual aspect

Present tense verbs in the habitual aspect take the same agreement marking as those in the continuative aspect. Thus, habitual aspect is signaled through the addition of adverbial or adpositional phrases, such as “every day” in the following example.

- (17) *min kyn aju syrε-bin*
 1SG.NOM sun every run-1SG
 ‘I run every day.’

3.2.3 Present tense, inceptive aspect

The combination of present tense and inceptive aspect is expressed through affixation of *-En* to the main verb stem, which is accompanied by an auxiliary verb with stem *εhe-*. The auxiliary agrees in person and number with the subject. See below for an example.

- (18) *min ynkyλ-εn εhe-bin*
 1SG dance-INCEP AUX-1SG
 ‘I am starting to dance.’

Based on the above example, many sentences which we elicited by asking for translations of English sentences in the present tense and continuative aspect may actually be in the inceptive aspect. For instance, when asked to translate “I am running right now,” Platon gave the following sentence.

- (19) *min syr-εn εhe-bin*
 1SG run-INCEP AUX-1SG
 ‘I am starting to run.’

3.2.4 Present tense, iterative aspect

Iterative aspect is expressed through reduplication of the main verb, as in the following example, where an auxiliary *εhe-* and the verb “go” are also used. (See 3.2.9 for another example of the use of “go” in tense/aspect marking.)

- (20) *buuava buuava bar-an εhe-bin*
 throw throw go-INCEP AUX-1SG
 ‘I am throwing (repeatedly).’

3.2.5 Present tense, perfect aspect

The combination of present tense and perfect aspect is expressed using the auxiliary *sulq̄u-*, marked for past tense with *-BIt* and for person-number agreement with the subject. (The main verb does not take any agreement or TAM marking.) The agreement markers are listed in Table 3. The markers have the same forms as those used to mark nominative case possessives for the person and number of the possessor (see Progress Report 2).

The next set of examples illustrates the present perfect for all persons in the singular.

- (21) *min χaja-βα ταχsa sulq̄u-but-um*
 1SG.NOM mountain-DAT climb AUX-PST-1SG
 ‘I have climbed a mountain before.’
- (22) *εn χaja-βα urut ταχsa sulq̄u-but-um*
 2SG.NOM mountain-DAT before climb AUX-PST-2SG
 ‘You have climbed a mountain before.’
- (23) *kini χaja-βα urut ταχsa sulq̄u-but-a*
 3:SG:NOM mountain-DAT before climb AUX-PST-3SG
 ‘He has climbed a mountain before.’

3.2.6 Past tense, perfective aspect

The past perfective is used to describe past events without regard to their internal structure, i.e. (as Payne says) “in [their] entirety” (1997: 239). The past perfective is formed by first affixing the past tense affix *-BIt* to the verb stem, then affixing a person-number agreement marker (see Table 3).

The next set of examples illustrates the past perfective in all persons and numbers with the verb “melt.”

(24) *min muʁ-u u:lar-buut-um*
 1SG.NOM ice-ACC.DEF melt-PST-1SG
 ‘I melted the ice.’

(25) *en muʁ-u u:lar-buut-urn*
 2SG.NOM ice-ACC.DEF melt-PST-2SG
 ‘You melted the ice.’

(26) *kini muʁ-u u:lar-buut-a*
 1:SG:NOM ice-ACC.DEF melt-PST-3SG
 ‘He/she melted the ice.’

(27) *bihigi muʁ-u u:lar-buut-puut*
 1PL.NOM ice-ACC.DEF melt-PST-1PL
 ‘We melted the ice.’

(28) *ehigi muʁ-u u:lar-buut-kuut*
 2PL.NOM ice-ACC.DEF melt-PST-2PL
 ‘You melted the ice.’

(29) *kini-ler muʁ-u u:lar-buut-tara*
 3-PL:NOM ice-ACC.DEF melt-PST-3PL
 ‘They melted the ice.’

For some verbs (but not others), it appears that the final vowel of the verb stem is deleted before affixing the past tense marker. From the following example, where “melt” appears in the present continuative, we can see that the verb stem for “melt” is *u:lara-*.

