

## ➤ NOTES ON SAKHA'S MODAL PREDICATORS *NAADA* AND *TUSTAAX* FROM A TAIMYR DOLGAN PERSPECTIVE

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This paper addresses the syntax, semantics and history of the modal deontic predictors *naada* and *tustaax* in Sakha and contrasts their use with Sakha's closest linguistic relative Taimyr Dolgan. In this respect, this study is a continuation of Siegl (2019) which, in passing, already reported similarities and dissimilarities in these two closely related Turkic languages of Northern and Northeastern Siberia. A contrastive analysis based on recent translations of the Gospel of Luke (which for the time being is the only longer text available in both languages) confirms that the genealogical proximity of Sakha and Taimyr Dolgan is not reflected in the use of *naada* and *tustaax*. The study concludes with a superficial look at the fate of Russian *nado* in Kolyma and Tundra Yukaghir. Even though the lexeme is obviously of Russian origin, Kolyma Yukaghir but especially Tundra Yukaghir data shows several similarities with Sakha *naada*, which are absent from Russian and therefore imply Sakha influence.

### 1. INTRODUCTION

A number of Siberian languages borrowed the Russian nominal modal predictor *nado* already before the advent of Soviet-Russian education,<sup>1</sup> which resulted in widespread bilingualism and occasionally triggered language shift. Relevant data from Taimyr Dolgan, Sakha (Turkic), Tundra Yukaghir, Kolyma Yukaghir (isolates), Selkup (Samoyedic, Uralic), and Ket (isolate) was presented in passing in Siegl (2019), the main focus of which was a detailed case study of Taimyr Dolgan from both a synchronic and a diachronic perspective.<sup>2</sup> Due to the fact that a number of Dolgan properties apply *prima facie* to its closest genealogical relative Sakha as well, several notes on

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1 See Hansen 2009 for modality in Slavic and the position of *nado*.

2 A terminological note is in order here. Due to the fact that the author has worked on Taimyr Dolgan only (see Siegl 2018; 2020 for background information), references to Dolgan always imply Taimyr Dolgan.

Sakha and a more distant genealogical relative Tuvan (Turkic) were in order.<sup>3</sup> Concerning the contact scenario, Siegl (2019) suggested that an independent borrowing of Russian *nado* in the late nineteenth century could be motivated for both Dolgan and Sakha. Due to structural proximity, Russian *nado* replaced the former Turkic nominal predicator *\*kǎrgäk*, a process which seems to have happened in both languages independently; in most, if not all other contemporary Turkic languages, reflexes of *\*kǎrgäk* are attested; for example, see Tuvan (1e). The borrowing/transfer was unproblematic, because both the Turkic and the Russian constructions share(d) a crucial property in their respective predication frames, namely, the needer in the dative case and the lack of number agreement on the predicator. As for the encoding of the entity needed, one crucial difference is at hand. Whereas the Russian *nado* construction requires the NP in the accusative case (1a), Russian's other deontic predicator, deadjectival *nužen*, is actually closer to the *naada* construction, because in this construction, the entity needed appears in the nominative case. However, in this construction, the deontic predicator must agree with the entity needed (1b).<sup>4</sup> Whereas the replacement of *\*kǎrgäk* with *naada* followed one of Uriel Weinreich's central observations, namely, that structural proximity favours borrowing of grammatical material (Weinreich 1977: 63), this was not an instance of constructional borrowing but an instance of partial replication:<sup>5</sup>

(1)

a. Russian

*mne nado lošku*  
 1SG.DAT necessary spoon.FEM.ACC.SG  
 'I need a spoon.'

b. Russian

*mne nužna loška*  
 1SG.DAT necessary.FEM.SG spoon.FEM.NOM.SG  
 'I need a spoon.'

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3 References concerning the origin of language data are subsumed in the appendix. Glossing follows Siegl 2019; for reasons of practicality, Sakha data is glossed following the author's Dolgan conventions. This does not imply that the glossed elements would be functionally identical. The major difference of the author's approach in contrast to Turkological approaches concerns the analysis of person marking in present tense context (see also Siegl 2020: 236–237). Based on synchronic considerations, the author considers the present tense verbal forms marked with an independent series of tensed agreement markers which results in a marked third person singular form: *bar-abin* <go-PRS.1SG> 'I go, I am going' vs. *bar-ar* <go-PRS.3SG> '(S)he goes / is going'. In this approach, the only morphologically unmarked verbal form is the imperative's second person singular form *bar!* <go.IMP.2SG> 'Go!'. A result of this approach is that predicative nouns in third person singular context (which are morphologically unmarked as well) are considered marked for nominal predication; see, e.g., *min eder-bin* <1SG young-PRD.1SG> 'I am young' vs. *kini eder* <3SG young-PRD.3SG> '(S)he is young'. The author wants to thank Aldana Vlasáková and Jonáš Vlasák (Charles University, Prague) for their help and comments on Sakha and an earlier version of this article. The usual disclaimer – blame the linguist, not the native speaker – certainly applies.

4 It requires mentioning in passing that *nado* can govern verbs in Russian, but not *nužen*. This morphosyntactic restriction is irrelevant for the languages which have borrowed *nado*.

5 The theoretical background concerning partial replication (for which ample cross-linguistic evidence is available; see, e.g., Heine & Kuteva 2005: 219–259 among many others) was discussed in Siegl 2019 and does not require any further argumentation in this study, whose primary concern is comparative fine-tuning.

## c. Sakha

*miexe luoska naada*

1SG.DAT spoon necessary.PRD.3SG

'I need a spoon.' (AV)

## d. Dolgan

*minieke luoska naada*

1SG.DAT spoon necessary.PRD.3SG

'I need a spoon.' (overheard example in the field)

## e. Tuvan

*meŋee karandaš xerek*

1SG.DAT pencil necessary

'I need a pencil.' (VP I 114)

As already mentioned, even though Siegl (2019) focused predominantly on Taimyr Dolgan, several comparative observations concerning Sakha became necessary. Due to restrictions of space, a more thorough comparative approach was called for. Nevertheless, an immediate disclaimer is in order. Although the syntax and semantics of *naada* in Standard Sakha and some of its dialects are a central topic of this investigation (including some stray notes on deontic modality in general), this study will not and cannot focus on Sakha exclusively. This remains the task of specialists on Sakha. Due to the fact that the author could identify a number of meaningful differences between Taimyr Dolgan and Sakha, this study focuses on a comparative perspective from the angle of Taimyr Dolgan.<sup>6</sup> Therefore, only the second section, which covers aspects of the syntax and semantics of Sakha *naada*, will focus on Sakha only; in this context, a note on the competing verbal necessitive mood is required as well. In the third section, the fate of Old Turkic *\*kärğäk* in Sakha will briefly be discussed. In contrast to Dolgan, Sakha has a complex modal particle, which is a reflex of the former modal predicator *\*kärğäk*. In the fourth section, the role of the Verb-PTCP.FUT + *tustaax* construction encoding obligation will be touched upon. This choice is motivated from a comparative perspective, because the *tustaax* construction is certainly more prominent in written Sakha than in Taimyr Dolgan (Siegl 2019). Furthermore, Sakha shows additional grammatical and lexical means for the encoding of deontic modality; so far, these have not been reported for Taimyr Dolgan and similar forms cannot be identified in the currently available data. Although this section has to remain superficial, these observations require mentioning because they are relevant for the fifth section, where the use of *naada* and *tustaax* ~ *tustaak* will be contrasted. Even though the only longer text in both languages currently available is the Gospel of Luke, this text, despite the problematic characteristics of the underlying genre,<sup>7</sup> demonstrates that the use of *naada* and *tustaax* do not necessarily overlap;

6 Given that the state of documentation of Dolgan is still insufficient, this statement should definitely not be considered final. In passing it requires mentioning that this perspective is unusual, because usually Taimyr Dolgan is approached from the perspective of Sakha. Because the author's work focuses on Taimyr Dolgan only, Sakha is approached occasionally and infrequently for the comparative data which resulted in this study.

7 Even though Bible translations accompany a number of cultural and stylistic-linguistic problems (as clearly verbalized already by von der Gabelentz 1901: 106), these are eagerly exploited in typology. As there is unfortunately no other longer text currently available in both languages at this moment, the translations of the Gospel of Luke had to be exploited for this study.

this result is certainly intriguing given that both languages are genealogically very close. In this context, some comparative notes on other Sakha deontic constructions are communicated as well. The sixth section summarizes Sakha and Taimyr Dolgan differences. Simultaneously, Section 6 paves the way for a quick look at a study close to submission, which covers the syntax and semantics of Kolyma Yukaghir *nadoŋo-* and Tundra Yukaghir *naaduo-* ‘to be necessary ~ required’ and Tundra Yukaghir *naade(ŋ)* ‘necessity’. Despite the lexeme’s obvious Russian origin, Sakha influence has to be taken into consideration as well.

## 2. NAADA IN SAKHA

For practical reasons, the synchronic coverage of Sakha *naada* follows the Dolgan discussion of Siegl (2019).<sup>8</sup> Even though distinctive differences are mentioned in brief during coverage of the Sakha data, these will be summarized in Section 2.8.

### 2.1 *naada* as a Russian borrowing

Sakha *naada*, similar to the Dolgan lexeme, is the regular outcome of the expected nativization pattern. The stressed vowel of the Russian original *на́до* /náda/ was perceived as long and the reduced vowel in the second syllable as a low central vowel. As discussed at length in Siegl (2019), *naada* appears for the first time in Pekarskij’s dictionary whose main data was gathered in the late nineteenth century; therefore, it can safely be considered a pre-Soviet borrowing. Similar to Dolgan *naada*, Sakha *naada* is firmly integrated in the language and the lexeme appears in standard lexicographic resources, folklore collections, and Sakha Wikipedia entries, as well as in the recent translation of the Bible.

### 2.2 *naada* and its part-of-speech properties

The nominal properties of Sakha *naada* – and, in fact, its belonging to the parts of speech noun (STBUT VI 427 classifies *naada* as an abstract lexical noun) – is most obvious in the following example where the lexeme appears in the dative case:

(2) Sakha

*itinnik naada-ŋa kim-i de bul-uo-ŋ huoya*  
 so necessity-DAT who-ACC EMPH find-FUT-2SG not.exist.PX3

‘For this kind of need, you won’t find anybody.’ (AV)

This use of *naada* is a characteristic of both Dolgan and Sakha, differing considerably from Russian. In the context of (2), Russian would require a different noun *nužda* ‘need, necessity’. In other contexts, a derivation of *nado* such as *nadobnost’* would be required, but *nado* is impossible in this context (see Siegl 2019 for further details).

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<sup>8</sup> The data for this section was extracted from the 1959 reprint of Pekarskij’s dictionary (SJJ), the Sakha-Russian dictionary (JaRu), the recent illustrative Sakha dictionary (STBUT), two collections of folklore texts (JNS, OPS), and Wikipedia entries in Sakha. Additional examples, some of which are translations of the original Dolgan data published in Siegl 2019, derive from consultations with Aldana Vlasáková in Prague and subsequent correspondence. Because she comes from an area where onsets in *s* change to *h* in spontaneous speech (a feature she preserved in email communications as well), I have decided not to normalize the examples.

