

## Passives, impersonals and Voice in Sakha

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**Abstract.** Previous studies on Sakha have diverged on whether to analyze its passives and impersonals as syntactically distinct constructions or not. In this paper, we report a novel variety of Sakha which behaves differently from those recorded in the literature with regard to its passives and impersonals. We argue that in this Sakha variety, the impersonal should be analyzed as an active construction with a null impersonal pronoun, rather than a passive construction. We also discuss the implications of the findings for theories of passives and the typology of Voice.

**Keywords.** Sakha; Turkic; passive; impersonal; Voice

**1. Introduction.** This paper investigates passives (1) and impersonals (2) in Sakha, a Turkic language spoken in Yakutia.<sup>1</sup> Previous work has diverged on whether to analyze (1) and (2) as syntactically distinct constructions (Tan & Köhler 2020) or not (Vinokurova 2005, Baker & Vinokurova 2010, Ebata 2013). Today we report a novel variety where the passives and impersonals behave quite differently from those recorded in the literature. We demonstrate that in this variety, although the two constructions share the same morpheme, the impersonal should be analyzed as an active construction with a null impersonal pronoun rather than a passive construction.<sup>2</sup> We also discuss the implications of the findings for theories of passives (Collins 2005, Bruening 2013, Legate 2014, Alexiadou et al. 2015) and the typology of Voice (Legate et al. 2020).

(1) chaasky aljat-ylyn-na.

cup break-PASS-PST.3SG

‘The cup was broken.’

(2) massyyna-nnan ikki suukka-nnan tijj-ill-er.

car-INS two day-INS arrive-PASS-AOR.3SG

‘One arrives by car in two days.’

This paper is structured as follows. Section 2 introduces relevant background. In specific, Section 2.1 reviews existing literature on Sakha passives and impersonals; Section 2.2 introduces the analysis of Turkish passives and impersonals by Legate et al. (2020), which are very different from Sakha passives and impersonals as recorded in the literature but actually similar to those in the present variety. Section 3 introduces the basic patterns of passives in the present Sakha variety. Then, in Section 4, we argue that passives and impersonals in the present Sakha variety should be analyzed as different constructions. Section 5 presents an analysis of the two constructions. Finally, Section 6 concludes the findings and discusses the theoretical implications.

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<sup>1</sup> In addition to abbreviations from the Leipzig Glossing Rules, in this paper we followed Baker & Vinokurova 2010 in using the following abbreviations in the glosses of examples: AOR, aorist tense/participle; PTPL, past participle.

<sup>2</sup> It is beyond the scope of this paper why impersonals share the same morpheme with passives in Sakha. But crosslinguistically, it is not uncommon for impersonals to bear passive morphology, and it has been argued for some languages that the impersonal develops out of the original passive (see Malchukov & Siewierska 2011).

## 2. Background.

2.1. SAKHA PASSIVES AND IMPERSONALS. Passives in Sakha are marked by the passive suffix *-Illn*, where the vowels are always high, but exhibit vowel harmony where they assimilate to the backness and roundedness features of the last syllable of the stem, (3-5). When the passive suffix is attached to a verb stem together with other morphemes, the passive morpheme precedes the morphemes for tense, aspect and agreement in the linear order, (3-5).

- (3) min tut-ulun-num.  
1 SG catch-PASS-PST.1 SG  
'I was caught.' (Tan & Köhlert 2020:141)
- (4) sulus eh-ilin-ne.  
star explode-PASS-PST.3 SG  
'The star was exploded.' (Tan & Köhlert 2020:142)
- (5) sir ahat-yll-ar.  
earth feed-PASS-AOR.3 SG  
'The earth is fed.' (Tan & Köhlert 2020:145)

There are several phonologically conditioned allomorphs of the passive morpheme, in addition to those derived by vowel harmony. Firstly, when the passive morpheme is preceded by a vowel, an *n-* is inserted as the onset of the passive morpheme, (6-8). The example in (6) also reveals another allomorph: When the passive suffix is followed by a vowel, it surfaces as *-(n)Ill-* with geminate *l* rather than *-(n)Illn-*. (7) and (9) show that when the suffix is followed by a non-alveolar consonant, it surfaces as *-(n)Illl-*

- (6) kiliep sie-nill-er.  
bread eat-PASS-AOR.3 SG  
'Bread is eaten.' (Tan & Köhlert 2020:142)
- (7) min sie-nilli-bit-im.  
1 SG eat-PASS-PTPL-1 SG  
'I was eaten.' (Tan & Köhlert 2020:141)
- (8) sibekki yrge-nilin-ne.  
flower pick-PASS-3 SG  
'A flower as picked.' (Baker & Vinokurova 2010:609)
- (9) min tut-ullu-but-un  
1 SG catch-PASS-PTPL-1 SG  
'I was caught.' (Tan & Köhlert 2020:141)

Having described the allomorphy, we now move on to the morphosyntactic behaviors of passives in Sakha. The passive is characterized by attachment of the passive morpheme, suppression of the agent, and promotion of the theme, (10). Interestingly, the suppressed agent cannot be re-introduced with a 'by'-phrase, which has been interpreted as stronger or more extreme agent suppression in Sakha than in most languages (Ebata 2013, Tan & Köhlert 2020).