(30) *bihigi muʁ-∅ u:lara-buut*
 1PL.NOM ice-ACC.INDF melt-1PL
 ‘We are melting the ice.’

Yet in the previous set of examples, the stem appears as *u:lar-*, without the final *a*. It is unclear what rules govern the deletion of the final vowel of the verb stem.

3.2.7 Past tense, continuative aspect

The past continuative (or progressive) is used to describe past events as unfolding or progressing over time. The past continuative is formed by affixing *-t:ʔ:* to the verb stem, followed by the past affix *-BIt* and a person-number agreement marker. As illustrated by the following set of examples, some of the person-number agreement markers used in the past continuative come from the paradigm in Table 3. However, in (32), the agreement marker *-kun* instead comes from the paradigm in Table 2. Also note that in (33), the person-number agreement marker is deleted due to hiatus resolution, induced by the vowel-initial question particle.

(31) *min ta:h-ur buuraʁa-t:a-buut-um*
 1SG.NOM rock-ACC.DEF throw-PROG-PST-1SG
 ‘I was throwing a rock.’

- (32) *karɣan ta:h-u buɾaβa-ta:-but-kun-aj*
 when rock-ACC.DEF throw-PROG-PST-2SG-Q
 ‘When were you throwing a rock?’
- (33) *kim ta:h-ɯnan buɾaβa-ta:-but-aj*
 when rock-INS throw-PROG-PST-Q
 ‘Who was throwing a rock?’

We have not yet elicited past continuative verbs in the plural.

3.2.8 Simple future

The Sakha simple future does not appear to be strongly marked for any particular aspect. Verbs in the simple future take the future marker *-IEχ*. From the partial paradigm for the verb “be cold, freeze” below, it appears that verbs in the simple future take the agreement markers from Table 3. The affix *-IEχ* is also used in future stative copular clauses (see 10.3) and near future clauses (see 3.2.9).

In the following examples, *-IEχ* is contracted to *-IE*.

- (34) *min sarsun tɔŋ-u-m*
 1SG.NOM tomorrow feel.cold-FUT-1SG
 ‘I will freeze tomorrow.’
- (35) *en sarsun tɔŋ-u-n*
 2SG.NOM tomorrow feel.cold-FUT-2SG
 ‘You will freeze tomorrow.’
- (36) *kini tɔŋ-u*
 3:SG:NOM feel.cold-FUT
 ‘He/she will freeze.’

3.2.9 Near future

Like English, Sakha can express that an event will happen in the near future using the verb “go,” as in the paradigm below. In (37) - (39), the future marker is contracted, but in the remaining examples, the full affix is identifiable from the surface representation of the verb.

- (37) *min ahuj bar-ɯa-m*
 1SG.NOM eat go-FUT-1SG
 ‘I am going to go eat.’
- (38) *en ahuj bar-ɯa-n*
 2SG.NOM eat go-FUT-2SG
 ‘You are going to go eat.’
- (39) *kini ahuj bar-ɯa*
 3:SG:NOM eat go-FUT
 ‘He/she is going to go eat.’
- (40) *bihigi ahuj bar-ɯaχ-puut*
 1PL.NOM eat go-FUT-1PL
 ‘We are going to go eat.’
- (41) *ehigi ahuj bar-ɯaβ-ut*
 2PL.NOM eat go-FUT-2PL
 ‘You are going to go eat.’
- (42) *kiniler ahuj bar-ɯaχ-tara*
 3:PL:NOM eat go-FUT-3PL
 ‘They are going to go eat.’

3.2.10 Future tense, continuative aspect

Future tense and continuative aspect are expressed with the future tense of the auxiliary *sulǵur-*, as in the following example.

- (43) *min sy:re sulǵ-uaB-um*
1SG.NOM run AUX-FUT-1SG
'I will be running.'

The future continuative can also be expressed with the auxiliary verb *buǵl-* ("happen"), as illustrated in the next example. Note that *bar-* ("go," homophonous with the verb for "exist") seems to be used to express "visit" in this sentence:

- (44) *ehi: apu:re-r-ga kini miEBE bar buǵl-uaB-a*
next_year april-DAT 3:SG:NOM 1SG:DAT go happen-FUT-3SG
'He will be visiting me in April next year.'