### 2.3 *naada* as a nominal predicator vs. *naada* as abstract noun

Apart from its use as abstract lexical noun (2), *naada* can be used as a nominal predicator, as example (1c) has already demonstrated. The same is reflected in STBUT VI (p. 427), where *naada* received two entries. Although the lexicographic decision is certainly correct, *naada* shows a number of syntactic peculiarities which are not mentioned in the individual lemmata of the concise-explanatory dictionary STBUT and therefore require discussion.

#### 2.3.1 Syntactic preliminaries

A fully synchronic coverage of the Sakha nominal predicator *naada* is problematic, because clear indices of ongoing language change are visible in the data compiled for this study. It appears that in the first half of the twentieth century, central properties of the Turkic *\*kärğäk* construction were still preserved. Concerning the dative case-marked needer, the situation in contemporary Sakha is as in prior stages of the language; the dative case cannot encode syntactic arguments and therefore cannot participate in the assigning of number marking to the predicating element. As for the entity needed, which is encoded by the nominative case, number agreement in the present tense varies but is apparently drifting towards agreement:

(3) Sakha

- a. *miexe bihax inirik naada*  
1SG.DAT knife really necessary.PRD.3SG  
'I really need a knife.' (AV)
- b. *toyo kihie-xe ilii-ler-e naada=ni*  
why person-DAT hand-PL-PX3 necessary.PRD.3SG=Q  
'Why does a person need his hands?' (AV)
- c. *miexe doyot-tor naada-lar*  
1SG.DAT friend-DAT necessary-PRD.3PL  
'I need friends.' (AV)

From a structural perspective, the invariant *naada* construction of type (3b)<sup>9</sup> was probably unique, because other nominal predicators such as *baar* 'existence', *suox* 'non-existence', and *ilik-* 'not yet' are marked for number and person (see, e.g., Ubrjatova 2006: 104–106), here exemplified with *baar*:

(4) Sakha

- a. *Ee! Baar-bin baar-bin – die-te*  
EXCL exist-PRD.1SG exist-PRD.1SG say-PSTI.3SG  
'Hey I am alive, I am alive' so she said. (Lit: I exist, I exist) (JNS 270)
- b. *Össö kim-tuox baar=ij?*  
still who-what exist.PRD3SG=Q  
'Still, is there somebody?' (JNS 284)

9 See also footnote 3. The original motivation derived from work on Dolgan where the predicator has been registered, so far, in an invariant predicative third person form only.

In contemporary Sakha, the entity needed favours plural agreement morphology on *naada*, probably introduced due to analogy (note that *d'on* 'people' is inherently plural):

## (5) Sakha

- a. *doɣot-tor naada-lar*  
friend-PL necessary-PRD.3PL  
'Friends are necessary.' (AV)
- b. [...] *onon Babuškiŋ kurduk d'on on-no naada-lar* [...]  
therefore Babuškiŋ like people that-LOC necessary-PL  
'...therefore people like Babuškiŋ are a necessity there...' (Sakha Wikipedia)<sup>10</sup>

However, this innovation has not yet made it to negation where, so far, only the negator receives number marking (compare 6b and 6d). The negated nominal predicator *naada* receives the required dummy possessor as any negated noun (6e):

## (6) Sakha

- a. *miexe doɣot-tor naada-lar*  
1SG.DAT friend-PL necessary-PRD.3PL  
'I need friends.' (AV)
- b. *miexe doɣot-tor naada-ta huox-tar*  
1SG.DAT friend-PL necessary-PX3 not.exist-PRD.3PL  
'I don't need friends.' (AV)
- c. *miexe bħax naada*  
1SG.DAT knife necessary3SG  
'I need a knife.' (AV)
- d. *miexe bħax naada-ta suox*  
1SG.DAT knife necessary-PX3 not.exist-PRD.3SG  
'I don't need a knife.' (AV)
- e. *emeexsin soɣotoɣun xaal-la silgi-ta da*  
old.woman alone remain-PSTI.3SG horse-PX3 EMPH  
*suox inay-a da suox oɣo-to da suox*  
not.exist-PRD.3SG cow-PX3 EMPH not.exist-PRD.3SG child-PX3 EMPH not.exist-PRD.3SG  
'The old woman remained on her own. She has no horse, no cow, no child.' (JNS 180)

In non-present tense contexts, *naada* behaves as any nominal predicate and requires copula support to host agreement morphology:

## (7) Sakha

- a. *xojut naada buol-uo*  
then necessary become-FUT.3SG  
'It will become necessary then.' (AV)

<sup>10</sup> <[https://sah.wikipedia.org/wiki/Бабушкин\\_Иван\\_Васильевич](https://sah.wikipedia.org/wiki/Бабушкин_Иван_Васильевич)>, accessed 27.11.2020.

- b. *ÜKI* *üle-hit-ter-i* *belemn-iir-ge*  
 central.institute.of.labour work-ACT-PL-ACC prepare-PTCP.PRS-DAT  
*3-6 ij naada e-te*  
 3-6 month necessary be-PSTI.3SG  
 ‘The Central Institute of Labour needed 3–6 months for the training of workers.’  
 (Sakha Wikipedia)<sup>11</sup>
- c. *urukku-ta Britanija kolonija-ta e-te*  
 prior-PX3 Britain colony-PX3 be-PSTI.3SG  
*1960 s. tutulug-a suox respublika buol-but-a*  
 1960 year obstacle-PX3 not.exist republic become-PSTII-3SG  
 ‘Earlier (Cyprus) was a British colony, in 1960 it became a republic without obstacles.’  
 (Sakha Wikipedia)<sup>12</sup>

Concerning plural agreement between the entity needed and predicative *naada* + auxiliary in past tenses (future tense forms were not tested separately but likely will not diverge), the collected data shows even more variation. Even though an attempt to explain variation is beyond the scope of this study, a presentation of the three attested patterns is certainly required.<sup>13</sup> In the first constellation (9 hits), the auxiliary hosts both past and number marking, but the nominal predicator *naada* remains unmarked:

(8) Sakha

- a. [...] *učuutal-lar olus naada e-ti-ler*  
 teacher-PL much necessary be-PSTI-3PL  
 ‘...teachers were very much needed.’ (online)<sup>14</sup>
- b. *kömō-γō kel-er suhal suluuspa-lar nahaa naada e-bit-ter*  
 help-DAT come-PTCP.PR surgent service-PL a.lot necessary be-PST.RES-3PL  
 ‘The arriving assistance service men were very much needed.’ (online)<sup>15</sup>

The second constellation shows agreement in number between *naada* and the entity needed, but the auxiliary appears as a third person singular form. This constellation produced 18 hits:

(9) Sakha

- a. [...] *ol ihin kōmōlöhō-ōččü-ler naada-lar e-bit*  
 that for help-ACT-PL necessary-PL be-PST.RES.3SG  
 ‘...for that helpers were needed.’ (Sakha Wikipedia)<sup>16</sup>

11 <[https://sah.wikipedia.org/wiki/Туруоруу\\_\(хампаанньа\)](https://sah.wikipedia.org/wiki/Туруоруу_(хампаанньа))>, accessed 25.8.2019.

12 <<https://sah.wikipedia.org/wiki/Кипр>>, accessed 16.10.2019.

13 The data for the following examples come from a dedicated search in Sakha online media, which produced 30 examples of such forms (several examples reappeared in consecutive search results and were counted only once). Comparable data for Dolgan is currently not attested.

14 <[https://республика-саха-якутия.рф/pdf/yakut/1dalan\\_d\\_ylg\\_am\\_miene.pdf](https://республика-саха-якутия.рф/pdf/yakut/1dalan_d_ylg_am_miene.pdf)>, accessed 17.2.2021.

15 <<https://edersaas.ru/massyuna-2/>>, accessed 17.2.2021.

16 <<https://sah.wikipedia.org/wiki/Рафаэль>>, accessed 17.2.2021.

- b. [...] *onon nuučča-lar-ga toŋ-mot por-tar Keningsberg,*  
 therefore Russian-PL-DAT freeze-PTCP.NEG harbor-PL Kaliningrad  
*Memel' uonna Iliŋŋi Prussija tuhaan-naax teritorija-ta naada-lar e-te*  
 Memel and Eastern Prussia law-SOC territory-PX3 necessary-PL be-PSTI.3SG  
 '...therefore the Russians needed very much the ice-free the harbours Kaliningrad, Memel  
 and Eastern Prussia's legal territory.' (online)<sup>17</sup>

The third constellation with 3 hits shows agreement stacking on all agreeing elements:

(10) Sakha

- a. [...] *araas geroj-dar naada-lar e-ti-ler*  
 various hero-PL necessary-PL be-PSTI-3PL  
 '...various heroes were required.' (online)<sup>18</sup>
- b. [...] *xars-a suox čayılxaj kiraaska-lar naada-lar e-bit-ter*  
 care-PX3 not.exist bright colour-PL necessary-PL be-PST.RES-3PL  
 '...really bright colours were necessary' (online)<sup>19</sup>

### 2.3.2 *naada* and nominal predication

The concise-explanatory dictionary of Sakha STBUT treats the predicative function of *naada* as an independent lexical entry. This means that two lemmata are distinguished, first, *naada* as an abstract lexical noun (11a) and second, *naada* as nominal predicator (11b):

(11) Sakha

- a. *itinnik naada-ŋa kim-i de bul-uo-ŋ huoya*  
 so necessity-DAT who-ACC EMPH find-FUT-2SG not.exist.PX3  
 'For this kind of need, you won't find anybody.' (AV)
- b. *miexe xarandaas naada*  
 1SG.DAT pencil necessary.PRD.3SG  
 'I need a pencil.' (AV)

Although STBUT's interpretation is essentially correct, a syntactic asymmetry needs to be touched upon. When *naada* is used as a lexical noun, its appearance is restricted to object and/or adjunct position. The examples in STBUT contain only such instances. Apart from this function where *naada* fills an argument or an adjunct position, *naada* appears in predicative constructions. Syntactically, *naada* is the subject and allows possessive marking as well (12a). This is, of course, also possible in complex constructions, such as in temporal-conditional clauses formed with converbal forms of copulas (12b), though in such instances *naada* is the syntactic subject of the dependent clause:

17 <<https://e.nlrs.ru/online/view/33793/files/assets/basic-html/page-81.html#>>, accessed 17.2.2021 – originally a printed text from 1970.

18 <<https://forums.ykt.ru/viewtopic.jsp?id=1538973>>, accessed 17.2.2021.

19 <<https://e.nlrs.ru/online/view/25847/files/assets/basic-html/page-59.html>>, accessed 17.2.2021, originally a book from 1960.