- (10) a. min oloppoh-u aljat-tym.  
1 SG chair-ACC break-PST.1 SG

- ‘I broke the chair.’ (Vinokurova 2005:285)
- b. chaasky aljat-ylyn-na.  
cup break-PASS-PST.3SG  
‘The cup was broken.’ (Vinokurova 2005:336)

Another interesting pattern in Sakha is that in sentences where the passive morpheme has been attached, the theme can be optionally marked ACC, (11), (Vinokurova 2005, Baker & Vinokurova 2010, Ebata 2013). Earlier studies have treated the structure with the passive morpheme and the accusative theme as a type of passives, referring to it as ‘syntactic passive’ (Vinokurova 2005) or ‘impersonal passive’ (Ebata 2013). On the other hand, those studies also noted that the structures with and without accusative case on their theme can behave differently. For instance, it has been argued that while the former allow purpose clauses, agent-oriented adverbs, and instrumental phrases, (12a), the latter do not, (12b).

- (11) chaasky(-ny) aljat-ylyn-na.  
cup(-ACC) break-PASS-PST.3SG  
‘The cup was broken.’ (Vinokurova 2005:336)
- (12) a. chaasky-ny sorujan eotyje-nen aljat-ylyn-na.  
cup-ACC intentionally hammer-INS break-PASS-PST.3SG  
‘The cup was intentionally broken with a hammer.’  
b. \*chaasky sorujan eotyje-nen aljat-ylyn-na.  
cup intentionally hammer-INS break-PASS-PST.3SG  
‘The cup was intentionally broken with a hammer.’ (Vinokurova 2005:336)

In contrast to earlier studies, however, Tan and Kühlert (2020) argued for a syntactic distinction between the structures with and without an accusative theme. They claimed that only the structure with a nominative theme is passive, whereas the structure with an accusative theme is an active construction with a syntactically projected null impersonal pronoun; and they provided a number of arguments in support of this distinction. First, while the verb agrees with the theme in passives, it must always be 3SG in impersonals, even though the theme is plural, (13). This suggests that the theme is promoted to the grammatical subject position only in passives. Second, unaccusative verbs in Sakha such as *tijj* ‘arrive’ cannot be passivized, but can become impersonal, (14). Third, consistent with cross-linguistic observations of impersonals (e.g., Legate et al. 2020), the agent must be [+human] in impersonals. For instance, sentence (15) is ungrammatical if the intended agent is non-human, e.g., a bird. They also provided other arguments, including the passive’s inability to allow agent-oriented adverbs like *sorujan* ‘intentionally’, exceptional case marking (ECM) constructions, and control, in contrast to the impersonal.

- (13) a. yges-ter-(\*)y keh-illi-bet-ter.  
tradition-PL-(\*)ACC break-PASS-NEG.AOR-3PL  
‘Customs are not broken.’ (Passive)  
b. yges-ter-y keh-illi-bet.  
tradition-PL-ACC break-PASS-NEG.AOR.3SG  
‘One does not break customs.’ (Impersonal)  
(Tan & Kühlert 2020:145)
- (14) a. \*kini-ler massyyna-nnan ikki suukka-nnan tijj-ill-e-ler.  
3-PL car-INS two day-INS arrive-PASS-AOR-3PL

- Intended: ‘They are reached by car in two days.’ (Passive)
- b. massyyna-nnan ikki suukka-nnan tiij-ill-er.  
 car-INS two day-INS arrive-PASS-AOR.3SG  
 ‘One arrives (there) by car in two days.’ (Impersonal)  
 (Tan & Köhlert 2020:146)

- (15) \*kyhyn keot-ull-er.  
 winter fly-PASS-AOR.3SG  
 Intended: ‘In winter, one flies.’ (Bird) (Tan & Köhlert 2020:146)

Based on the observations above, Tan and Köhlert (2020) have proposed different structures for Sakha passives and impersonals. Figure 1 shows their proposed structure for passives, where the theme starts as the grammatical object, and is later promoted to the grammatical subject position. In contrast, the impersonal is an active construction (Figure 2), with a null impersonal subject.

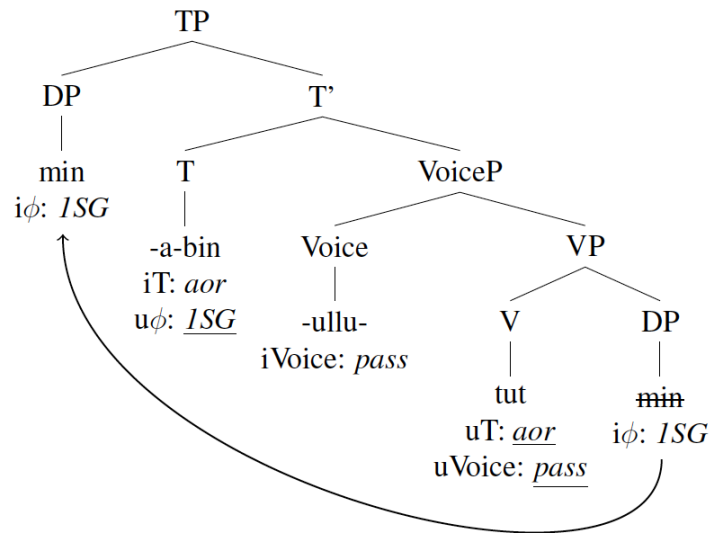


Figure 1. Sakha passive (Tan & Köhlert 2020:149)