3.3 Mood and modality

In this section, I describe how the imperative mood (§3.3.1), and strong necessity deontic (§3.3.2), weak necessity deontic (§3.3.3), possibility deontic (§3.3.4), and hortative (§3.3.5) modalities are expressed.

3.3.1 Imperatives

A positive imperative consists of the verb stem, plus a marking for the number of the addressee. In particular, when addressing multiple people, the suffix *-In* is used.

The next pair of examples illustrates a positive imperative in the singular and plural forms, respectively.

- (45) (a) *u:ta is*
water-PRTV drink.IMP:S
'Drink some water!'
(b) *u:ta ih-in*
water-PRTV drink.IMP-PL
'Drink some water!'

A negative imperative is formed by suffixing *-ime* to the verb stem in the singular and *-imen* in the plural, as below.

- (46) (a) *u:nu ih-ime*
water-ACC.DEF drink.IMP-S:NEG
'Don't drink the water!'
(b) *u:nu ih-imen*
water-ACC.DEF drink.IMP-PL:NEG
'Don't drink the water!'

3.3.2 Strong necessity deontic ("must")

There are at least two ways to express the equivalent of the English modal auxiliary "must." The first of these is to affix *-tErχ* to the verb stem, as below.

- (47) *en untu-gun ke:teχ-terχ-Bin*
2SG.NOM boot-2SG.POSS wear-DEO-2SG
'You must wear boots.'

The second way to express the strong necessity deontic is with an auxiliary *na:da*, as in the following example. The main verb also takes what may be a modality-marking affix *-Ik*.

- (48) *min syr-ɣk-pɣn na:da*
 1SG.NOM run-DEO-1SG AUX
 ‘I need to run.’

3.3.3 Weak necessity deontic (“should”)

The English modal auxiliary “should” may also be expressed using the modal auxiliary *na:da* (used for the strong necessity deontic as discussed in §3.3.2), as shown below.

- (49) *kini sy:ryn na:da*
 3:SG:NOM run AUX
 ‘She/he should run.’

3.3.4 Possibility deontic (“can”)

The auxiliary “can” may also be expressed using the modal auxiliary *χrynsɛt*, as below.

- (50) *ɛn hɔn-ωχ χrynsɛt ɛβɛtɛr ɕiɛ-βɛ bar-ωαχ χrynsɛt*
 2SG.NOM stay_overnight-FUT can or home-DAT go-FUT can
 ‘You can stay overnight or you can go home.’

3.3.5 Hortative

The hortative modality encourages an action (Palmer 1979; Palmer 2001). The hortative modality is expressed by affixing *-kβE* to the verb stem.

- (51) *duɔla-ŋa kæmæləhæ-kβæ*
 Duolan-DAT help-HORT
 ‘Let’s help Duolan.’

3.4 Negation

A clause can be negated by affixing negative marking to the main verb or by addition of the word *suωχ* (“not, no”). In the example below, the negative marker *-βEtEχ* is affixed to the verb. Note that $[\chi]$ is voiced in this example, which Krueger claims occurs whenever $[\chi]$ is followed by a bound morpheme (1962). However, I observe that in Platon’s speech, voicing of $[\chi]$ only occurs when this segment is followed by a *vowel-initial* bound morpheme.

- (52) *kini ɕakuskaj-ga bar-bataβ-a*
 3SG Yakutsk-DAT go-NEG-3SG
 ‘He has not gone to Yakutsk.’

In the next example, a past tense copular construction with an adjectival predicate is negated by the addition of *suωχ* before the verb.

- (53) *kinilɛr ɕɔɔχ suωχ ɛti-lɛr*
 3:PL:NOM happy NEG COP.PST-3PL
 ‘They were not happy.’

3.5 Auxiliaries

In Table 4, I summarize the uses of the auxiliaries we have observed so far. Some uses have already been illustrated by examples in the preceding sections. For the use of *sulɕur-* in present perfect and future continuative clauses, see §3.2.5 and §3.2.10, respectively. For the use of *ɛhɛ-* in present iterative and inceptive clauses, see §3.2.4 and §3.2.3. The remaining constructions listed in 4 are illustrated by the next set of examples or discussed in §12.