## (12) Sakha

- a. *naada-m elbex*  
need-PX1SG much.PRD.3SG

‘I need a lot.’ (Lit. my need is much) (AV)

- b. *ah-ur naada-ŋ baar buol-layına ahaa*  
eat-PTCP.PRS need-PX2SG exist become-TEMP.3SG eat.IMP.2SG

‘If you need to eat, then eat!’ (Lit. If your need of eating exists, eat!) (AV)

Therefore, when *naada* is not a predicating element, it allows possessive person marking as the aforementioned examples demonstrate.<sup>20</sup> The same applies to example (13), where the predicating element is the negative existential (nominal) predicator *suox*:

## (13) Sakha

- on-no bar-ar naada-m suox*  
that-LOC go-PTCP.PRS need-PX1SG not.exist.PRD.3SG

‘I am not obliged to go there.’ (Lit. It is not my necessity going there) (JaRu 249)

This suggests that three morphosyntactic frames are attested. As a lexical noun, *naada* can appear as the subject of non-verbal (copula) clauses and in such instances it allows possessive marking (14a). In (14b), *naada* appears as the complement of a copula clause.<sup>21</sup> Concerning its appearance as a nominal predicator (14c–e), this use is the most frequent. As already briefly mentioned above, this use only recently started to allow number marking:

## (14) Sakha

- a. *naada-m elbex*  
need-PX1SG much.PRD.3SG

‘I need a lot.’ (Lit. My need is much) (AV)

- b. *biir kün sirdıg-ı-n kör-ör naada*  
one day light-PX3-ACC see-PTCP.PRS necessity.PRD.3SG

‘The daylight must be seen.’ (Lit. Seeing the daylight is necessary) (JNS 340)

- c. *miexe bihax inirik naada*  
1SG.DAT knife really necessary.PRD.3SG

‘I really need a knife.’ (AV)

- d. *toyo kihie-xe ilii-ler-e naada=ni*  
why person-DAT hand-PL-PX3 necessary.PRD.3SG=Q

‘Why does a person need his hands?’ (AV)

- e. *doyot-tor naada-lar*  
friend-PL necessary-PRD.3PL

‘Friends are a necessity.’ (AV)

20 Such constructions are not attested in the author’s data on Dolgan, but this gap is probably accidental.

21 Concerning this construction, it is unclear whether agreement in number could be possible.

When used as a nominal predicator, *naada* cannot combine with possessive markers:

(15) Sakha

\**miexe xarandaas naada-m*  
 1SG.DAT pencil need-PX1SG  
 ‘I need a pencil.’ (AV)

Finally, a note on the construction *naada* + verb is in order. When *naada* governs a verb, *naada* and the case-marked participle of the lexical verb form a monoclausal complex predicate with an impersonal reading (see also Section 2.4 below). Therefore, example (14b) above is not an example of this construction:

(16) Sakha

*kinini üör-et-iex-xe naada!*  
 3SG.ACC learn-CAUS-PTCP.FUT-DAT necessary.PRD.3SG  
 ‘He must be taught!’ (AV)

### 2.3.3 The argument structure of predicating *naada*

In instances where *naada* appears as nominal predicator in ‘X needs / requires Y’ constructions, its argument structure is straightforward. The needer, mostly a pronoun or an animate noun, appears in the dative case; the entity/person needed is in the nominative case, followed by the predicator *naada*:

(17) Sakha

- a. *miexe looška naada*  
 1SG.DAT spoon necessary.PRD.3SG  
 ‘I need a spoon.’ (AV)
- b. *kihie-xe ücügej doγot-tor naada-lar*  
 person-DAT good friend-PL necessary.PRD.3PL  
 ‘A human being needs good friends.’ (AV)

Although dative-marked nouns show a number of functions in Sakha (encoding semantic roles such as recipient, goal, benefactor, location), the noun phrase encoding the needer does not have any subject-like properties, such as triggering predicate or predicative agreement. As for the entity needed, which is encoded by the nominative case, agreement in number has become possible.

### 2.4 Predicating verbs with *naada*

When *naada* governs a verb, the dependent verb must be nominalized. Surprisingly, STBUT VI (427) discusses this pattern only in passing as a second lemma of *naada*, qualifying its use as “coming close to a verbal form”. While assembling data from online resources, such forms appeared to be very common in online media. As for its structural properties, two realizations are encountered. Their uniting morphological feature is the requirement that the lexical verb appears as a future tense participle. In the first construction, the participle is followed by

the dative case marker. The resulting predicate triggers an impersonal reading (18a). Valency patterns remain unaltered (18b):

- (18) Sakha
- a. *türgen-nik bar-iax-xa naada!*  
 quick-ADV go-PTCP.FUT-DAT necessary.PRD.3SG  
 ‘One has to go quickly!’ (AV)
- b. *kinini üör-et-iex-xe naada!*  
 3SG.ACC learn-CAUS-PTCP.FUT-DAT necessary.PRD.3SG  
 ‘He must be taught!’ (Lit. One must teach him!) (AV)

When predicative endings are added to the nominalized verb, the impersonal reading is lost and the construction encodes that the actor is obliged to fulfil an action in the future. Additionally, person marking appears on the nominalized verb but not on the predicating clause-final element (19a). However, the predicator *naada* needs to be analysed as predicating as well, a feature which becomes obvious in non-present tense forms (19b). This unusual predication type (formally an instance of double predication) seems to be restricted to this construction in both Sakha (and Dolgan):

- (19) Sakha
- a. *türgen-nik bar-iax-pın naada*  
 quick-ADV go-PTCP.FUT-PRD.1SG necessary.PRD.3SG  
 ‘I am obliged to go quickly.’ (AV)
- b. *čas annaraa öttüger bar-iax-pın naada e-te*  
 hour that.one before go-PTCP.FUT-PRD.1SG necessary be-PSTI.3SG  
*da süreyeld’žee-bit-im*  
 EMPH become.lazy-PSTII-1SG  
 ‘I was supposed to go an hour ago, but got lazy (and stayed).’ (AV)

In both instances, *naada* is certainly “a newcomer”. As for the impersonal constructions, *naada* appears in a position where older text collections show a dative case-marked participle, often with the modal particle *söp* (20a); nevertheless, forms with *naada* are attested in the folklore text collections as well (20b)<sup>22</sup> and in fact already in Pekarskij’s dictionary (20c):

- (20) Sakha
- a. *sahıl-udayan baar onu-oxa kihi-te*  
 fox-female.shaman exist.PRD.3SG that-DAT person-PART  
*ut-iax-xa söp d’i-en sübel-iir*  
 take-PTCP.FUT-DAT PTC say-CON advise-PRS.3SG  
 ‘‘There is a female fox shaman, a person needs to be sent there’’ so he advises.’ (JNS 294)

22 According to the metadata in JNS (p. 398), this narrative was recorded in 1986.

- b. [...] *tusku-ta-ajjal-la*                      *il-iax-xa*                      *naada* [...]   
 well.being-PART-good.fortune-PART      take-PTCP.FUT-DAT      necessary.PRD.3SG   
 ‘...the blessing (of the spirits) has to be obtained.’ (JNS 234)
- c. *oyo-nu*    *erej-ge*    *üör-et-iek-ke*                      *naada*   
 child-ACC work-DAT learn-CAUS-PTCP.FUT-DAT      necessary.PRD.3SG   
 ‘The child must get used to working.’ (SJJ 1664)

Concerning personal constructions, already Korkina (1970: 207–212) mentioned that complex predicates with *naada* compete with the verbal necessitive mood. The latter is based on a verb appearing either as a future tense or a present tense participle and the sociative marker *-LAAX*. Person is marked by predicative person markers. For future tense reference, the futuritive participle *-IAX* is used (21a–b) for present/immediate-future tense, the present tense participle *-AR* (21c).<sup>23</sup> However, the temporal difference between the immediate future and the more distant future appears fluent, as example (21d) shows, which was offered as the translational equivalent of ‘you have to read now’, for which one would expect a realization similar to (21c):

(21) Sakha

- a. *saamaj ulaxan-nar-i-n*    *il-an*    *bili*    *kinini*    *buhar-iax-taax* [...]   
 most    big-PL-PX3-ACC    take-CON    that.one 3SG.ACC    cook-PTCP.FUT-SOC.PRD.3SG   
 ‘She took the oldest, that one, she was supposed to be cooked...’ (JNS 168)
- b. *köh-üöx-pün*                      *ilin*    *komun-uox-pun*                      *naada*   
 move-PTCP.FUT-PX1SG.ACC    before    gather-PTCP.FUT-PRD.1SG    necessary.PRD.3SG   
 ‘Before I will move, I must pack.’ (AV)
- c. *Simon min ejiexe*    *et-er-deex-pin* –                      *d’ie-bit-e*   
 Simon 1SG    2SG.DAT    say-PTCP.PRS-SOC-PRD.1SG    say-PSTII-3SG   
 ‘Simon, I have something to say unto you.’ (7:40)<sup>24</sup>
- d. *kini aay-ia-taax*   
 3SG    read-PTCP.FUT-SOC.PRD.3SG   
 ‘He is supposed to read (now).’ (AV)

This triggers one additional question. Albeit a lack of sufficient material and the fact that a definite answer to it has to remain beyond the scope of this study, given that the necessitive construction of type (22a–b) with future tense and (22c) with immediate future tense reference encode temporal reference by the underlying participle, it remains unclear whether there exists a similar encoding possibility with *naada* when *naada* governs a verb. In both examples (22a) and (22b), a present tense participle is attested, but only in (22a) is the participle which is not marked for case actually part of the complex predicate. While example (22c) shows a truncated case-marked form of the future tense participle, it likewise refers to the immediate future:

23 Other forms are not relevant for this discussion and can be discarded.

24 The English translations of the Gospel of Luke were taken from an online version of the King James 2000 Bible. Because both the Dolgan Gospel and the Sakha Bible seem to be translations of the 1876 Russian Synodal edition, all instances appearing in this study were cross-checked against the Russian text as well.

## (22) Sakha

- a. *biligin ah-ur-in naada kenniki as suox buol-uo*  
 now eat-PTCP.PRS-PRD.2SG necessary.PRD.3SG later food not.exist become-FUT.3SG  
 'You have to eat now. Later there won't be any food.' (AV)
- b. *iti üle-ni büüt-er-er-ber miexe tüört čaas naada*  
 this work-ACC end-CAUS-PTCP.PRS-PX1SG.DAT 1SG.DAT four hour necessary.PRD.3SG  
 'To finish this work, I need four hours.' (AV)
- c. *min oyo-m ah-ia-n naada soturu bar-iax-pit*  
 1SG child-PX1SG eat-PTCP.FUT-ACC necessary.PRD.3SG soon go-FUT-1PL  
 'My child, you have to eat now. We will go soon!' (AV)

Although this problem certainly requires further research in both Sakha and potentially for Dolgan as well, this unsolved question does not interfere with the aim of this study.

**2.5 *naada* as verbal predicator**

Sakha derives two verbs from *naada*, *naadalan-* (2.5.1) and *naadj-* (2.5.2).