Finally, Tan and Köhlert (2020) also noted that the passive morpheme in Sakha cannot stack to create an impersonal of passive, (16-17), which is a passive construction where the theme is syntactically projected as an impersonal pronoun, while the agent is demoted through passive (e.g., Legate et al. 2020). Therefore, they took this as evidence that ImpersP and VoiceP are iterated VoiceP of different flavors in Sakha, assuming the VoiceP cannot be recursively embedded.

- (16) ??qos-ko yeoret-ill-ill-er.  
 room-DAT teach-PASS-PASS-AOR.3SG  
 ‘In the room, one is taught.’ (Tan & Köhlert 2020:150)
- (17) ??ilim-inen tut-ull-ull-ar.  
 net-INS catch-PASS-PASS-AOR.3SG  
 ‘One is caught in a net.’ (Tan & Köhlert 2020:150)

2.2. TURKISH PASSIVES AND IMPERSONALS. This section introduces an analysis of Turkish passives and impersonals by Legate et al. (2020). As we will see, the behaviors of Turkish pas-

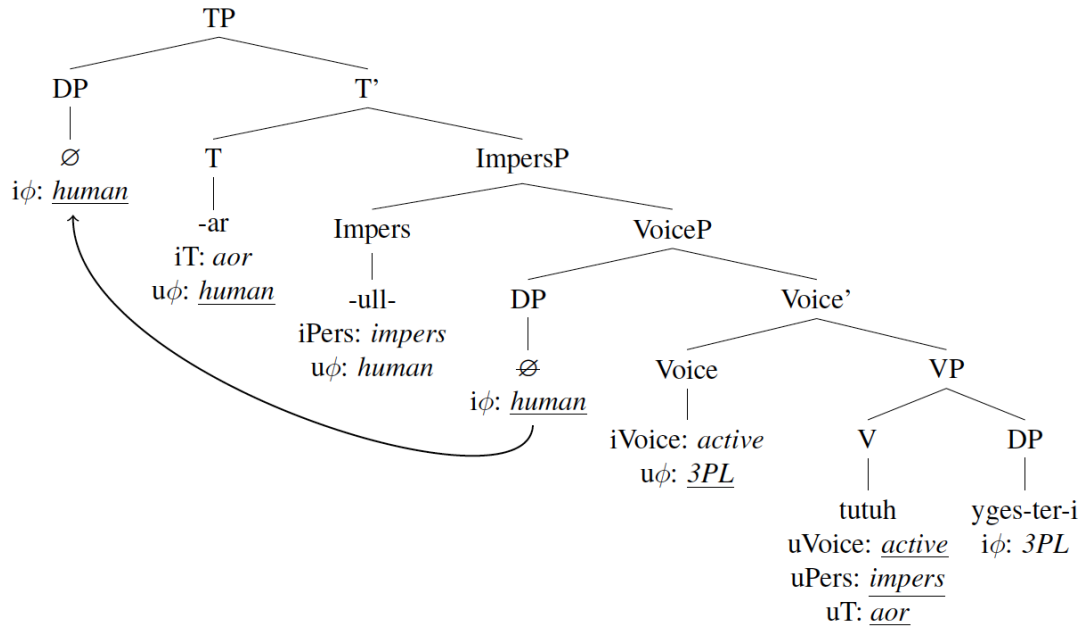


Figure 2. Sakha impersonal (Tan & Kühlert 2020:149)

sives and impersonals are similar to those in the current Sakha variety in many ways.

Legate et al. (2020) argued that contra previous literature (e.g., Özkaragöz 1986, Murphy 2014), passives and impersonals should be analyzed as different constructions in Turkish although they overlap in morphology, based on a number of tests. Some of them are summarized in Table 1. First, different from Sakha, while both Turkish passives and impersonals allow agent-oriented adverbs, only passives allow ‘by’-phrases. Next, an interesting pattern in Turkish is that passives and impersonals are in complementary distribution with regard to the types of verbs that they can occur with: Passives can only occur with transitive verbs that can take a structurally-case-marked accusative object, whereas impersonals can only appear with other types of verbs, including transitive verbs with oblique objects, unergative verbs, unaccusative verbs, and CP-taking verbs. The impersonal also differs from the passive in obeying the human agent requirement, allowing control and depictives, and having DP *wh*-remnants in sluicing.

Legate et al. also observed that Turkish allows stacking the passive morpheme to create an impersonal of passive, (18). Therefore, they argued that ImpersP and VoiceP are distinct projections, assuming that Voice cannot recurse.

- (18) a. bu oda-da döv-ül-ün-ür.  
 this room-LOC beat-PASS-PASS-AOR  
 ‘One is beaten in this room.’  
 b. harp-te vur-ul-un-ur.  
 war-LOC shoot-PASS-PASS-AOR  
 ‘One is shot in the war.’