The first example demonstrates that *sulɕur-* can play a copula-like role, linking the subject with (in this case) a locational predicate.

- (54) *min amɛ:rika-βa sʉlɕu-bʉn*
 1SG.NOM America-DAT AUX-1SG
 ‘I am in America.’

Auxiliary (Stem)	Constructions
sʉlɕu-	Copular clauses with locational predicates Present perfect clauses Future continuative clauses
ɛhɛ-	Present iterative clauses Present inceptive clauses
buɔl-	Subordinate clauses expressing causation (“because”) Some future tense constructions Some past tense constructions

Table 4: Sakha auxiliary verbs and their uses in various constructions.

On its own, the verb *buɔl-* means “to happen,” as in the next example.

- (55) *tuɔɕ buɔl-but-aj*
 what happen-PST-Q
 ‘What happened?’

The use of *buɔl-* in future tense constructions is discussed in §3.2.10, while its use in subordinate clauses is left open for future investigation (§12). Next is an example of *buɔl-* in a past tense construction. The discourse context for the following question is that the addressees are no longer students.

- (56) *ɛhigi ʉstʉɕɔn buɔla sʉlɕa-bʉk-kʉt duɔ*
 2PL:NOM student happen AUX-PST-2PL Q
 ‘Were you students? (Did it happen that you were students in the past?)’

3.6 Verbal derivational morphology

As described in Progress Report 2, the present tense copula can be viewed as a derivational operation that forms a verb from the predicate by affixing verbal inflectional morphology to the predicate. In §10.2, I argue that the same operation applies in the past tense.

4 Word order in declaratives

In this section, I describe word order in declaratives featuring intransitives (§4.1), monotransitives (§4.2), ditransitives (§4.3), and verbs of motion (§4.4).

4.1 Word order in declaratives with intransitive verbs

In a declarative featuring an intransitive verb, the subject precedes the verb, as in the following example.

- (57) *min ynkyly-bʉn*
 1SG.NOM dance-1SG
 ‘I am dancing.’

4.2 Word order in declaratives with monotransitive verbs

The word order in declaratives with monotransitive verbs is SOV, as illustrated by the following example.

- (58) *ɛn buɔtaɕ-kʉn ɕɔɕʉna-βʉn*
 2SG.NOM beard-2SG.ACC shave-2SG
 ‘You shave your beard.’

4.3 Word order in declaratives with ditransitive verbs

Word order in declaratives with ditransitive verbs is flexible. In the next two examples, the subject appears at the beginning of the sentence, followed by the indirect object/beneficiary/recipient, the direct object, and the verb, in that order.

- (59) *min* *εjiβε* *kinige* *biε-bin*
1SG.NOM 2SG:DAT book give-1SG
'I give you a book.'

- (60) *min* *εjiβε* *as* *belemnε:tim*
1SG.NOM 2SG:DAT food prepared
'I prepared food for you.'

However, Platon comments that in the next example, the positions of the non-subject arguments of the verb ("meat" and "dog") can be swapped.

- (61) *kini* *wt-tan* *εt-i* *bulǰu-r*
3:SG:NOM dog-ABL meat-ACC.DEF take-3SG
'He is taking the meat from the dog.'

4.4 Word order with verbs of motion

In declaratives with verbs of motion, the subject appears first, followed by the point of departure, the destination, and the verb, in that order. The following example illustrates this ordering, and also demonstrates that an adverbial phrase may be positioned after the subject.

- (62) *min* *asput* *nediele-βε* *nujark-tan* *ǰakuskaj-ga* *kεl-bit-im*
1SG.NOM last week-DAT New_York-ABL Yakutsk-DAT come-PST-1SG
'I came to Yakutsk from New York last week.'

5 Adverbs and adverbial phrases

In this section, I discuss general characteristics of adverbs (§5.1), location adverbs (§5.2), time adverbs (§5.3), and manner adverbs and their derivation (§5.4).