**2.5.1 *naadalan-* 'to be necessary, to be needed'**

The first verb, *naadalan-* 'to be necessary, to be needed', a medial-reflexive derivation consisting of the verbalizer *-la* and the reflexive/middle *-N*, is clearly the less productive of the two.<sup>25</sup> For the time being, this verb appears only in lexicographic resources underlying this study, yet as early as Pekarskij's dictionary:<sup>26</sup>

## (23) Sakha

- a. *Miiterej – iald'a-n bielser-ge kördör-ör*  
 Dmitrij become.sick-CON doctor.assistant-DAT show-PTCP.PRS  
*naadalan-ar buol-la*  
 be.necessary-PTCP.PRS become-PSTI.3SG  
 'Dmitrij, having become sick, had to see a doctor.' (STBUT VI 428)
- b. *min naadalam-mit d'axtal-lar-im saŋa-lar-t-n isi-ti-m*  
 1SG be.necessary-PTCP.PST woman-PL-PX1SG voice-PL-PX3-ACC hear-PSTI-1SG  
 'I heard the voice of the women I needed.' (SJJ 1665)

25 The author's consultant considered this verb unusual and did not produce forms for it on her own. Furthermore, neither the folklore collections nor the Bible translation contain an example of this verb. Under these circumstances, the comment in both JaRu and STBUT that the verb would belong to the register of spontaneous speech appears problematic.

26 A slightly unusual feature of all lexicon entries (JaRu; STBUT; SJJ) is the fact that the verb appears everywhere in a non-finite verb form but not in a finite form.

2.5.2 *naadij-* 'to need'

The other verb *naadij-* 'to need' may be called the default; all attested instances of a verbal lexeme appear in this form. Again, the first mention is by Pekarskij. Transitive *naadij-* is attested in a variety of forms, finite (24a) but also non-finite, such as a converbal (24b), converbal/participle (24c), or participle (24d):

(24) Sakha

- a. *Enkeebil emeexsin emnik beje-leex eder saah-igar*  
 Enkeebil old.woman breastfeeder own-SOC young year-PX3.DAT  
*er d'ieŋ-ŋe naadi-batax [...]*  
 man house-DAT be.necessary-NEG.PST.RES.3SG

'In her young years, old woman Enkeebil did not need a man in her house...' (JNS 282)

- b. *ol da ihin d'ie-ŋe-uok-ka baaj-ga-duol-ga*  
 that NEG because house-DAT-fire-DAT richness-DAT-wealth-DAT  
*naadij-bak-ka, xara tia-ni biha xaam-an [...]*  
 be.necessary-PTCP.PRS.NEG-DAT black forest-ACC across go-CON

'Therefore, not needing wealth in her home, when she went through the black forest...' (JNS 282)

- c. *tux-u ere naadij-daxxina man-tan kel-ie-ŋ da il-ia-ŋ*  
 what-ACC INDEF need-TEMP.2SG this-ABL come-FUT-2SG and take-FUT-2SG

'When you need something, you will come and take it.' (AV)

- d. *otton bügün aak-kar naadij-ar buol-laxxina*  
 and.SO today name-PX2.DAT be.necessary-PTCP.PRS become-TEMP.2SG  
*haya mañña-ta aŋal – d'ie-bit*  
 new reward-PART bring.forth.IMP.2SG say-PST.RES.3SG

'“If you need your name today, bring forth a new reward,” he said.' (JNS 354)

Even though instances of *naadij-* are not numerous in the quantitative data underlying this study, it needs to be mentioned that Sakha data contains more examples for *naadij-* than available Dolgan data. Nevertheless, even for Sakha, verbal forms were far more problematic to elicit than nominal forms. The preference for nominal forms is further backed up by data from the two folklore collections JNS and OPS. Altogether, both collections contain 13 examples for *naada* and its derivational forms; only one verbal example – in fact, a negative form (example 24a) – is verbal. This suggests that nominal forms are preferred in Sakha (and Dolgan as well).

## 2.5.3 Summary

Summarizing the verbal derivations of *naada*, a crucial syntactic difference between the verbal forms and the nominal predicator arises. Whereas the nominal predicator can govern verbs, the verbal derivations cannot. This feature unites Sakha with Dolgan. This also means that especially the verbalized forms which simply state either 'X is needed' (*naadalan-*) or 'X needs Y' (*naadij-*) are certainly less modal than forms with the nominal predicator, which encode the concept "need to do X".

## 2.6 The sociative derivation *naadalaax* ‘with need’

Similar to Dolgan, Sakha *naada* allows derivation with sociative *-LAAK* as well. Such forms are used either as a modifier (25a) or in predicative constructions where they behave like any predicative noun (25b–c):

- (25) Sakha
- a. *naada-laax hep-ter atulas-ti-n duo*  
necessity-SOC thing-PL buy-PSTI-2SG Q  
‘Did you buy necessary things?’ (AV)
  - b. *min naada-laax-pin*  
1SG necessity-SOC-PRD.1SG  
‘I come with need.’ (Lit. I am with need) (AV)
  - c. *iti naada-laax e-te*  
this necessity-SOC be-PSTI.3SG  
‘This was necessary.’ (AV)

## 2.7 Other forms derived from *naada*

For the sake of completeness, it has to be mentioned that STBUT has two more entries for derivations with *naada*. The first of them is the action noun in *-AAČČI* → *naadhaačči* ‘the needer’ and an additional abstract noun derived with *-JII* → *naadiju* ‘necessity’ (STBUT VI 429). Neither form is attested in Taimyr Dolgan; concerning *naadhaačči*, such forms are absent, because the suffix which derives action nouns in Sakha is an unproductive participle in Dolgan and mostly used as a marker of habitual aspect.<sup>27</sup> The second form, based on a suffix which derives abstract nouns (in this context, an abstract noun from an already abstract noun), appears to be more of a stylistic or literary nature. This is not surprising for Sakha, whose history as a written language exceeds Taimyr Dolgan’s by more than five decades:

- 26) Written Sakha
- suruk-ka-bičik-ke naadi-ju üöskee-bit-e*  
letter-DAT-letter-DAT necessity-NMLZ be.born-PSTII-3SG  
‘In literacy, the necessity was born.’ (STBUT VI 429)

<sup>27</sup> This has been investigated in detail by Stapert (2013: 209–238). She explicitly mentions that there are isolated instances where *-AAČČI* can be found as an action noun, for which the copying of Sakha patterns appear to be most likely (Stapert 2013: 222). A propagator of such forms was the translator of the Dolgan Gospel of Luke, N.A. Popov (Stapert even used an example from a school book compiled by the same author). Such nominalizations are also attested in the Dolgan Gospel of Luke (14:26): [...] *ol Min üör-en-eečči-m buol-um-uok-taak* <that 1SG learn-REFL-NMLZ-PX1SG become-NEG-PTCP.FUT-SOC.PRD.3SG> ‘... he cannot be my disciple’ or (14:27) [...] *ol kajdak Min üör-en-eečči-m buol-uo huoga* <that 1SG learn-REFL-NMLZ-PX1SG become-FUT.3SG not.exist.PX3> ‘...cannot be my disciple’. Although the nominalization problem is marginal from the perspective of this study, this example shows the necessitive mood (V-PTCP.FUT-SOC+PRD; see example (21) and Sections 3 and 5) once more. From a comparative Dolgan-Sakha perspective, the realization of negation, once synthetically and once analytically, is interesting. Korkina (1970: 211) mentions that synthetic negation (here *buolumuoktaak*) is not used in Sakha.

### 2.8 Intermediate summary

Even though both Taimyr Dolgan and Sakha use *naada* similarly, at least three meaningful differences are currently attested. First, for the time being, the construction of the type *naada-PX* is not attested in Taimyr Dolgan data; this gap may be accidental, though. Second, the verbalizing strategy appears to be more productive in Sakha, even though this hardly appears in textual examples. Third, the two derivations mentioned in the prior Section 2.7 are absent in Taimyr Dolgan as well; whereas the absence of the action noun form *naadhaačči* is triggered by the fact that the related derivational suffix in Dolgan has a different function, the absence of the abstract noun does not offer an immediate linguistic explanation. For the sake of completeness it requires mentioning once more that the verbal derivations of *naada-* cannot be used as a modal verb in either Sakha or Dolgan. Such complex predicates require the nominal predicator *naada*. As will be shown below in Section 4 and in more detail in Section 5, the nominal predicator *tustaax*, which operates in the same sphere of deontic modality, is likewise used to create modal predicates. For reasons of completeness, the existence of a verbal necessitive, briefly presented in examples (18a–d) requires mentioning, though neither an in-depth analysis nor a comparative analysis is possible in this study.

### 3. THE FATE OF OLD TURKIC \*KÄRGÄK IN SAKHA

In Siegl (2019), the proposed transfer of *naada* was discussed in detail, though from the perspective of Taimyr Dolgan. A central result of the proposed reconstruction was the suggestion that both Dolgan and Sakha could have borrowed the nominal predicator independently from each other. This position remains unaltered. In the meanwhile, additional data supporting this proposal has come to the author's attention. Whereas Dolgan data does not contain any modal reflexes of \**kärgäk*, Sakha has an obvious reflex in the form of the modal particle *ere kerex*. The first element of this particle is most likely the indefinite particle *ere* 'just, only'; its interpretation as a converbal form *er-e* from *er-* 'to speak' appears unlikely. The second element *kerex* is the reflex of Old Turkic \**kärgäk*. According to STBUT V (561), *ere kerex* is used in order to "encode the attitude of the speaker concerning the necessity of an action and its immediate realization" (my translation). As such, this characterization is certainly more informative than its entry in the Sakha-Russian dictionary from 1972, but it is the latter which offers an extraordinarily good example with an impersonal necessitive construction and *ere kerex*.<sup>28</sup>

(27) Sakha

a. *bar-ıax-xa ere kerex*  
 go-PTCP.FUT-DAT INDEF PTC

'One just has to go.' (Ru: *стоит только пойти*) (JaRu 222)

b. *aat-ı-n aat-t-ıax ere kerex*  
 name-PX3.ACC name-VBLZ-PTCP.FUT INDEF PTC

'One just has to call his name.' (STBUT V 561)

28 Structurally, this example is similar to example (20a) with *söp*, but due to the appearance of *kerex*, example (27a) should indeed be a reminiscence of the older predication pattern with \**kärgäk*, even though *ere kerex* appears to have become a complex modal particle.