(Özkaragöz 1986:77)

**3. Passives in the present variety.** This section introduces the basic properties of passives in the present Sakha variety. We will demonstrate that it is very different from what has been recorded in existing literature. First, in the active ~ passive alternation, just as in familiar varieties dis-

	Passive	Impersonal
Agent-oriented adverb	yes	yes
'By'-phrase	yes	no
Transitive verb with ACC object	yes	no
Transitive verb with oblique object	no	yes
Unergative verb	no	yes
Unaccusative verb	no	yes
CP-taking verb	no	yes
Human agent requirement	no	yes
Control	no	yes
Depictives	no	yes
DP wh-remnant in sluicing	no	yes
...		

Table 1. Passives and impersonals in Turkish

cussed earlier, the theme loses its accusative case, the agent is suppressed, and the verb agrees with the theme, suggesting the theme is promoted to the grammatical subject position, (19). However, as will be discussed in greater details in the next section, different from other varieties, the loss of the accusative case on the theme is obligatory in the present variety.

- (19) a. min kuerchekh-ter(-i) on'or-dum.  
 1SG dessert-PL-ACC make-PST.1SG  
 'I made desserts.'  
 b. kuerchekh-ter(-\*i) on'oh-ullu-but-tara.  
 dessert-PL-ACC make-PASS-PTPL-3PL  
 'Desserts were made.'

Another difference between the present variety and others is that the former allows agent-oriented adverbs (20) and instruments (21) in passives, indicating the presence of a thematic Voice (Bruening 2013, Alexiadou et al. 2015). It also allows depictives in passives, (22), which is different from typologically related Turkish (Legate et al. 2020) but not theoretically surprising (e.g., Roeper 1987, Landau 2010).

- (20) a. suruk-tar eoideookh-tuk sur-ullu-but-tara.  
 letter-PL clever-ADV write-PASS-PTPL-3PL  
 'The letters were written cleverly.'  
 b. chaasky sorujan aljat-ylyn-na.  
 cup on.purpose break-PASS-PST  
 'The cup was broken on purpose.'
- (21) tirii-ler elbekh khacchu-nnan atyylah-yly-byt-tara.  
 leather-PL a.lot.of money-INS buy-PASS-PTPL-3PL  
 'The leathers were bought with a lot of money.'
- (22) suruk sitirik sur-ullu-but-a.  
 letter drunk write-PASS-PTPL-3SG  
 'The letter was written drunk.'

**4. Passives vs. impersonals.** In this section, we discuss the distinction between passives and impersonals in the present Sakha variety. We argue that although the impersonal also bears the *-Illn* morpheme, it is syntactically different from passive constructions, and should instead be analyzed as an active construction with a syntactically-projected null impersonal pronoun. In particular, we argue that similar to Turkish but different from familiar Sakha varieties, passives and impersonals in this Sakha variety are in complementary distributions: Passives are only allowed for verbs that can take objects with a structurally assigned accusative case, while impersonals are only allowed for other verbs, including unergative verbs, unaccusative verbs, oblique object verbs, and CP-taking verbs. We present the observations that support the argument below.

4.1. VERBS WITH ACC OBJECTS. For verbs that take a structurally case marked accusative object, we argue that they only allow passives, not impersonals. This is demonstrated by the incompatibility of the passive morpheme and the accusative case on the theme: Different from the literature (Baker & Vinokurova 2010, Tan & Köhler 2020), in the present Sakha variety, once the passive morpheme is attached to the verb, the accusative case is strictly forbidden on the theme (23-25), suggesting that the construction is passive instead of impersonal.

- (23) chaasky(-\*ny) aljat-ylyn-na.  
cup-ACC break-PASS-PST.3SG  
'The cup was broken.'
- (24) kinige(-\*ni) aagh-ylyn-na.  
book-ACC read-PASS-PST.3SG  
'The book was read.'
- (25) sir(-\*i) ahat-yll-ar.  
earth-ACC feed-PASS-AOR.3SG  
'The earth is fed.'

This argument is also supported by the pattern of verb agreement. Recall that Tan and Köhler (2020) observed that the verb can be 3SG even when the theme is plural, which was taken as a test for impersonal, (13b, repeated below as 26). However, the verb agreement pattern is different in the present variety: The verb must agree with the theme, (27), indicating that the theme has been promoted to the grammatical subject position.

- (26) yges-ter-y keh-illi-bet.  
tradition-PL-ACC break-PASS-NEG.AOR.3SG  
'One does not break customs.' (Tan & Köhler 2020:14)
- (27) kuerchekh-ter(-\*i) on'oh-ullu-but-tara.  
dessert-PL-ACC make-PASS-PTPL-3PL  
'Desserts were made.'

4.2. VERBS WITHOUT ACC OBJECTS. For verbs that cannot take an accusative object (i.e., unergative verbs, unaccusative verbs, CP-taking verbs and verbs taking an oblique case object), we argue they only allow impersonals, not passives. We support the argument with three tests.