5.1 Characteristics of adverbs

Adverbs are characterized by their ability to appear in many different locations in a clause (Payne 1997: 69). This is one of the criteria which I have used to identify the adverbs in the following sections. Other criteria include lack of nominal, adjectival, adpositional, or verbal inflectional morphology.

5.2 Location adverbs

The only location adverb which I have identified from our data is *taǰarǰa*, meaning "outside." From the following example, it appears that an adverbial locational predicate may be juxtaposed with the subject to form a grammatical sentence, without the addition of any copular morphology (unlike the adpositional locational predicates introduced in my previous report).

- (63) *min* *taǰarǰa*
1SG.NOM outside
'I am outside.'

Sakha	English	Notes on usage (if applicable)
бeбeнe	yesterday	When reduplicated, means “often”
bygyn	today	
sarsun	tomorrow	
elde	early	
χojut	late	
sotobɔ	soon	
ehi:	next year	

Table 5: Examples of Sakha temporal adverbs.

5.3 Time adverbs

Table 5 gives some examples of temporal adverbs. We have positive evidence that the position of some of these adverbs in a clause is flexible. For example, in the following sentence, Platon comments that *бeбeнe* may be positioned before or after the subject *en*.

- (64) *бeбeнe en et siji-bit-in*
yesterday 2SG.NOM meat eat-PST-2SG
‘Yesterday you ate meat.’

The next set of examples illustrates the usage of the remaining adverbs listed in Table 5. From these examples, it appears that adverbs may be restricted to positions in the sentence before the verb.

- (65) *min bygyn ɕie-ber ɔskuɔla-but:an χojut kel-bit-im*
1SG.NOM today house-1SG.DAT.POSS school-1SG.ABL.POSS late come-PST-1SG
‘I came home from my school late today.’

- (66) *sarsun min et siji-β-im*
tomorrow 1SG.NOM meat eat-FUT-1SG
‘Tomorrow I will eat meat.’

- (67) *min elde tɔrd-um*
1SG.NOM early wake_up-1SG
‘I wake up early.’

- (68) *min ejibe nujɔrk-ka sotɔɔ sotɔɔ ehi: tije-β-im*
1SG.NOM 2SG:DAT New_York-DAT soon soon next_year visit-FUT-1SG
‘I will visit you in New York often next year.’

5.4 Manner adverbs and adverbial derivational morphology

Manner adverbs can be formed from adjectives by adding the suffix *-Tlk*. For example, the adverb “happily” is formed from the adjective “happy” in the following example.

- (69) *kini-ler-∅ ɕɔlx-tuk ynkyly-ler*
3-PL-NOM happy-ADV dance-3PL
‘They dance happily.’

6 Coordination

In this section, I describe the coordinating conjunctions *ωνα* (§6.1) and *εβετερ* (§6.2), which correspond to the English “and” and “or,” respectively.

Sakha does not seem to have the equivalent of the English conjunction “but.” At the very least, the most natural translations of English sentences featuring “but” seem to employ other constructions. For example, when asked to translate “Today the water is warm, but yesterday it was cold,” Platon does not use any conjunctions:

- (70) *byggyn u: stulas beβehe tumuunuyj et-ε*
today water warm yesterday cold COP.PST-3SG
‘Today the water is warm; yesterday it was cold.’

6.1 *ωνα*

The conjunction *ωνα*, which can be translated as “and,” can join two verb phrases, as in (71); two noun phrases, as in (72); or two numerals, as in (73).

- (71) *kini kinige a:βa-r ωνα sɔɾək surɔjɑ-r*
3:SG:NOM book read-3SG and letter write-3SG
‘She reads books and writes letters.’
- (72) *min ωνα mafa tah-ɯ bɯɾɑβɑ-t:ɯj-but*
1SG.NOM and Masha rock-ACC.DEF throw-PROG-1PL
‘Masha and I are throwing rocks.’
- (73) *ghys ωνα syhys*
third and one_hundredth
‘third and one hundredth’

6.2 *εβετερ*

The conjunction *εβετερ*, which can be translated as “or,” can join two numerals, as in (74), or two verb phrases, as in (75). Based on the use of *ωνα*, *εβετερ* can likely also join noun phrases (although we have not elicited any examples of this yet).