Even though the results of the comparative analysis based on the Gospel of Luke are reserved for Section 5, a short note is already in order. In the Gospel's Sakha translation, *ere kerex* is attested twice, both times in the context of reported direct speech. The optional nature of *ere kerex* becomes obvious by comparing these instances with the Dolgan translation; in the Dolgan data available to the author, a Dolgan pendant is not attested and the modal nuances of "encoding the attitude of the speaker concerning the necessity of an action and its immediate realization" as postulated by STBUT can successfully be encoded by imperatives, which, after all, encode a wish/command to happen after the moment of utterance:

## (28) Gospel of Luke

## a. Sakha

*tojonuo-m en bayar-ia-η ere kerex*  
 lord-PX1SG 2SG wish-FUT-2SG INDEF PTC  
*miigin iraaħır-d-ar kta-x-taax-xın*  
 1SG.ACC be.clean-CAUS-PTCP.PRS be.able-PTCP.FUT-SOC-PRD.2SG  
 'Lord, if you will, you can make me clean.' (5:12)

## b. Dolgan

*min tojon-um en abır-ur hanaa-laak*  
 1SG lord-PX1SG 2SG rescue-PTCP.PRS wish-SOC  
*buol-lar-gın iraaş-ta minigin*  
 become-CON.COND-2SG be.clean-CAUS.IMP.2SG 1SG.ACC  
 'Lord, if you will, you can make me clean.' (5:12)

## (29) Gospel of Luke

## a. Sakha

*en biir ııl-ı et-ie-η ere kerex*  
 2SG one word-ACC say-FUT-2SG INDEF PTC  
*kulut-um ekči ütööř-üö*  
 servant-PX1SG of.course recover-FUT.3SG.  
 '...but say a word, and my servant shall be healed.' (7:7)

## b. Dolgan

*min kamna-ħıt-ım oh-uog-u-n biir*  
 1SG serve-ACT-PX1SG heal-PTCP.FUT-PX3-ACC one  
*ere haņa-nı hañar*  
 INDEF word-ACC speak.IMP.2SG  
 '...but say a word, and my servant shall be healed.' (7:7)

#### 4. ADDITIONAL NOMINAL DEONTIC CONSTRUCTIONS IN SAKHA – *TUSTAAX* AND *KERIDNEEX*

Although *naada* is a prominent example of deontic modality in Sakha, it is certainly not the only possibility to encode deontic modality with a nominal predicator. Another prominent instance is

a predicative construction with *tustaax*, which is already attested in Böhlingk (1851) and was shortly touched upon in Siegl (2019):

(30) nineteenth-century Sakha

*man-na bälä-täx tustaax-pın*  
this-LOC tell-NMLZ necessity-PRD.1SG

‘Ich habe die Verpflichtung hierbei zu bemerken...’ (Böhlingk 1851: 25, 382)

The *tustaax* construction is equally attested both in folklore and in the recent Bible translation:

(31) Sakha

a. *biir urut aja d’ie-bik-kit-in biir-des-kit ölor-üöx tustaax*  
one first aja say-PTCP.PST-PX2PL-ACC one-DER-PX2PL kill-PTCP.FUT necessity.PRD.3SG

‘The one of you who says *aja* first will have to be killed by the other one...’ (JNS 302)

b. *on-no ücügej sir buol-uox tustaax e-te*  
that-LOC good land become-PTCP.FUT necessity be-PSTI.3SG

‘...over there, there must be good land.’ (JNS 126)

c. *ol gin-an bar-an bügün sarsın öjüün*  
that make-CON go-CON today tomorrow day.after.tomorrow  
*da min ajam-min salg-ıax tustaax-pın*  
and 1SG path-PX1SG.ACC continue-PTCP.FUT necessary-PRD.1SG

‘Nevertheless I must walk today, and tomorrow, and the day following.’ (13:33)

However, during consultant work, examples with *tustaax* were only hesitatingly offered and judged “as not belonging to contemporary spoken Sakha”.<sup>29</sup> Instead, *naada* was certainly preferred:

(32) Sakha

a. *saja atax-tajah-a il-ıx tustaax-pın*  
new shoe-cloth-PX3 take-PTCP.FUT necessity-PRD.1SG

‘I have to buy new shoes.’ (AV)

b. *miexe saja atax-tajah-a naada*  
1SG.DAT new shoe-cloth-PX3 necessary.PRD.3SG

‘I need new shoes.’ (AV)

<sup>29</sup> This reservation receives further support by the evidence from the two Sakha folklore collections OPS and JNS. Whereas *naada* and its derivational forms appear 13 times in both collections, *tustaax* appears two times and only in the collection JNS; see examples (28a–b). In fact, both examples derive from texts collected in the 1940s (JNS 373–376, 407–408). As mentioned in Siegl 2019, *tustaax* is likewise very rare in Dolgan texts and narratives. In the writings of N.A. Popov, such forms are attested more often. Because Popov was the main translator of the Gospel of Luke, the appearance of such forms in this text is hardly surprising (see also footnote 27 and the discussion in the following section). This confirms the criticism by the Taimyr Dolgan intelligentsia, who considered Popov’s style as “too Sakha influenced”. Actually, Popov was born and raised in the tundra around Ust’-Avam and Voločanka, an area where contacts with Sakha were at best marginal if not entirely absent.

Furthermore, the differences between the analytic *tustaax* and the verbal necessitive mood (V-PTCP.FUT-SOC+PRD) are far from clear. In the following example from the same text, first an analytic construction with *tustaax* appears (33a), but is shortly thereafter followed by the verbal mood (33b). Whether this implies that their deontic force was considered equal already then has to remain speculative due to the absence of further data:

(33) Sakha

- a. *biir urut aja d'ie-bik-kit-in biir-des-kit ölör-üöx tustaax*  
 one first aja say-PTCP.PST-PX2PL-ACC one-DER-PX2PL kill-PTCP.FUT necessity.PRD.3SG

‘The one of you who would say “aja” first, one of you will have to kill...’ (JNS 302)

- b. *biir urut aja d'ie-bik-kit-in biir-git ölör-üöx-teex*  
 one first aja say-PTCP.PST-PX2PL-ACC one-PX2PL kill-PTCP.FUT-SOC.PRD.3SG

‘The one who would say *aja* first, one of you must kill...’ (JNS 304)

Still, the sphere of deontic modality in Sakha contains another nominal predicator *keriñneex*, in fact yet another sociative marked form. The predicator *keriñneex* was shortly discussed by Korkina (1970: 214–215) in the context of *tustaax* as its functional alternative, though without detail. Since STBUT V does not have a lemma for *keriñneex* and the two folklore collections analysed have only one example (31), this hapax legomenon cannot be approached meaningfully:<sup>30</sup>

(34) Sakha

- min öl xaba-n bar-iax keriñ-neex-pin*  
 1SG suffer-CON go-PTCP.FUT obligation-SOC-PRD.1SG

‘I have suffered. I will have to run away.’ (JNS 144)

Due to the marginal status of *tustaax* and *keriñneex* in the available materials and the consultant’s reaction, only some very superficial observations are possible here. What certainly unites both predicators is the uncertainty whether the underlying noun is still attested outside the sociative derivation. Whereas Pekarskij’s dictionary has an entry for *keriñ* (SJJ 1005), there is none for *tus* but only for *tustaax* (SJJ 2864). As for *keriñ*, Pekarskij translated it with ‘obligation’ and compared it to Mongolian *kuraj*.<sup>31</sup> STBUT V (535–536) has a lemma for *keriñ*, which is translated into Russian with several senses, referring to spatial concepts such as ‘degree, size, extent’. In passing, it should be mentioned that STBUT even attempts an etymological approximation, mentioning Khalkha *xup*, whose translation in the only lexicographic resource available to the author is ‘degree, extent, possibility’ (‘Maß, Grenze, Möglichkeit’; Zebek 1961: 214). Even though the unfolding picture does not allow any sound interpretation at this point, it appears that the underlying lexical noun in both the *tustaax* and the *keriñneex* construction got lost and survived in the modal derivation only. Although the deontic force of each construction cannot be solved (especially by a specialist of Taimyr Dolgan), Sakha shows reflexes of at least three deontic nominal predicators: *tustaax*,

30 The predicator *keriñneex* is not attested in Dolgan.

31 This lexeme was not mentioned by Kałużyński 1961.

*keriŋneex*, and *kerex*.<sup>32</sup> Whether the matching first syllable *ker-* in *kerex* and *keriŋneex* is accidental or suggests shared origin remains out of reach. Even though this section is hardly more than a collection of superficial thoughts, it holds several implications. First, the available data on Sakha clearly shows that it had at least one more nominal deontic predicator than Taimyr Dolgan (*keriŋneex*). Second, the Turkic predicator *\*kärgäk* has survived as a complex modal particle in Sakha, whereas it got lost in Taimyr Dolgan. Third, even though *tustaax* does not appear to be a central means of encoding deontic modality today, it still can be encountered. This may suggest that the modal nominal predicators *keriŋneex*, *tustaax*, and *naada* encoded different degrees of necessity. Additionally, the verbal necessitive mood that exists in both languages has to be added to the means which operate in the field of deontic modality. This means that Sakha had at least one (*tustaax*) and perhaps even two additional nominal predicators (*tustaax* + *keriŋneex*) at its disposal; the only nominal predicator which both languages do share unanimously is *naada*.

## 5. NAADA, NAADIJ-, AND TUSTAAX ~ TUSTAAK FROM A COMPARATIVE PERSPECTIVE

The previous section already suggested that the sphere of deontic modality is far from being uniform in these two otherwise very closely related languages. This observation is therefore intriguing. Also, this section, which reports findings from the comparative analysis of the Dolgan and the Sakha translations of the Gospel of Luke (Dolgan 2002, Sakha 2008), the only longer text available in both languages for the time being, offers similar evidence.

In order to achieve comparability, the Sakha translation was analysed from a Taimyr Dolgan perspective. Although *naada* and its derivations were originally the only tokens of interest, the analysis quickly revealed that *tustaax* ~ *tustaak* had to be taken into consideration as well. Although the latter is infrequent in Dolgan (see notes below) and was certainly dispreferred by the Sakha consultant, the Sakha translation contains several examples after all. Due to the fact that *ere kerex* and *keriŋneex* are not attested in Taimyr Dolgan, these are not included in this discussion; the two attested examples from the Sakha translation were touched upon above (28a, 29a). For the sake of completeness it bears mentioning that the Sakha translation of the Gospel of Luke did not contain any examples with *keriŋneex*, but since this predicator was attested only once in the folklore corpus, its absence is certainly not surprising.

### 5.1 *naada* and *naadij-* from a comparative perspective

In this section, all attested examples for both the nominal predicator *naada* and its verbal derivation *naadij-* will be analysed in the order of full matches (Section 5.1.1), partial matches (Section 5.1.2), and diverging realization (Section 5.1.3).

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32 A potential structural parallel appears in older data on Southern Selkup (Samoyedic, Uralic). The dialectological dictionary compiled by Bykonja, Kuznecova, and Maksimova 2005 has numerous examples with the Russian borrowing *nadä* (e.g. Bykonja, Kuznecova & Maksimova 2005: 140), but also for a Turkic borrowing *keregeŋ* (e.g. Bykonja, Kuznecova & Maksimova 2005: 43); neither of these are native Selkup predicators, but occupy the same modal sphere. Although this is an instance of multiple borrowing (whose borrowing history has not been worked out), I consider it worthwhile to mention. Southern Selkup's closest linguistic relative Kamas used the Turkic borrowing *kere?* (Joki 1944: 28). Whether *keregeŋ* and *keriŋ* mentioned in this section are related appears likely, but this question lies beyond the scope of the current study.

