

# On Tense and Copular Verbs in Nonverbal Predications in Sakha

Mark C. Baker and Nadya Vinokurova  
*Rutgers University and Yakutsk State University*

## 1. Complexities in the Distribution of Copular Verbs

It is well-known that in many languages copular verbs are not needed with nonverbal predicates when the clause is in present tense, but are needed in other tenses. Hebrew (Rapoport 1987), Arabic (Benmamoun 2000), Russian, and Turkish (Wetzer 1996: 52, Stassen 1997: 46, Baker 2003) are relatively familiar languages that fit this profile. A less familiar example is Sakha (also known as Yakut), a Turkic language spoken in Siberia. (1) shows that no copular/auxiliary verb is needed in the present tense in Sakha; rather, subject agreement attaches directly to the predicate regardless of its category. The same morpheme representing present tense and first person agreement features, *-bit* and its allomorphs, can attach to all three lexical categories (Vinokurova 2005):<sup>1</sup>

- |     |    |                          |           |
|-----|----|--------------------------|-----------|
| (1) | a. | Bihigi bil-e-bit.        | Verb      |
|     |    | we know-AOR-1pS          |           |
|     |    | ‘We know’                |           |
|     | b. | Bihigi bytaam-myt.       | Adjective |
|     |    | we slow-1pS              |           |
|     |    | ‘We are slow.’           |           |
|     | c. | Bihigi balyksyt-tar-byt. | Noun      |
|     |    | we fishermen-PL-1pS      |           |
|     |    | ‘We are fishermen.’      |           |

In future tense, however, a copular verb is needed with adjectival and nominal predicates, although not with verbal predicates, as shown in (2).

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<sup>1</sup> Abbreviations used in the glosses include: ACC, accusative case; AOR, aorist (nonpast) participle; AUX, auxiliary root; BV, Baker and Vinokurova; CAUS, causative; DAT, dative case; FUT, future tense/participle; GEN, genitive; LOC, locative; NEG, negation; NOML, nominalizer; NSF, Inflectional noun suffix; NV, Vinokurova 2005; PASS, passive voice; PAST, (recent) past tense; PL, plural number; PTPL, past participle/remote past tense; SG, singular number; STAT, stative aspect; SUBJ, subject. Agreement morphemes are glossed with a three part symbol, including a number indicating the person of the agreed with phrase (1, 2, or 3), a lower case letter indicating the number of the agreed with argument (s or p), and an upper case letter indicating the paradigm that the agreement form belongs to (S for “predicative” (normal subject agreement) or P for “possessive”). See section 4 for an analysis of the nature of the distinction between the “predicative” and “possessive” agreement paradigms in Sakha.

The reader should be warned that many phonological changes apply to suffixes in Sakha. It has a Turkish-style system of vowel harmony, and consonants also undergo many assimilation processes. As a result, the same morpheme can have quite different-looking allomorphs in different examples.

- (2) a. En aaq-yaq-yŋ. (NV:221)  
 You read-FUT-2sP  
 ‘You will read.’
- b. \*En bytaan-yaq-yŋ; En bytaan buol-uoq-uŋ (also NV: 232)  
 \*Youslow-FUT-2sP You slow be-FUT-2sP  
 ‘You will be slow.’
- c. \*En professor-yaq-yŋ; En professor buol-uoq-uŋ  
 \*You professor-FUT-2sP You professor be-FUT-2sP  
 ‘You will be a professor.’

A standard idea about this is that there is a morphological condition on the future tense suffix, such that it cannot attach to an adjective root or a noun root, but only to a verb root. Hence, a meaningless verb must be included in (2b,c) to bear the tense morphology. Since present tense is not morphologically marked in the same way (there is no overt present tense suffix), there is no similar pressure to include a verbal copula in (1), accounting for the difference.<sup>2</sup> Indeed, most other tenses in Sakha are like future in this respect, rather than like present tense; for example, the same pattern is found with remote past tense *-BYT*, not to mention the nominalizing/gerund suffix *-YY*, and the adverbial suffix *-n*.