- (74) *set:ε εβετερ aβɯs*
seven or eight
‘seven or eight’
- (75) *εn hɔn-ɯχ χɾynset εβετερ ɕiε-βε bar-ɯɑχ χɾynset*
2SG.NOM stay_overnight-FUT can or home-DAT go-FUT can
‘You can stay overnight or you can go home.’

7 Subordination

In this section, I give some examples of embedded clauses (§7.1), indirect speech (§7.2), and relative clauses (§7.3).

7.1 Embedded clauses

In some cases, an embedded clause has the same realization as a non-embedded clause. In the example below, the subordinate clause “you are a dancer” (*ynkyhytkyn*) has the same form as it would have if it were not embedded (see Progress Report 2 for an explanation of the construction of present tense copular clauses with nominal predicates).

- (76) *ynkyhyt-kyn bil-bεtεB-im*
 dancer-2SG know-NEG-1SG
 ‘I didn’t know you were dancer.’

7.2 Indirect speech

An example of indirect speech is shown below. The affix *-byn* on the verb “dance” is identical to the expected form of the first person singular agreement marker for “I dance,” yet that interpretation of the morpheme would not fit with the English sentence which we asked Platon to translate here. See §12 for further discussion.

- (77) *kini ynkyly-byn bijε-bit-ε*
 3:SG:NOM dance-? say-PST-2SG
 ‘He said that he dances.’

7.3 Relative clauses

An example of a relative clause is given below. Whereas the default word order for transitive verbs like “sing” is SOV (§4), here the order is relative clause, object, subject, then verb. Also noteworthy is that the verb of the relative clause lacks the expected agreement marking *-ε* for third person singular.

- (78) *iε-te yæεχ-pit urwa-tun kini ulu-r*
 mother-3SG.NOM.POSS teach-PST song-3SG.ACC.POSS 3:SG:NOM sing-3SG
 ‘He is singing a song that his mother taught him.’

8 Evidentiality

Sakha does not grammaticalize evidentiality. When eliciting the following example, we asked Platon to suppose that he had just heard from someone else that Masha had fallen down, but had not seen the event himself. However, given this discourse context, Platon still produced the same past tense marking and agreement marking as we have seen on verbs elsewhere. (Note that the gloss of *ɔχtɔn* as “down” is purely a conjecture. However, I am certain of the gloss for the verb, as we have elicited the verb “fall” in other sentences.)

- (79) *ma:fa ɔχtɔn ty:s-pyt-ε*
 Masha down fall-PST-3SG
 ‘Masha fell down.’

9 Deixis

In this section, I discuss temporal (§9.1) and spatial (§9.2) deixis.

9.1 Temporal deixis

The temporal deictic terms we have elicited so far are covered in §5.3 on time adverbs (e.g. “today,” “tomorrow,” “soon”). We have not elicited the equivalent of English “then.”

9.2 Spatial deixis

The Sakha equivalents of the English spatial deictic terms “here” and “there” are *man:a* and *ɔn:ɔ*, respectively, illustrated in the following pair of examples.

- (80) (a) *man:a ɔt suɔχ*
 here grass NEG
 ‘There isn’t any grass here.’

- (b) *ɔnɔ ɔt suɔχ*
 here grass NEG
 ‘There isn’t any grass there.’

10 Copular clauses

In my previous progress report, I described the morphosyntax of present tense copular clauses. In this section, I describe copular clauses in the past and future tenses with nominal, adjectival, and locational predicates. (Pronominal predicates and superlative/comparative constructions were fully covered in the last report, and so will not be covered here.) In the past tense, copular clauses can be constructed with a copular verb (§10.1) or derivational operation (§10.2). In the future tense, the auxiliary *buɔl-* functions much like a copular verb (§10.3).

10.1 Past tense copular verb *ɛti-*

The stem of the past tense copular verb is *ɛti-*. Table 6 gives the agreement markers for this verb. The agreement markers are almost identical to those used to mark nominal nominative case possessors for agreement with their possessors. The only exception is the form of the third person plural agreement marker, which is *-LEr* instead of *-LErE* (see Table 3 for comparison).