4.2.1. GENERIC VS. EXISTENTIAL READING. The first test involves the generic vs. existential reading of the agent. Across languages, the agent in passives has an existential reading; in contrast, the agent/theme in impersonals is typically interpreted as non-specific, generic 'one'

(e.g., Cinque 1988, Egerland 2003a,b, Fenger 2018). Here we test the reading of the agent by adding the ‘I don’t know (by) who’ continuation, which requires an existential reading of the agent. Therefore, it should be fine to add this continuation in passives, but would be semantically anomalous to do so in impersonals.

(28) and (29) show that for verbs that take ACC objects, it is fine to add the continuation, suggesting the sentences are passives. In contrast, although it is acceptable to add the passive morpheme to unergative verbs (30) and unaccusative verbs (31), it would be semantically anomalous to add the continuation, which indicates that the agents/themes do not have an existential reading and that the sentences cannot be passive.

(28) kuerchech son’oh-ullu-but-a, min bil-bep-pin kim-inen.  
 dessert make-PASS-PTPL-3SG 1SG know-NEG-AOR.1SG who-INS  
 ‘The dessert was made, but I don’t know by who.’

(29) tirii atyylah-yilly-byt-a, min bil-bep-pin kim-inen.  
 leather buy-PASS-PTPL-3SG 1SG know-NEG-AOR.1SG who-INS  
 ‘The leather was bought, but I don’t know by who.’

(30) ulakhan kihi byhyty-nan olus kuuske ulele-nill-er, #min  
 big person shape-INS very hard work-PASS-AOR.3SG 1SG  
 bil-bep-pin kim.  
 know-NEG-AOR.1SG who  
 ‘As an adult, one works very hard, #but I don’t know who.’ (Unergative)

(31) kyhyn muus-ka okht-ull-ar, #min bil-bep-pin kim.  
 winter ice-DAT fall-PASS-AOR.3SG 1SG know-NEG-AOR.1SG who  
 ‘In winter, one falls on the ice, #but I don’t know who.’ (Unaccusative)

4.2.2. HUMAN RESTRICTION. The second test concerns the human restriction for the agent: A cross-linguistically typical feature of impersonal pronouns is that they only allow a human interpretation (e.g., Cinque 1988, Egerland 2003a,b), whereas there is no such restriction for passives.

For instance, in (32), the most natural interpretation of the agent would be some non-human animal; and the sentence is grammatical, suggesting there is no human restriction for the agent and that the sentence is passive. By contrast, for unergative verbs and unaccusative verbs that can only be used for non-humans, it would be ungrammatical to attach the passive morpheme to the verb, (33-34).<sup>3</sup> This result is expected if (i) passives are not allowed for verbs with no structurally case-marked objects and (ii) there is a human restriction for impersonal pronouns: (33) and (34) cannot be passives because the verbs cannot take an accusative object, and they cannot be impersonals either since the predicates require a non-human agent/theme. Therefore, this test shows again that verbs that cannot take objects with a structurally assigned case only allow impersonals.

(32) oiuur-ga kini ytyr-yllyn-na.  
 forest-DAT 3SG bite-PASS-PST.3SG  
 ‘He was bitten in the forest.’

(33) \*oiuur-ga dyygynaa-nyll-ar.  
 forest-DAT buzz-PASS-AOR.3SG  
 Intended: ‘In the forest, one buzzes.’ (Mosquito) (Unergative)

<sup>3</sup> The verb in (34) is only used for non-human themes, in contrast to the ‘fall’ that can be used with humans in (31).



- (34) \*kuhun tuh-ill-er.  
 autumn fall-PASS-AOR.3SG  
 Intended: ‘In autumn, one falls.’ (Leaf) (Unaccusative)

4.2.3. WH-REMNANT IN SLUICING. Our next test has to do with the wh-remnant in sluicing. Consistent with the cross-linguistic pattern (e.g., Merchant 2001), sluicing requires voice matching in Sakha. In particular, we will see that the wh-remnant in passives must be a ‘by’-phrase, which is denoted by the instrumental case in Sakha; whereas in impersonals, the wh-remnant must be a DP despite the passive morpheme on the verb, indicating an active Voice.

Before examining the data, we would like to point out that although we mentioned before that the impersonal pronoun is often interpreted as non-specific, generic ‘one’, which makes it semantically anomalous to add the ‘I don’t know who’ continuation, the impersonal pronoun can also have an arbitrary interpretation ‘someone, some people’ when it serves as the thematic subject and occurs with specific time reference, a phenomenon that has also been attested cross-linguistically with impersonals (e.g., Cinque 1988, Egerland 2003a,b, Fenger 2018). Therefore, if the sentence is constructed properly, it is still possible to add this continuation in impersonals in order to test the wh-remnant.

Thus, for verbs with accusative objects, the remnant must be a ‘by’-phrase instead of a DP, (35-36), suggesting the sentences are passive. In contrast, the remnant cannot be marked by an instrumental case when other types of verbs are used, (37-41), indicating an active construction.