### 5.1.1 Full matches

The Gospel of Luke contains only one full match, namely, the nominal predicator *naada*. The negation in Dolgan is unmotivated from the perspective of the original 1876 Russian Synodal version and appears to be a stylistic choice of the translator:

(35) Gospel of Luke

a. Sakha

*bu kenne bihiexe össö tuox tuohu-ta naada=niĵ*  
 this besides 1PL.DAT still what witness-PX3 necessary.PRD.3SG=Q

‘What need we any further witness?’ (22:71)

b. Dolgan

*bihieke kim da hulikt-ur-a ani naada-ta huog-a buol-uo*  
 1PL.DAT who EMPH witness-PTCP.PRS-PX3 now necessary-PX3 not.exist.PX3 become-FUT.3SG

‘What need we any further witness?’ (22:71)

### 5.1.2 Partial matches

Two partial matches are attested. In the first example, the Sakha translation opted for the verbal derivation *naadij-*, whereas the Dolgan translation operates with a predicative noun and as such follows the Russian Synodal text but flips the order (‘the one who is sick needs a physician’). In contrast, Sakha replicates the Russian negation and follows the original more faithfully:

(36) Gospel of Luke

a. Sakha

*em-čik-ke öliör naadi-bat-tar iarihax-tar naadij-allar*  
 heal-ACT-DAT healthy be.necessary-PRS.NEG-3PL sick-PL be.necessary-PRS.3PL

‘...They that are whole need not a physician, but they that are sick.’ (5:31)

b. Dolgan

*emt-iir kibi iaru-lar-ga naada öliör kibi-ler-deeg=eĵ*  
 heal-PTCP.PRS person sickness-PL-DAT necessary.PRD.3SG healthy person-PL-SOC=EMPH

‘...They that are whole need not a physician, but they that are sick.’ (5:31)

In the second partial match, Sakha uses the verbal derivation, but the entity needed (a donkey) mentioned (in verse 19:30) is not lexically referred to. In Dolgan, the predicative sociative *naadalaak* is used, which triggers a different argument structure (needer[DAT] entity.needed[NOM] *naadalaak*[PRD]); the appearance of the third person pronoun *gini* to create anaphoric reference to the donkey in the prior verse is semantically unexpected:

(37) Gospel of Luke

a. Sakha

[...] *Tojom-mut naadij-ar d'i-er-iĵ*  
 lord-PX1PL be.necessary-PRS.3SG say-PTCP.PRS-2SG

‘...thus shall you say unto him, because the Lord has need of him.’ (19:31)

b. Dolgan

*min Tojom-mor gini naada-laak*  
 1SG lord-PX1SG.DAT 3SG necessary-SOC.PRD.3SG

‘...thus shall you say unto him, because the Lord has need of him.’ (19:31)

### 5.1.3 Diverging realization

The remaining eight examples show *naada* or *naadj-* in only one of the two languages. The discussion begins with two similar examples (38, 39), where Sakha uses the adjectival derivation of the noun *kihalya* ‘necessity’ twice; the Dolgan translation relies on predicative *naada*:

(38) Gospel of Luke

a. Sakha

*huoj en bihiexe tug-uŋ kihalya-taj Nazaret Iisuh-a*  
 PTC 2SG 1PL.DAT what-PX2SG necessity-ADJ Nazaret Jesus-PX3

‘...what have we to do with you, you Jesus of Nazareth...?’ (4:34)

b. Dolgan

*toktoo bihigitten tuok naada=niŋ*  
 stop.IMP.2SG 1PL.ABL what necessary.PRD.3SG=Q

‘Let us alone; what have we to do with you...’ (4:34)

(39) Gospel of Luke

a. Sakha

*en miexe tug-uŋ kihalya-taj Iisus Urduk Tanar-a Uol-a*  
 2SG 1SG.DAT what-PX2SG necessity-ADJ Jesus high god-PX3 son-PX3

‘What have I to do with you, Jesus, you Son of God most high?’ (8:28)

b. Dolgan

*Iisus minigitten tuok naada=niŋ*  
 Jesus 1SG.ABL what necessary.PRD.3SG=Q

*Tuok-taagar daa Urduk Tanar-a Uol-a*  
 what-COMP EMPH high god-PX3 son-PX3

‘What have I to do with you, Jesus, you Son of God most high?’ (8:28)

In example (40), the Sakha translation shows a *tustaax* construction, whereas Dolgan uses the V-PTCP.FUT-PRD *naada* construction:

(40) Gospel of Luke

a. Sakha

*min sürext-en-ii-ni aah-iax tustaax-pin*  
 1SG baptize-REFL-NMLZ-ACC read-PTCP.FUT necessity-PRD.1SG

‘But I have a baptism to be baptized with.’ (12:50)

## b. Dolgan

*hürekt-iir-ten min hürekt-en-iek-pin naada*  
 baptize-PTCP.PRS-ABL 1SG baptize-REFL-FUT-PRD.1SG necessary.PRD.3SG

‘But I have a baptism to be baptized with.’ (12:50)

The remaining examples are sorted by language. In the following four examples, the Sakha translation uses *naada* or *naadij-*, but not Dolgan. In example (41), the continuation of the plot of example (37), Sakha uses the verbal form *naadij-*, whereas the Dolgan translation uses a different verb, thereby diverging from the Russian Synodal version:

## (41) Gospel of Luke

## a. Sakha

*Tojom-mut naadi-jar ol ihin [...]*  
 lord-PX1PL necessary-PRS.3SG that because

‘The Lord has need of him.’ (19:33-34)

## b. Dolgan

*bu tugut-u Tojon körd-üür*  
 this reindeer.calf-ACC lord seek-PRS.3SG

‘(Why loose you the colt (19:33))... The Lord has need of him (19:34).’

In example (42), Sakha has a participle form of *naadij-* as an infinite complement of the verb *bil-* ‘to know’ in object position. The Dolgan translation shows a similar complement, but does not show overt modality in the complement:

## (42) Gospel of Luke

## a. Sakha

*ot-ton ehigi iti-nne naadij-ar-git-in Aya-γit bil-er*  
 that-ABL 2PL this-LOC necessary-PTCP.PRS-PX2PL-ACC father-PX2PL know-PRS.3SG

‘...and your Father knows that you have need of these things.’ (12:30–31)

## b. Dolgan

*Aga-git ehiene tuok hip-pet-i-n bil-er*  
 father-PX2PL 2PL.POSS what obtain-PTCP.PST-PX3-ACC know-PRS.3SG

‘...and your Father knows that you have need of these things.’ (12:30–31)

In the last Sakha example, *naada* functions as the nominal predicate, but once again the Dolgan translation does not show any signs of deontic modality. In this respect, it is the Sakha translation which directly follows the Russian original, whereas the Dolgan translation chose a different solution, which cannot be fully motivated:

## (43) Gospel of Luke

## a. Sakha

*biir ere naada ebeet*  
 one INDEF necessary.PRD.3SG PTC

‘But one thing is needful.’ (10:42)

## b. Dolgan

*biir ere buol-lun*  
 one INDEF become-CON.COND.3SG  
 ‘But one thing is needful.’ (10:42)

The remaining two examples have *naada* in Dolgan, but not in Sakha. For practical reasons, the order of languages will be switched. In example (44), the Dolgan translation is rather free and uses *naada* as a nominal predicator in a complex yet dependent predicate. The Sakha translation follows the Russian original, which does not show any overt morphosyntactic modal semantics:

## (44) Gospel of Luke

## a. Dolgan

*karaj-ar buol bu kihi-ni tönnö-n*  
 take.care-PTCP.PRS become.IMP.2SG this person-ACC return-CON  
*kel-lekpine bari-ti-n töl-üö-m össüö karči naada buol-lagina*  
 come-TEMP.2SG all-PX3-ACC pay-FUT-1SG still money necessary become-TEMP.3SG  
 ‘Take care of him; and whatsoever you spend more, when I come again, I will repay you.’ (10:35)

## b. Sakha

*kinini ktaat-an kör-ihit bu*  
 3SG.ACC be.hard-CON look.IMP.2SG-hear.IMP.2SG this  
*bier-bip-pit-ten ordug-u tutun-naxxına min tönn-ön ih-en töl-üöy-üm*  
 give-PTCP.PST-PX1PL-ABL more-ACC spend-TEMP.2SG 1SG return-CON go-CON pay-FUT-1SG  
 ‘Take care of him; and whatsoever you spend more, when I come again, I will repay you.’ (10:35)

The last example in this section has *naadalaak* as a nominal modifier, but again the Dolgan translation is rather free; the Sakha translation follows the Russian original more closely but does not show any signs of deontic modality:

## (45) Gospel of Luke

## a. Dolgan

*d’ie tutuu-hut-tar tier-e birak-pit*  
 house builder-ACT-PL work.hard-CON throw-PTCP.PST  
*taas-tar-a muḡ naada-laak taas buol-but*  
 stone-PL-PX3 very necessary-SOC stone become-PST.RES.3SG  
 ‘The stone which the builders rejected, the same is become the head of the corner?’ (20:17)

## b. Sakha

*Iisus kiniler d’ieki kör-ön bar-an ep-pit-e*  
 Jesus 3PL towards look-CON go-CON say-PSTII-3SG  
*tutaa-čči-lar birax-pit taas-tar-a munnuk tutaax taah-a buol-la*  
 build-ACT-PL throw.away-PTCP.PST stone-PL-PX3 corner major stone-PX3 become-PSTI.3SG  
 ‘And he beheld them, and said, What is this then that is written, The stone which the builders rejected, the same is become the head of the corner?’ (20:17)

### 5.1.4 Summary

For convenience, the examples discussed in the prior section are summarized in the following table:

Table 1 Examples of *naada* and related forms in the Gospel of Luke.