ɛti- seems to express perfective aspect, based on Platon comments on the verb’s usage. For example, Platon says that (81) would be appropriate if one was narrating a story, which fits with Payne’s description of perfective aspect as the aspect used to narrate the main events of a story. Platon also commented that (81) would be appropriate if the subject were a student for a concrete period of time, which fits the definition of the perfective aspect as viewing a situation “in its entirety” (1997: 239).

Person	Singular	Plural
1	-Im	-BIt
2	-In	-GIIt
3	-(t)E	-LEr

Table 6: Underlying representations of Sakha person-number agreement suffixes for the past tense copular construction. Capital letters denote archiphonemes.

In this section, I illustrate the use of *ɛti-* with nominal (§10.1.1), adjectival (§10.1.2), and locational (§10.1.3) predicates.

10.1.1 With nominal predicates

We have only elicited *ɛti-* with nominal predicates in the third person singular. One such example follows.

- (81) *kini ustɔχɔn ɛt-ɛ*
 3:SG:NOM student COP-3SG
 ‘He/she was a student.’

10.1.2 With adjectival predicates

The following set of examples illustrates *ɛti-* with adjectival predicates and singular and plural subjects in all persons.

- (82) *min yfʻygej ɛt-im*
 1SG.NOM good COP-1SG
 ‘I was good.’

- (83) *en yffygεj εt-in*
 2SG.NOM good COP-2SG
 ‘You were good.’
- (84) *kini yffygεj εt-ε*
 3:SG:NOM good COP-3SG
 ‘He/she was good.’
- (85) *bihigi yffygεj εti-bit*
 1PL.NOM good COP-1PL
 ‘We were good.’
- (86) *εhigi yffygεj εti-git*
 2PL.NOM good COP-2PL
 ‘You were good.’
- (87) *kinilər yffygεj εti-lεr*
 3:PL:NOM good COP-3PL
 ‘They were good.’

10.1.3 With locational predicates

The next example demonstrates that *εti-* can be used with a dative case locational predicate.

- (88) *min ε̣iε-bεr εt-im*
 1SG.NOM home-1SG.DAT.POSS COP-1SG
 ‘I was at home.’

10.2 Past tense copular construction with verbal derivational morphology

In Progress Report 2, I described how in the present tense, the copula can be viewed as a derivational operation that forms a verb from the predicate via affixation of verbal inflectional morphemes. A similar operation is also possible in the past tense. In the following copular clauses, the nominal predicate *ustuḫɔn* (“student”) takes verbal tense, aspect, and agreement marking.

- (89) *min usuḫɔ-n:a:-bwt-um*
 1SG.NOM student-PROG-PST-1SG
 ‘I was a student.’
- (90) *kini usuḫɔ-n:a:-bwt-a*
 3:SG:NOM student-PROG-PST-3SG
 ‘He/she was a student.’
- (91) *kini-lεr usuḫɔ-n:a:-bwt-tara*
 3-PL:NOM student-PROG-PST-3PL
 ‘They were students.’

10.3 Future tense with *buɔl-*

The auxiliary *buɔl-* (introduced in §3.5) can be used in a copula-like manner in the future tense. We have collected the following partial paradigm for *buɔl-* in the future tense with adjectival predicates.

- (92) *min sarsun yffygεj buɔl-uɔ-m*
 1SG.NOM tomorrow good happen-FUT-1SG
 ‘I will be good tomorrow.’

- (93) *en sarsuun ytfygej buol-uɔ-n*
 2SG.NOM tomorrow good happen-FUT-2SG
 ‘You will be good tomorrow.’
- (94) *bihigi sarsuun ytfygej buol-uɔχ-put*
 1PL.NOM tomorrow good happen-FUT-1PL
 ‘We will be good tomorrow.’

11 Possession

In Progress Report 2, I introduced the system of possessive marking on nominals (§11.1), as well as the dative possessor (§11.2) and genitive possessor (§11.3) constructions. These constructions are briefly summarized here as well. I also introduce two new possessive constructions in §11.4 and §11.5, and argue that Sakha does not mark the distinction between alienable and inalienable possession (§11.6).