But not all the other tenses are like this. Vinokuroka (2005) points out that Sakha has a third pattern, which is visible in the recent past tense. In this tense, an auxiliary verb is needed with nominal predicates only, not with adjectives or verbs, as shown in (3).

- (3) a. Baaska ülelii-r-e.  
 Baaska work-AOR-3sP  
 ‘Baaska was working.’
- b. Baaska bytaan-a.  
 Baaska slow-3sP  
 ‘Baaska was slow.’
- c. Baaska byraas e-t-e *BUT not* #Baaska byraah-a.  
 Baaska doctor AUX-PAST-3sP Baaska doctor-3sP  
 ‘Baaska was a doctor.’ (OK as ‘Baaska’s doctor’)

In this paper, we focus on how this third, less familiar pattern of copula distribution might be accounted for.

This question is more than just a passing curiosity, because it is arguably part of a larger pattern in Sakha. Vinokurova (2005) identifies at least two other

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<sup>2</sup>Baker 2003 tries to deepen this standard account somewhat by deriving the morphological affixation requirements on Tense from the syntax. When present, a Pred blocks T from affixing to the lexical head, if T is an affix but not if it is a clitic. Otherwise, it is formally a stipulation that some languages have tense markers that attach only to verbs, but no language has tense markers that attach only to adjectives, or only to nouns (Stassen 1997). However, we do not study the pattern in (2) further here.

environments in which a copula is needed with a nominal predicate but not with a verbal or adjectival predicate. One is in relative clauses, which are head final in Sakha, a uniformly head-final language. When the predicate of the relative clause is a participial verb form or an adjective, it appears entirely bare (finite verbs are not allowed in relative clauses). But when the predicate of the relative clause is a noun, a nonfinite form of the copula is required in addition to the predicate noun:

- (4) a. Sargy-ga kömölöh-ör kyys (verbal predicate) (NV:258)  
 Sargy-DAT help-AOR girl  
 ‘the girl who helps Sargy’  
 b. Sargy-ga interiehinej kyys (adjectival predicate) (NV:258)  
 Sargy-DAT interesting girl  
 ‘the girl who is interesting to Sargy’  
 c. Sargy-ga sirdjit \*(boul-ar) kyys (nominal predicate)(NV:258)  
 Sargy-DAT guide be-AOR girl  
 ‘the girl who is a guide for Sargy’

The same asymmetry is seen in nonfinite embedded complement clauses—the arguments of verbs like ‘know’, ‘hear’, ‘hope’, and many others. Here possessive-like agreement with the embedded subject can attach directly to the predicate of the embedded clause if the predicate is a verb (participle) or an adjective, but not if it is a noun. If the predicate is a noun, the verb ‘be’ must be included, and it bears the possessive agreement:

- (5) a. En (xohoon) aaq-ar-yŋ bil-l-er.  
 you.SG poem read-AOR-2sP know-PASS-AOR.3sS  
 ‘It is known that you read (poems).’  
 b. En öjdöök-üŋ bihiexe bil-l-er.  
 you.SG clever-2sP we.DAT know-PASS-AOR.3sS  
 ‘It is known to us that you are clever.’  
 c. ??En saaxymatcyt-yŋ bihiexe bil-l-er.  
 you.SG chess.player-2sP we.DAT know-PASS-AOR.3sS  
 ‘It is known to us that you are a chess player.’  
 d. En saaxymatcyt buol-ar-yŋ bihiexe bil-l-er.  
 you.SG chess.player be-AOR-2sP we.DAT know-PASS-AOR.3sS  
 ‘It is known to us that you are a chess player.’

So (3) is not an isolated fact. Rather, there is a cluster of somewhat disparate-looking environments in which adjectives pattern with verbs rather than with nouns when it comes to the use of a copular verb. This is not a morphological quirk of one morpheme or one construction, but a recurring pattern in Sakha.