- (35) kuerchech son’oh-ullu-but-a, min bil-bep-pin kim\*(-inen).  
 dessert make-PASS-PTPL-3SG 1SG know-NEG-AOR.1SG who-INS  
 ‘The dessert was made, but I don’t know by who.’
- (36) tirii atyylah-ylylly-byt-a, min bil-bep-pin kim\*(-inen).  
 leather buy-PASS-PTPL-3SG 1SG know-NEG-AOR.1SG who-INS  
 ‘The leather was bought, but I don’t know by who.’
- (37) ystan-ylyn-na, min bil-bep-pin kim(-\*inen).  
 jump-PASS-PST.3SG 1SG know-NEG-AOR.1SG who-INS  
 ‘Someone jumped, but I don’t know who.’ (Unergative)
- (38) eotypeole-nylyn-ne, min bil-bep-pin kim(-\*inen).  
 swim-PASS-PST.3SG 1SG know-NEG-AOR.1SG who-INS  
 ‘Someone swam, but I don’t know who.’ (Unergative)
- (39) uol-ga keomeoleoh-ulun-ne, min bil-bep-pin kim(-\*inen).  
 boy-DAT help-PASS-PST.3SG 1SG know-NEG-AOR.1SG who-INS  
 ‘Someone helped the boy, but I don’t know who.’ (Verb with oblique object)
- (40) iti kun’-n’e khaia-gha un’-ulun-ne, min bil-bep-pin kim(-\*inen).  
 this day-DAT mountain-DAT pray-PASS-PST.3SG 1SG know-NEG-AOR.1SG who-INS  
 ‘On this day, someone prayed to the mountain, but I don’t know who.’ (Verb with oblique object)
- (41) [bihigi ostuol-u alja-p-pyp-pyt] bil-ilin-ne, min bil-bep-pin  
 1PL table-ACC break-CAUS-PTPL-1PL know-PASS-PST.3SG 1SG know-NEG-AOR.1SG  
 kim(-\*inen).  
 who-INS

‘Someone knew we broke the table, but I don’t know who.’ (CP-taking verb)

4.3. INTERIM SUMMARY. In this section, we have discussed the distinction between passives and impersonals in Sakha. We argue that although the two constructions overlap in morphology, they are syntactically different in this variety. First, the agent in passives only has an existential reading, whereas the agent (or theme for unaccusative verbs) in impersonals can<sup>4</sup> have a generic reading. Second, the agent/theme in an impersonal sentence must be a human referent, while the agent in passives does not have this restriction. Third, in sluicing, the remnant is a ‘by’-phrase for passives, but a DP for impersonals. Taken together, the data indicates that only passives are formed by agent demotion and theme promotion; in contrast, impersonals are active constructions that have a syntactically projected null impersonal noun, which, similar to overt impersonal pronouns observed in other languages (e.g. Cinque 1988, Fenger 2018), exhibits the same generic reading and human restriction properties. Those tests also demonstrate that the two constructions are in complementary distribution regarding the types of verbs they can appear with: Passives are only allowed for verbs that can take an object with a structurally assigned accusative case, while impersonals are only allowed for verbs that lack a structurally case-marked object.

There is a final piece of data to consider before we move on to the syntactic analysis: Similar to Turkish (e.g., Legate et al. 2020), the passive morpheme can stack in this Sakha variety, and the construction is interpreted as an impersonal of passive, (42-43). Assuming that VoiceP cannot recurse, this suggests that ImpersonalP and VoiceP should be analyzed as distinct projections. We will return to this in the analysis.<sup>5</sup>

(42) serii-ge yt-yll-yll-ar.  
war-DAT shoot-PASS-PASS-AOR.3SG  
‘In the war, one is shot.’

(43) oiuur-ga ytyr-yll-yll-ar.  
forest-DAT bite-PASS-PASS-AOR.3SG  
‘In the forest, one is bitten.’

**5. Analysis.** In this section, we propose a syntactic analysis for passives and impersonals in the present Sakha variety, which is the same as the analysis for Turkish in Legate et al. 2020 but different from previous analyses for Sakha in existing literature. We start with stating the theoretical assumptions that we work with. First, we assume thematic Voice and *v*-cause to be two different projections (e.g., Kratzer 1996, Pylkkänen 1999, 2008, Schäfer 2008, Harley 2013, Legate 2014, Alexiadou et al. 2015). The thematic Voice introduces an external  $\theta$ -role and assigns structural accusative case, while *v*-cause introduces causative semantics. Therefore, an active transitive sentence has the structure in Figure 3: The thematic Voice head Voice<sub>ACT</sub> introduces an external  $\theta$ -role, which is encoded by  $\theta$ ; the external argument is generated as the specifier of the Voice head, and we use the [ $\bullet$ D $\bullet$ ] feature (e.g., Müller 2010) on the Voice head to encode the head’s requirement to have a DP specifier; the Voice head also bears an accusative case feature (encoded with ACC), which is assigned to an object.

<sup>4</sup> We did not use ‘must’ because they sometimes can also have an arbitrary reading.

<sup>5</sup> A reviewer asked how this stacking data will fit the discussion on the ‘I don’t know (by) who’ continuation test we applied earlier. We haven’t got the opportunity to test this with our consultants, but the prediction is it will be fine to add the continuation, since the continuatin test only concerns the agent, whereas the impersonal pronoun is the theme instead of the agent in the impersonal of passive construction (more detailed analysis in the next section).