11.1 Possessive marking on nominals

A possessum may be marked with a suffix indicating the person and number of the possessor and the case of the possessum. For instance, below, “beard” is marked with the first person singular accusative possessive suffix. See Progress Report 2 for the full paradigm of nominal possession-marking suffixes.

- (95) *min butaχ-puun χɔruna-buun*
 1SG.NOM beard-1SG.POSS.ACC shave-1SG.PRS
 ‘I am shaving my beard.’

11.2 Dative possessor

The possessor appears in the dative case, as in the following example, while the possessum appears in the nominative case, as the subject of the verb “exist.”

- (96) *miɛɛ bat:αχ bar*
 1SG.DAT hair exists
 ‘I have hair.’

11.3 Genitive possessor

As seen in the next example, a nominal possessee may be juxtaposed with a genitive pronominal predicate (the possessor) to express possession.

- (97) *kinige miɛnɛ*
 book 1SG.GEN
 ‘The book is mine.’

11.4 Possessive construction with *kiɛnɛ*

Possession can be expressed by juxtaposing the nominative case possessee with a postpositional phrase featuring *kiɛnɛ* as the head and the possessor as its complement, as seen in the following example.

- (98) *kinige saxaja kiɛnɛ*
 book Saxaja POSTP
 ‘The book is Saxaja’s.’

11.5 Possessive construction with *-LAχ*

Possession can be expressed by juxtaposing a nominative case possessor with the possessee, which is affixed with *-LAχ* and person-number agreement marking. See below for an example.

- (99) *min kinige-leχ-pin*
1SG.NOM book-POSS-1SG
'I have a book.'

11.6 Lack of alienable/inalienable distinction

Payne states that languages which distinguish between alienably and inalienably possessed entities "always include kinship terms and body parts within the class of inalienably possessed items." Furthermore, alienable possession tends to be expressed using "more morphosyntactic material" than inalienable possession (1997: 105). However, in Sakha, the same possessive constructions can be used for kinship terms and body parts as for any other noun (barring the genitive possessor construction, which is limited to pronouns, since nominals do not have a genitive case). Furthermore, kinship terms and body parts may appear without possessive marking. This leads me to conclude that Sakha does not formally distinguish between alienable and inalienable possession.

12 Future work

In this section, I discuss a few of the many unresolved aspects of Sakha verbal morphology and clausal syntax which are worthy of future investigation.

As mentioned in §3.2.6, it is difficult to account for what appear to be alternations in the stem of the verb when comparing past, present, and future tense forms. For example, in (100), the stem of the verb "see" appears to be *kæræ-* in the present tense and *kær-* in the future.

- (100) (a) *ehigi beje-bitin kæræ-bæt*
2PL:NOM REFL-2PL.ACC.POSS see-2PL
'You see yourselves.'
- (b) *ehε-ni kær-byt-ym*
bear-ACC.DEF see-PST-1SG
'I saw a bear.'

One possible analysis (which I have adopted) is that a stem-final vowel may delete when forming the past tense. Another possible analysis is that the low vowel *-E-* is the present tense morpheme, which is why it only appears in the present tense sentence above. However, the latter proposal does not account for the presence of high vowels that directly precede the agreement marking in present tense forms such as *ynkyly-byn* ("I dance").

We also have collected relatively little data on subordination. Eliciting more examples of indirect and direct speech would allow us to compare their morphosyntax. Eliciting more embedded clauses would allow us to compare relative pronouns with the question words we have collected. We already see some preliminary evidence that some relative pronouns may be identical to their corresponding question words:

- (101) *tugu kær-byt-pyn bile-bin*
what.ACC see-PST-1SG know-1SG
'I know what I saw.'

Another potential area for future work would be to collect more paradigms of verbs that participate in the causative-inchoative alternation. Sakha seems to have similar morphological causatives to Turkish (see Payne 1997, p. 178, and the example below).

- (102) *bihigi* *muḡ-u* *u:lar-dur-but*
1PL.NOM ice-ACC.DEF melt-CAUS-1PL
'We melted the ice.'

Finally, we began collecting subordinate clauses expressing causation, as well as conditionals, but further analysis and elicitation is needed to clarify modality marking in the conditionals and the inflection of *buḡ-* in subordinate clauses.

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