Vinokurova 2005 therefore gives this pattern a theoretical interpretation, taking it as support for a theory of the lexical category distinctions that is different from that of Baker 2003. Baker claimed that verbs are the only intrinsic predicates among the lexical categories of a natural language; nouns and adjectives are not intrinsically predicative, and must combine with a functional head Pred in order to

function as predicates. This can have as a direct or indirect consequence the fact that a copula may be needed with nominal and adjectival predicates—as in the future tense in Sakha (2). In contrast, based on (3)-(5) Vinokurova claims that both adjectives and verbs are intrinsically predicates (at least in Sakha, although she implies that this might be universal); for her, nouns are the only lexical category that is not intrinsically predicative. She thus defines the three categories as follows: verbs are predicates that intrinsically take two or more arguments, adjectives are predicates that take exactly one argument, and nouns are not intrinsically predicative at all. She thus draws a three-way distinction among the lexical categories in terms of argument structure, whereas Baker draws only a two-way distinction in terms of argument structure (verbs are intrinsically predicates; nouns and adjectives are not) and uses an orthogonal distinction (that of being a sortal, having a referential index) to draw the distinction between nouns and adjectives. And the patterns in (3)-(5) from Sakha do make Vinokurova's view look very plausible for this language, perhaps for all languages.

In a paper related to this one (Baker and Vinokurova 2009), we began a defense of Baker's (2003) approach, showing how it could account for Sakha patterns after all. One phase of this defense was demonstrating that adjectives do form a natural class with nouns after all when it comes to syntactic matters, such as unaccusativity diagnostics. Thus, unaccusative verbal predicates allow their sole argument to be (pseudo) incorporated in Sakha, but neither adjectival nor nominal predicates do. Similarly, unaccusative verbal predicates allow the possessor of their sole argument to raise into the matrix clause, whereas the possessor of the sole argument of adjectival and nominal predicates cannot. This confirms the predictions of Baker 2003, and supports the idea that adjectives and nouns do not differ in intrinsic predicativeness, even in Sakha. We then proposed an alternative account of why the copular verb is needed in (4) and (5). We said that the copula head is inserted to prevent there from being two nominal heads in close proximity in the structure of the clause; otherwise there is a violation of Norvin Richards's (2006) Distinctness condition. However, we left open whether our alternative account should be extended to the past tense paradigm in (3).

In this paper, we review our earlier analysis and then explore an extension of it to (3). In short, we claim that the sentences in (3) have an extra nominal element—a Zeit Phrase pronoun, referring to the speech time, as in Stowell's (1996) theory of the syntax of tense. This ZP pronoun has two visible consequences in the morphosyntax of Sakha. First, it is involved in agreement, causing the form of agreement in (3) (but not in 1) to look like possessive agreement on nouns, not like simple predicative agreement. Second, the ZP is similar enough in category to the predicate nominal to cause a Distinctness effect, forcing there to be an extra verbal projection in (3) (but not in 1). If this is true, then there is a general solution to the distribution of the copula in (3)-(5) in Sakha, and no reason to think that adjectives are more predicative than nouns are.

## 2. Distinctness and Relative Clauses

To introduce and motivate the use of Distinctness, consider first the paradigm of relative clauses, as shown in (4). The other contrasts could be amenable to superficial morphological solutions, of the form “affix X can attach to verb roots and adjective roots but not to noun roots.” One could debate how satisfying such solutions would be—whether they do anything more than stipulate the facts, whether verbs and adjectives really constitute a meaningful natural class for morphology, and so on. But the path is at least open for consideration. What is interesting about relative clause constructions is that there is no sign of an affix attaching to the participial verb or the adjectival predicate. If there is no affix to attach, then it is unnatural to say that a copula is needed with the nominal predicate in order to bear the affix. It thus seems that a syntactic solution to this problem is called for, rather than a morphological solution. Richards’s (2006) Distinctness condition can provide that syntactic solution.