Gospel of Luke	Sakha	Predication type	Dolgan	Predication type
(22:71)	<i>naada=niĵ</i>	nominal predicator	<i>naadata huoga buoluo</i>	nominal predicator
(5:31)	<i>naadibattar</i>	verbal predicator	<i>naada</i>	nominal predicator
(19:31)	<i>naadiĵar</i>	verbal predicator	<i>naadalaak</i>	predicative sociative (nominal)
(4:34)	<i>kihalyataĵ</i>	other means of encoding necessity	<i>naada=niĵ</i>	nominal predicator
(8:28)	<i>kihalyataĵ</i>	other means of encoding necessity	<i>naada=niĵ</i>	nominal predicator
(12:50)	<i>tustaaxpin</i>	nominal predicator	<i>naada</i>	nominal predicator
(19:33-34)	<i>naadiĵar</i>	verbal predicator	not following original text	
(12:30-31)	<i>naadiĵargutin</i>	case-marked participle of <i>naadiĵ-</i> as argument of <i>bil-</i> 'to know'	case-marked participle of a different verb as argument of <i>bil-</i> 'to know'	
(10:42)	<i>naada</i>	nominal predicator	conditional converb of <i>buol-</i> 'be, become'	
(10:35)	future tense marked lexical verb <i>töl-</i> 'to pay'		<i>naada buollagina</i>	nominal predicator in dependent predicate
(20:17)	other sociative modifier		<i>naadalaak taas</i>	modifier

Even though the data is limited, it suggests several intriguing trends. In general, even though Sakha and Dolgan are genealogically very close, it is surprising to find only one full and two partial matches. As for the absence of verbal forms of *naada* in the Dolgan translation, this feature is not particularly surprising, because verbalized forms are very rare in Dolgan data (see Siegl 2019). The appearance of three verbal forms of *naadiĵar* in the Sakha translation is indeed surprising, given that in both folklore collections (JNS and OPS, which contain several hundred pages of Sakha texts), only one example is attested!<sup>33</sup> This suggests that the nominal predication pattern is equally dominant in both languages, despite the data from the Gospel of Luke.<sup>34</sup> From the perspective of Dolgan, the absence of the sociative *naadalaax* (regardless of its function as modifier or predicator) in the Sakha text is somehow unexpected. Nevertheless, from the perspective of the data extracted from the two folklore collections, which contain three examples only (once as modifier and twice in predicative position), this is probably not accidental. In elicitation, such forms showed up without problems. Leaving syntactic and frequency considerations aside, the semantic sphere does not reveal much variation. In general, *naada* predominantly appears in the function of 'NP requiring NP', often with both NP overtly expressed. Whereas the Sakha translation can rely on other means as well (e.g. *kihalyataĵ*), Dolgan prefers *naada*. In other instances where one translation chose a different form, conditionals or imperatives are attested. Concerning deontic semantics of the type 'need

33 The absence of the reflexive verb *naadalan-* is not surprising (see footnote 25).

34 It remains beyond the scope of this study whether secondary influence of the nominal Russian *nado* construction plays any role or whether this signals the preservation of the older Turkic, likewise nominal *\*kärgäk* construction.

to do X', only one example is attested (40). Whereas Dolgan shows double predication with *naada*, the Sakha translation uses *tustaax* and a nominalized verb. For practical reasons, this example will be discussed one more time at the end of the next section, which deals with *tustaax* ~ *tustaak*.

## 5.2 *tustaax* ~ *tustaak*

Since the nominal denontic predicators *tustaax* ~ *tustaak* compete with *naada*, a short note with two immediate disclaimers is justified. The first disclaimer concerns Dolgan. As already mentioned in Siegl (2019), *tustaak* is rare in Dolgan data; if *tustaak* is attested, it appears in texts written by N.A. Popov, who was the central translator of the Dolgan Gospel of Luke as well.<sup>35</sup> Second, next to analytical predicate formation with *tustaax* ~ *tustaak* governing a nominalized verb and thereby forming a complex monoclausal predicate, deontic modality is expressed as well with a verbal necessitive form. A clear-cut difference in denontic strength between forms in *tustaax* ~ *tustaak* and the verbal mood cannot be postulated for the time being, and it appears artificial to separate such forms from each other. Still, due to the organization of this study, this decision had to be made. In the last subsection, the diverging realization is subsumed.

### 5.2.1 Full matches

As for full matches, there is only one example in which both languages use the predicator *tustaax* ~ *tustaak*:

(46) Gospel of Luke

a. Sakha

*ol gin-an bar-an bügün sarsın öjüün*  
that make-CON go-CON today tomorrow day.after.tomorrow  
*da min ajam-min salg-iax tustaax-pin*  
and 1SG path-PX 1SG.ACC continue-PTCP.FUT necessity-PRD.1SG

‘Nevertheless I must walk today, and tomorrow, and the day following.’ (13:33)

b. Dolgan

*min bügün harsın nöjüö kün bar-an ih-iek t ustaak-pin*  
1SG today tomorrow next day go-CON go-PTCP.FUT necessity-PRD.1SG

‘Nevertheless I must walk today, and tomorrow, and the day following.’ (13:33)

### 5.2.2 Partial matches

Two examples with partial matches could be identified in the translations. In (47), Sakha uses *tustaax*, but Dolgan uses a necessitive marked verb.<sup>36</sup>

35 As a belated addition to Siegl 2019, *tustaak* appears neither in the most voluminous Dolgan folklore collection DF nor in a recently published sizeable collection of Dolgan Folklore ÜO.

36 Such necessitive forms were not mentioned in Ubrjatova 1985 or Artem'ev 2001. The second edition of Artem'ev's grammar published in 2013 is still not available to the author.

## (47) Gospel of Luke

## a. Sakha

*Taŋar-a Saarisuba-ti-n Jevangelie-ti-n Min atin*  
 god-PX3 kingdom-PX3-ACC holy.script-PX3-ACC 1SG other  
*kuorat-tar-ga emie ihitinner-iex tustaax-pin*  
 city-PL-DAT too announce-PTCP.FUT necessity-PRD.1SG  
 ‘I must preach the kingdom of God to other cities also...’ (4:43)

## b. Dolgan

*min Taŋar-a ijaag-i-n tuhunan Üörüü-leek Hurag-ı*  
 1SG god-PX3 destiny-PX3-ACC about merry-SOC letter-ACC  
*barı guorat-tar aaji kepsi-ek-teek-pin*  
 all city-PX3.DAT every tell-PTCP.FUT-SOC-PRD.1SG  
 ‘I must preach the kingdom of God to other cities also...’ (4:43)

In the next example, the same applies, but now in an opposite constellation:

## (48) Gospel of Luke

## a. Sakha

*ol bari-ta buol-uox-taax ereeri*  
 that all-PX3 become-PTCP.FUT-SOC.PRD.3SG even.though  
*össö da büt-er uhuk buol-batax*  
 still EMPH end-PRS.3SG end become-PST.RES.NEG.3SG  
 ‘...for these things must first come to pass, but the end is not yet.’ (21:9)

## b. Dolgan

*iti bari-ta buol-uok tustaak iti daa*  
 this all-PX3 become-PTCP.FUT necessity.PRD.3SG this EMPH  
*buol-lar h=on-no büt-üö huoga*  
 become-CON.COND.3SG EMPH=that-LOC end-FUT.3SG not.exist.PX3  
 ‘...for these things must first come to pass, but the end is not yet.’ (21:9)

## 5.2.3 Diverging realization

One of the two attested examples was already mentioned in Section 5.1.3, and it is repeated as (49) for convenience:

## (49) Gospel of Luke

## a. Sakha

*min sürext-en-ii-ni aah-tax tustaax-pin*  
 1SG baptize-REFL-NMLZ-ACC read-PTCP.FUT necessity-PRD.1SG  
 ‘But I have a baptism to be baptized with.’ (12:50)

b. Dolgan

*hürekt-iir-ten min hürekt-en-iek-pin naada*  
 baptize-PTCP.PRS-ABL 1SG baptize-REFL-FUT-PRD. 1SG necessary.PRD.3SG  
 ‘But I have a baptism to be baptized with.’ (12:50)

The last example is problematic, because the difference seems to be the outcome of a “free translation” in Dolgan which does not reproduce the deontic modal connotation of the Russian original text. The Sakha translation follows the Russian original:

(50) Gospel of Luke

a. Sakha

*min tus-pu-nan et-illi-bit tuol-uox tustaax*  
 1SG side-PX1SG-INSTR say-PASS-PTCP.PST achieve-PTCP.FUT necessity.PRD.3SG  
 ‘...that this that is written must yet be accomplished in me’ (22:37)

b. Dolgan

*min tus-pu-nan tuok huru-llu-but-a, bari-ta kel-iege*  
 1SG side-PX1SG-INSTR what write-PASS-PSTII-3SG all-PX3 come-FUT.3SG  
 ‘...that this that is written must yet be accomplished in me’ (22:37)

5.2.4 Summary

Again, for convenience, the attested examples are subsumed in the following table:

Table 2 Necessitive constructions with *tustaax* ~ *tustaak* in the Gospel of Luke.

Gospel of Luke	Sakha	Verbal predicate	Dolgan	Verbal predicate
(13:33)	<i>salgiax tustaaxpin</i>	complex	<i>ihiek tustaakpin</i>	complex
(4:43)	<i>ihitinneriex tustaaxpin</i>	complex	<i>kepsiekteekpin</i>	simple
(21:9)	<i>buoluoxtaax</i>	simple	<i>buoluok tustaak</i>	complex
(12:50)	<i>aahiax tustaaxpin</i>	complex	<i>hürekteniekpın naada</i>	complex ( <i>naada</i> )
(23:37)	<i>tuoluox tustaax</i>	complex	diverging translation (future tense marked verb)	

Since the number of examples is even smaller than for *naada*, and given that *tustaax* is almost absent in the two Sakha folklore collections, the collected data does not allow any postulation of trends. As for Sakha, all four examples with *tustaax* are used to form analytic complex (monoclausal) predicates which encode the obligation of ‘X has to do Y’. Further descriptive fine-tuning remains out of reach. Whereas the Dolgan translation shows one full match, the other Dolgan example *buoluok tustaak* contains the same construction where the Sakha translation opted for the verbal mood *buoluox*. The Dolgan translation uses two different constructions to encode the obligation of ‘X has to do Y’: *ihiek tustaakpin* ‘I must walk’ and *hürekteniekpın naada* ‘I have to be baptized’, which despite their different morphological encoding appear to be semantically almost identical. The only significant difference, as already mentioned, is that the *tustaak* construction cannot be found outside the writings or translation efforts of N.A. Popov, which makes the construction of the type *hürekteniekpın naada* the default construction in

Dolgan. However, as noted above, this construction is certainly possible in Sakha (51) and as such most certainly not restricted to the spoken language only:

(51) Sakha

- a. *türgen-nik bar-iax-pın naada*  
 quick-ADV go-PTCP.FUT-PRD.1SG necessary.PRD.3SG

‘I am obliged to go quickly.’ (AV)

- b. *Tuox ere buol-an er-ebin, baluha-ya*  
 what INDEF become-CON say-PRS.1SG hospital-DAT

*bar-iax-pın naada di-ir*  
 go-FUT-PRD.1SG necessary.PRD.3SG say-PRS.3SG

‘‘There is something’’ I say, ‘‘I must go the hospital’’, he said.’ (Sakha Wikipedia)<sup>37</sup>

In passing, a final note on the verbal necessitive mood, which has been touched upon several times above, is in order. Even though this form exists in both languages, it does not imply similar use in the translations of the Gospel of Luke. A random test did not produce idiomatic full matches. The following example is among the best attested:

(52) Gospel of Luke

a. Sakha

*üle-hit kihi üle-te tölön-üöx-teex*  
 work-ACT person work-PX3 reward-PTCP.FUT-SOC.PRD.3SG

‘...for the laborer is worthy of his hire.’ (10:7)

b. Dolgan

*üle-hit tuog-u eme-te il-iaak-taak*  
 work-ACT what-ACC INDEF-PX3 take-PTCP.FUT-SOC.PRD.3SG

‘...for the laborer is worthy of his hire.’ (10:7)

## 6. CONCLUSIONS

The central task of this follow-up study was to approach the morphosyntax of *naada* in Sakha from a Taimyr Dolgan perspective. The data presented above confirms the initial observations brought forward in Siegl (2019) that a number of meaningful differences are attested. Even though the predication frame of *naada*, its derivational possibilities (derivation of verbal and sociative forms), and its basic predication properties are certainly shared, this study has shown that *naada* in Sakha is but one out of several nominal predicators encoding deontic modality. In contrast to Taimyr Dolgan, Sakha’s *tustaax* construction stills appears to be in use, although its role in contemporary spoken Sakha may indeed be marginal. Presumably, therefore, *naada* and *tustaax* are not yet interchangeable in Sakha, though this assumption requires a detailed semantic investigation by Sakha specialists. As for Dolgan, textual data suggests that the semantic differences between *naada* and *tustaak* have been lost entirely (Siegl 2019). Note once more that only Dolgan texts compiled by N.A. Popov show *tustaak*. As the discussion above has shown,

37 <[https://sah.wikipedia.org/wiki/Александр\\_Самсонов\\_-\\_Айыы\\_Уола](https://sah.wikipedia.org/wiki/Александр_Самсонов_-_Айыы_Уола)>, accessed 20.11.2020.