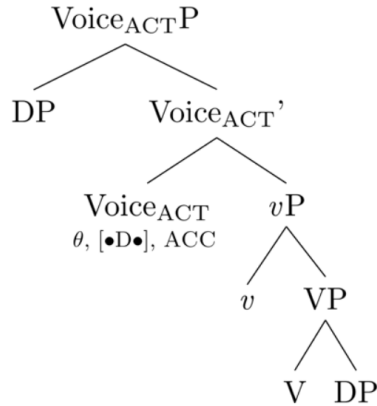


Figure 3. Active construction

Based on those assumptions, we propose that passives in Sakha have the structure in Figure 4. There is a passive Voice head,  $\text{Voice}_{\text{PASS}}$ , which does not introduce an external argument as its specifier (Legate 2014) or assign a structural accusative case. However, the passive Voice head does introduce an external argument  $\theta$ -role. Following Legate et al.’s (2020) analysis of short passives, we assume the external argument position is existentially bound at LF in Sakha passives, as a ‘by’-phrase is not allowed. The theme DP finally raises to  $\text{Spec,TP}$ , where it receives nominative case from T and becomes the grammatical subject. This captures the fact that in passives the theme cannot bear accusative case and the verb must agree with it.

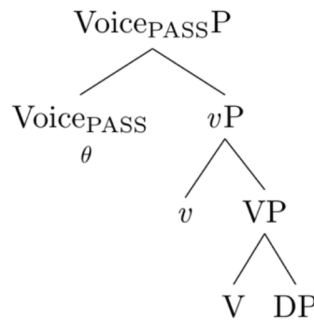


Figure 4. Passive in the current Sakha variety

For impersonals where the verb has a thematic subject, we propose the structure in Figure 5. The fact that the passive morpheme can stack to produce an impersonal of passive suggests that ImpersonalP and VoiceP are different projections. Besides, since the two passive morphemes are positioned adjacent to each other, the ImpersonalP immediately dominates VoiceP. Moreover, we follow Legate et al. 2020 in assuming that the Impersonal head selects for a VoiceP that lacks accusative case assignment, which accounts for the complementary distribution of passives and impersonals. Furthermore, the Voice in impersonals is active, as evidenced by the DP remnant in sluicing. The Voice also introduces an external argument, encoded by  $\theta$  in the tree, and this external argument  $\theta$ -role is saturated by the null impersonal pronoun (IMP), which is projected in the specifier of VoiceP. For the impersonal pronoun, we follow McCloskey 2007 and Legate et al. 2020 in assuming that it is licensed through agreement. Specifically, the Impersonal head bears

the uninterpretable valued  $\phi$ -feature [human], and the impersonal pronoun bears interpretable but unvalued  $\phi$ -features; the Impersonal head undergoes agreement with the impersonal pronoun and values its features (Legate et al. 2020). Thus, the uninterpretable feature of the Impersonal head is deleted, and the pronoun’s interpretable unvalued feature is valued to [human], which accounts for the human restriction of impersonals.<sup>6</sup>

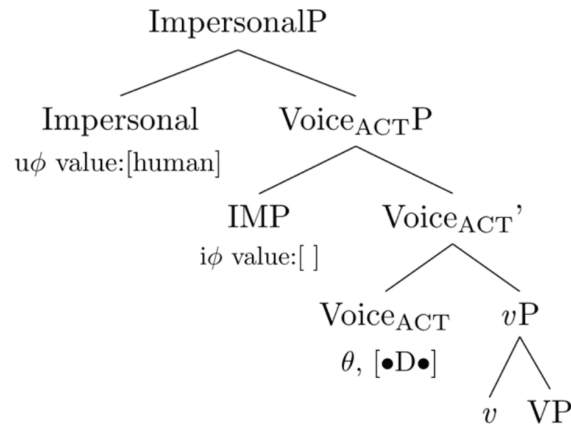


Figure 5. Impersonal where the verb has a thematic subject

Finally, Figure 6 is the proposed structure for unaccusative impersonals and impersonals of passives. Different from the  $\text{Voice}_{\text{ACT}}$  in Figure 5, there is instead a passive Voice head as in Figure 4, which does not introduce an external argument as its specifier or assign accusative case, but introduces an external  $\theta$ -role. The impersonal pronoun, which is generated as the thematic object, is licensed through the same agreement process as discussed above.

To summarize, in this section we have proposed a syntactic analysis for passives and impersonals in the current Sakha variety. We demonstrate that the behaviors of those constructions can be captured by an analysis where only passives involve subject suppression and object promotion; in contrast, impersonals should be analyzed as active constructions with a syntactically projected null impersonal pronoun.

**6. Conclusion and discussion.** This paper has examined a variety of Sakha. We have argued that the passive morpheme is shared by two syntactically distinct constructions: Passive constructions, and impersonal constructions, as evidenced by their different behaviors - the passive agent has an existential interpretation, may be non-human, has a ‘by’-phrase remnant in sluicing, and must be the agent of a transitive verb that takes a structurally case-marked object in active; in contrast, the impersonal agent can have a generic reading, must be human, has a DP remnant in sluicing, and only occurs with verbs that lack an accusative object in active. Those facts support an analysis where the passive agent is demoted, while the impersonal agent is a syntactically projected null impersonal pronoun.