Richards documents an extensive range of situations in a variety of languages in which a phrase of category X cannot occur in the same domain as another expression of category X. Rather, the combination must be “repaired” by either deleting or inserting additional structure to avoid having two Xs in the same local domain. Richards implements this insight as a constraint on linearization. He proposes that if the syntax feeds into PF an ordering statement of the form  $\langle X, X \rangle$ , where one instance of X is said to have to precede a second instance of X, PF is unable to distinguish the two Xs, becomes confused, and crashes:

- (6) Distinctness: If a linearization statement  $\langle X, X \rangle$  is generated, the derivation crashes.

Richards makes it clear that X can stand for two instances of the same category, or for two categories that bear some of the same features, the exact details of how much similarity is tolerated varying somewhat from language to language. Since Richards adopts the currently-standard view that spell-out and hence linearization happens one phase at a time, this amounts to saying that there cannot be two distinct expressions of category X within the same spell-out domain. Since our goal here is not to reduce the Distinctness condition to first principles, but to apply it to a new body of data, we build these assumptions into the statement of Distinctness explicitly, giving us the working version in (7).<sup>3</sup>

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<sup>3</sup> Note that we are not committed to Richards’ particular derivation of Distinctness from the needs of PF linearization. A more syntactic version, built into the operation of Merge for example, would also work. All that is necessary to us is that something like (7) be true.

Richards crucially assumes that the Distinctness condition only applies to functional categories, not to lexical categories. For him, then, Distinctness might rule out having two Ds in the same phase, but does not rule out having two nouns in the same phase. We understand Distinctness as applying in principle to lexical categories as well as functional categories, so that one can capture contrasts like (8) and (9) even in languages like Sakha which (we believe) do not have nonpossessive determiners. It may be that there are some languages in which determiners create Distinctness violations but bare nouns do not (e.g., Hebrew, in order to account for construct state constructions on Richards’s analysis). We assume that such phenomena can be

- (7) *Distinctness*: A structure will be filtered out if it contains two expressions, X and Y, such that X asymmetrically c-commands Y, X and Y are contained in the same spell-out domain, and X and Y both have the same category/feature Z (Z parameterized).

Of the many instances of distinctness Richards discusses, some involve having two noun projections in the same local domain. For example, it is a well-known fact, traditionally ascribed to Case theory, that a noun (simple or derived) cannot take an NP/DP as its complement in English and many other languages:

- (8) a. \*the father [the bride]  
b. \*the destruction [the city]

These violate (7) with  $X=father/destruction$ ,  $Y=bride/city$ , and  $Z=N$  (or D, or some subfeature of N). The violations are avoided by including a preposition structurally between the complement noun and the head noun, as in (9).

- (9) a. the father [of the bride]  
b. the destruction [of the city]

Richards assumes that PPs are phases; hence, when *of* is included, *destruction* and *city* are no longer contained in the same spell-out domain. One is spelled out before the other, and their similarity in category does not lead to a violation at PF.

Even closer to the cases that concern us, Richards claims that the Distinctness condition applies to nonfinite relative clauses in English, accounting for contrasts like the following:

- (10) a. a person with whom to dance  
b. \*a person whom to admire  
c. a person – to admire

The ungrammatical (10b) has an NP *whom* in Spec, CP of the infinitival clause. This relative clause is merged with the nominal *person*, such that *person* asymmetrically c-commands *whom*, and the two are of the same category (NP or DP). Finally, since *whom* is at the edge of the CP phase (the relative clause), it is not spelled out with the rest of the CP, but survives to be spelled out with the higher phase. Therefore, (10b) violates the Distinctness condition, much as (8) does. In contrast, (10c) is possible because the relative operator is phonologically null; as such, it is invisible at PF, and issues of how it is ordered with respect to the head of the relative do not arise. Finally, (10a) is grammatical because the NP *whom* is contained inside a PP headed by *with*. Since PP is a phase (and *whom* is not at its edge), *whom* is part of a different spell out domain from *person* in this