Sakha differs from Taimyr Dolgan by showing yet another deontic modal predicator *keriŋneex*, as well as by having reflexes of *\*kärgäk* in the form of the complex particle *ere kerex*. Although the discussion of these Sakha forms remains shallow, this was a conscious decision, because neither of them is attested in Taimyr Dolgan, which serves as the point of reference for this study. Last but not least, the comparative analysis of the Dolgan and Sakha translations of the Gospel of Luke demonstrated that, despite their genealogical proximity, the number of full matches is surprisingly low. Although the number of examples which could be extracted from the translations is restricted due to the nature of the underlying text, this suggests, once again, that the perspective of considering Taimyr Dolgan a “dialect of Sakha” remains problematic. Although an attempt of explanation is beyond the scope of this study, the absence of several aforementioned means for the encoding of deontic modality in Taimyr Dolgan could be more than just a result of long-lasting bilingualism in Russian, because this process would equally apply to Sakha, where at least *tustaax* and *naada* still co-appear. Knowing that Dolgan has undergone some creolization by speakers shifting from Evenki (Stapert 2013: 330-340; Siegl 2015a) and a Samoyedic substrate is attested as well (though certainly this substrate is less prominent; see Siegl 2015b), assigning this development only to Russian influence appears premature. The role of multiple contacts becomes even more relevant when looking at the syntax and semantics of *nadoŋo-* in Kolyma Yukaghir and *naaduo-* and *naadeŋ* in Tundra Yukaghir (Siegl, in progress).<sup>38</sup> Although the lexeme is without doubt of Russian origin, several details readily reveal obvious Sakha influence.

## 7. OUTLOOK – RUSSIAN *NADO*, SAKHA *NAADA*, AND THE YUKAGHIR LANGUAGES

Although data from Yukaghiric, which does not follow Russian, could certainly be contrasted with Dolgan, it is self-evident that data from the contact language Sakha (which has influenced both Yukaghir languages for more than a century) needs to be used. A striking Tundra Yukaghir/Sakha parallel is the existence of the abstract noun *naade(ŋ)*, which is used in Yukaghir just as in Sakha. Russian requires an abstract derivation of *nado* → *nadobnost'*, but *nado* is not possible in this context:

(53)

a. Tundra Yukaghir

*čama naade ew=l'e*  
big need NEG=be.3SG(NEG)  
'There is no great need.' (JuRS 278)

b. Sakha

*miexe elbex naada-ta huox*  
1SG.DAT much necessary-PX3 not.exist.PRD.3SG  
'I don't need much.' (AV)

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38 The glossing and transliteration of Yukaghir data are by the author.

## c. Russian

*bol'šoj            nadobnosti            net*  
big.GEN.FEM.SG necessity.GEN.FEM.SG NEG

'There is no great need.' (Russian translation of JuRS 278)

The same noun is even used metaphorically in the context of 'to relieve oneself' (54a–b). Although Russian has a similar phrasal construction, Russian cannot use *nado* but requires the abstract noun *nužda*, a derivation from the modal adjective *nužen* (54c).

(54)

## a. Tundra Yukaghir

*tude naadie-ń            pulge-č*  
3SG necessity-DAT go.out-INTR.3SG

'He went out to relieve himself.' (Lit. he went outside to his necessity) (FJ 370)

## b. Sakha

[...] *tahırd'a    naada-tıgar            er-e            ikkite-xasta            taxs-a            sırit-ta*  
outside            necessity-PX3.DAT man-PX3 twice-how.many.times go.out-CON go-PSTI.3SG

'...the man went outside to relieve himself several times.' (STBUT VI 427)

## c. Russian

*Vyšo-l            po svoej            nužde*  
go.out-PST.MASC on owl.PREP.FEM.SG necessity.PREP.FEM.SG

'He went out to relieve himself.' (FJ 371 = Russian translation of 54a)

Whereas Kolyma Yukaghir appears to lack an abstract noun, similar to Tundra Yukaghir *naadeŋ*, both Kolyma and Tundra Yukaghir have a denominal verb based on Russian *nado*. The derivational process is opaque and shows reflexes of the copula ( $\eta$ )*oo-* ~ ( $\eta$ )*uo-* (see Maslova 2003: 124–126; Schmalz 2013: 112):

(55)

## a. Kolyma Yukaghir

*ningej legul-ek nadoŋuo-l            ńier-ek            uoži-k*  
much food-FOC be.necessary-SF cloth-FOC water-FOC

'Much food is necessary, clothing, water (too).' (FJ 328)

## b. Tundra Yukaghir

*eguojie-pul-ya    me=naaduo-te-j            kudere-k*  
next.day-PL-LOC AFF=be.necessary-FUT-INTR.3SG put.back-IMP.2SG

'(This) is needed in the next days (as well), put it back!' (FJ 144)

The first reliable instances of Kolyma Yukaghir *nadoŋo-* and Tundra Yukaghir *naaduo-* were documented in the 1940s and 1950s among speakers who were born in the nineteenth century. As for the transfer, direct Russian influence does not necessarily have to be postulated, because Sakha has used *naada* at least since the last quarter of the nineteenth century (Siegl 2019). Furthermore, the high degree of bi- and trilingualism among Yukaghirs has long been known. For example,

all seven Tundra Yukaghir consultants on which Kurilov (1977) is based were reported to speak Sakha and except for one consultant the adjacent Tungusic language Even as well. However, Even has not borrowed *nado*. The continuous influence of Sakha on Tundra Yukaghir in Andrjuškino in the twenty-first century is explicitly mentioned several times in Schmalz (2013: 18–20), and Sakha borrowings appear throughout the thesis. Borrowings appear likewise in a number of texts from the twentieth century, as well as obvious structural replications.<sup>39</sup> The influence of Sakha on Kolyma Yukaghir is even more profound, and grammatical particles have been borrowed, such as the indefinite particles *ere* and *de* and the interrogative particle *duo*.<sup>40, 41</sup>

(56)

## a. Kolyma Yukaghir

*met qanin-ere kel-te-je*  
 1SG when-INDEF come-FUT-INTR.1SG  
 ‘I will come some time.’ (KY II 20)

## b. Sakha

*tünneg-e xan-na ere baar buol-la*  
 window-PX3 where-LOC INDEF exist become-PSTI.3SG  
 ‘Her window had to be somewhere.’ (JNS 182)

## c. Kolyma Yukaghir

*kiš-kin-de min-d’el’el-dee-jne m=et=ed’-ie-je uöjoomuje*  
 any-who-INDEF take-INFER-3SG-DS:COND AFF=POT=alive-INCH-INTR.1SG slowly  
 ‘If somebody had taken me, I could slowly have become alive.’ (KY I 102)

## d. Sakha

[...] *ot-ton biir ojoj-toox biir inax-taax da kihi sin olor-oo ini – d’ie-bit*  
 that-ABL one wife-SOC one cow-SOC INDEF man PTC live-FUT.3SG PTC say-PST.RES.3SG  
 ‘‘Then, with a wife and a cow, a man will likely live well,’’ he said.’ (JNS 354)

## e. Kolyma Yukaghir

*kudede duu öjl’e duu?*  
 kill.TRANS.1SG Q no Q  
 ‘Did I kill it, no?’ (KY II 28)

## f. Sakha

*mannik oyon’hor-u kör-dü-ŋ duo?*  
 such old.man-ACC see-PSTI-2SG Q  
 ‘Have you seen such an old man?’ (JNS 248)

39 For example, text 64 (FJ) has a number of Russian borrowings that were clearly not borrowed directly from Russian but from Sakha. In other stories, converbs of motion verbs appear fully reduplicated, a pattern which is pervasive in Sakha (and Dolgan).

40 Whereas Sakha influence is not discussed in Maslova 2003, Russian influence is briefly summarized in the introductory chapter (Maslova 2003: 25–27) and in the main text.

41 This borrowing pattern is certainly unusual, because it is much more usual to find Russian elements in this context (see, e.g., Alvre 2002 among many others).

Summing up, even though Kolyma and Tundra Yukaghir know the Russian nominal predicator *nado*, its use, as well as the possibility of deriving a verb from it, shows more parallels with Sakha than with the donor language Russian.

## ABBREVIATIONS

e.g. .3SG	verbal person	MASC	masculine gender
e.g. 3SG	freestanding pronoun	NEG	negative
ABL	ablative case	NMLZ	nominalization
ACC	accusative case	PART	partitive case
ACT	action nominalization	PASS	passive-reflexive
ADJ	adjectivizer	PL	plural
ADV	adverbializer	POSS	pronominal possessive marker
AFF	affirmative clitic	POT	potential mood
CAUS	causative	PRD	predicative person marking
COMP	comparative case	PREP	prepositive case
CON	converb	PRS	present tense
CON.COND	irrealis conditional converb	PST.RES	resultive past
COND	conditional mood	PSTI	first past tense
DAT	dative case	PSTII	second past tense
DER	derivational suffix	PTC	particle
DS:	differential subject	PTCP	participle
EMPH	1) emphatic particle 2) emphatic clitic	PX	possessive (nominal person) marker
FEM	feminine gender	Q	1) interrogative clitic 2) interrogative particle
FOC	focus	REFL	reflexive
FUT	future tense	SF	subject focus
INFER	inferential evidential	SG	singular
IMP	imperative	SOC	sociative
INCH	inchoative	TEMP	temporal-conditional nominalization
INDEF	indefinite particle	TRANS	transitive
INTR	intransitive	VBLZ	verbalizer
LOC	locative case		

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