<sup>6</sup> A reviewer raised the question what is the nature of the null impersonal pronoun, whether it is *pro*, and whether it can undergo raising/ECM etc. In the present analysis, the null impersonal pronoun belongs to a variety of pronominals (including *pro* and PRO) that bear interpretable but unvalued features that must be valued in the course of the derivation (MINIMAL PRONOUNS, in the sense of Kratzer 2009). Unfortunately, given the limited duration of the current project, we haven’t got the opportunity to apply more tests such as ECM, but Tan and Kühler 2020 reported that impersonals do allow ECM in Sakha, and our analysis also predicts so.

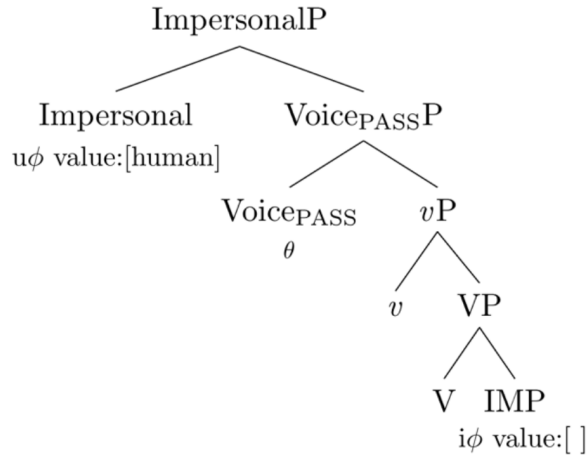


Figure 6. Unaccusative impersonal and impersonal of passive

Therefore, the findings support passive theories that view passive as involving agent suppression (Bruening 2013, Legate 2014, Alexiadou et al. 2015), and challenge the theories which claim that the agent in passive is syntactically realized as the thematic subject (Collins 2005). Furthermore, the data bears implications on the typology of Voice. The availability of impersonals of passives in Sakha supports the analysis which treats ImpersonalP and VoiceP as different projections (Legate et al. 2020) rather than the same projection with different flavors.

Finally, we would like to point out that there are still outstanding data on Sakha passives and impersonals that we cannot completely explain in the current project, and must be left for future research. One unexplained observation concerns reciprocal binding. As background, the Sakha reciprocal word *beiebeieleri* ‘each other’ is not a logophor, but an anaphor that requires a syntactic binder: In the typical logophor context of (44) (e.g., Charnavel 2019), *beiebeieleri* can only be the mothers, not Masha and Aiaana.

- (44) [Masha uonna Aiaana]<sub>i</sub> ereideekh-ter! \*kini-ler<sub>i</sub> iye-ler-e kuerche5-i  
 Masha and Aiaana poor-PL 3-PL mother-PL-POSS dessert-ACC  
 beiebeieleri-ger<sub>i</sub> on’or-uokh-tara suo5a.  
 each.other-DAT make-FUT-3PL NEG.FUT  
 ‘Poor [Masha and Aiaana]<sub>i</sub>! \*Their<sub>i</sub> mothers won’t make a dessert for each other.<sub>i</sub>’

Given that the agent is syntactically projected in impersonals but not in passives, it is predicted that reciprocal binding will be allowed in impersonals but forbidden in passives. The impersonal data behave as expected: Reciprocal binding with unergative verbs (45) and unaccusative verbs (46) are grammatical. The prediction is also borne out for passive sentences where the reciprocal is promoted to the grammatical subject position: (47) is reported to be ungrammatical.

- (45) beiebeieleri-ger ulele-nill-er.  
 each.other-DAT work-PASS-AOR.3SG  
 ‘People work for each other.’
- (46) serii-ge beiebeieleri-ger okht-ull-ar.  
 war-DAT each.other-DAT fall-PASS-AOR.3SG

‘In the war, people fall for each other.’

- (47) \*beiebeieleri tut-ullu-but-a/tara.  
each.other catch-PASS-PTPL-3SG/3PL  
‘Each other was/were caught.’

However, an unexpected finding is that our consultant consistently accepted passive sentences with the dative reciprocal, (48-49). This observation requires further investigation.

- (48) kuerchekh beiebeieleri-ger son’oh-ullu-but-a.  
dessert each.other-DAT make-PASS-PTPL-3SG  
‘A dessert was made for each other.’

- (49) suruk beiebeieleri-ger yyt-ylly-byt-a.  
letter each.other-DAT send-PASS-PTPL-3SG  
‘A letter was sent to each other.’

There is another remaining question regarding the ‘by’-phrase. It has long been observed that unexpectedly, ‘by’-phrases are not allowed in Sakha passives (Ebata 2013, Tan & Köhler 2020); our findings further complicate the picture by showing that in the current variety, while ‘by’-phrases are forbidden in passives, it is obligatory for the wh-remnant in sluicing. It will be necessary for future studies to further investigate the behavior of the ‘by’-phrase in Sakha. Finally, as has been noted throughout the paper, our consultant has offered judgments that are quite different from what has been reported in existing literature on Sakha. While this paper only focuses on the current variety, the language variation among Sakha speakers will also be an interesting topic for future research.

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