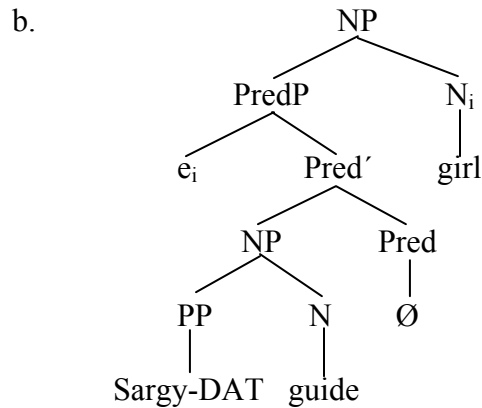
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captured by adjustments of which features Z Distinctness is sensitive to in a particular language. For example, Distinctness in Hebrew might be violated when two categories in the same phase have some feature that is borne by determiners but not nouns in Hebrew.

example, and there is no violation. Hence, the contrast between (10a) and (10b) is explained in the same way as the similar-looking contrast between (8) and (9)—an advance over classical case theory, which applied only to (8) versus (9).

There is a clear similarity between these cases analyzed by Richards and our paradigm in (4). The ungrammatical case of a bare nominal predication functioning as a relative clause such as (11a) has roughly the structure in (11b).

- (11) a. \*Sargy-ga sirdjit kyys (nominal predicate, =4c)  
 Sargy-DAT guide girl  
 ‘the girl who is a guide for Sargy’



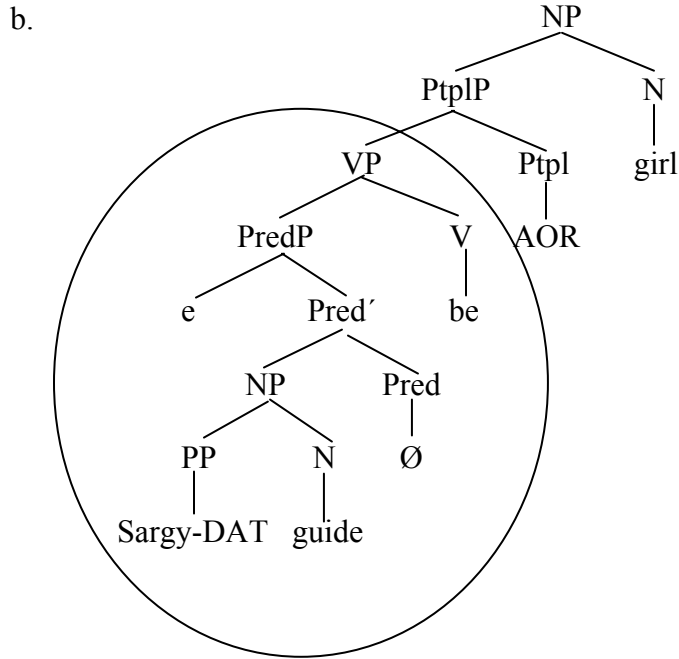
In this structure, it is clear that ‘girl’ asymmetrically c-commands ‘guide’, and has the same category features as it. The main question, then, is whether the NP predicate is in the same spell-out domain as the head of the relative clause or not. It is plausible to say that it is: clearly there is no overt verb, adposition, or complementizer that heads a projection that contains one and not the other. Here it is presumably important that Sakha has only reduced, participial relative clauses, not full finite CP relative clauses (cf. (4a); see Krause 2001 for more general discussion of this phenomenon). Such participial relative clauses are plausibly not phases. Indeed the only head other than the nouns that is definitely present here is Pred, and that is presumably not a phase head. Assuming this, the representation in (11b) violates the Distinctness condition, and is ruled out.<sup>4</sup>

<sup>4</sup>One question that arises here is whether the subject of a predication itself creates a Distinctness violation with the nominal predicate, even when it is not extracted to form a relative clause. We claim that the answer is yes: this could explain why the subject of a nominal predication cannot receive a low, existential reading (in English or Sakha) even when a noun is arguably stage level, whereas the subject of (some) adjectival predications can (cf Diesing 1992).

- (i) a. Oonnjuu-ga oqo-lor naada-lar (Predicate Adj, existential reading)  
 play-DAT child-PL need-3pS  
 ‘(Some) children are needed in the play.’  
 b. #Bu samolek-ka oqo-lor passazhir-dar (Noun predicate)  
 This airplane-DAT child-PL passenger-3pS  
 Not: ‘There are some children who are passengers in this plane.’  
 Only OK with a generic reading: ‘In this plane children are the passengers.’

Now compare this with the grammatical equivalent of (11a), in which a participial form of the copula ‘be’ is included. Its structure is overall rather similar to (11b), but contains projections of at least two extra heads, V and the participle morpheme it bears:

- (12) a. Sargy-ga sirdjit buol-ar kyys (nominal predicate, =4d)  
 Sargy-DAT guide be-AOR girl  
 ‘the girl who is a guide for Sargy’



‘Girl’ still asymmetrically c-commands ‘guide’ in this version, and they still have the same category. But it is plausible to say that there is now a phase boundary that contains ‘guide’ but not ‘girl’, such that the two are in different spell-out domains. In particular, Baker and Vinokurova (to appear) argue that all VPs in Sakha are phases for purposes of case assignment. Carrying that assumption over the VP headed by ‘be’ in (12b), there is no Distinctness violation in this structure. Just as including additional PP structure avoids a Distinctness violation between two NPs in the English examples in (9) and (10), so including extra VP structure avoids one here.

Now suppose that the predicate inside the relative clause is an AP rather than an NP, as in (4b). Then no copular verb is required. This is now expected: a structure like ‘Sargy-DAT interesting girl’ would have exactly the same structure as (11b), but the complement of Pred would be AP, not NP. This AP does not

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Thus, NP must raise out of the Spec, PredP position in English and Sakha and cannot reconstruct there, on pains of violating Distinctness. (Note that undergoing movement is another way to avoid Distinctness violations in Richards’s work.) The open question, then, is where exactly does the subject of nominal predicate raise to, such that it is in a different phase from the NP predicate itself, even if no auxiliary is projected (perhaps some position on the left periphery, outside the spell-out domain associated with C?).

have the same category features as the head of the relative clause ‘girl’. Hence, no Distinctness violation arises here, regardless of whether the predicate and the head are in the same spell-out domain or not. No copular verb is needed as a repair, and general economy considerations imply that none is used.

This analysis extends immediately to constructions in which a clausal constituent is merged with a noun like ‘rumor’ or ‘news’. Such constructions are different from relative clauses in certain syntactic and semantic respects; there is, for example, no gap in the clause left by the extraction of an argument. However, they are like relative clauses in that a reduced clause (less than a CP) merges with a nominal head. Hence, it is not surprising that a nonfinite copula is needed with a nominal predicate but not with other sorts of predicates in this construction also:

- (13) a. En kel-bit suraq-yŋ  
 you come-PTPL rumor-2sP  
 ‘a rumor that you came’  
 b. En djolloox suraq-yŋ  
 you happy rumor-2sP  
 ‘the rumor that you are happy’  
 c. ehigi professor-dar \*(buol-ar) surax-xyt  
 You.PL professor-PL \*(be-AOR) rumor-2pP  
 ‘the rumor that you are professors’

When the reduced clause contains only a nominal predication, as in (13c), a Distinctness violation results between the nominal head ‘rumor’ and the nominal predicate ‘professor’. If the predication is not nominal, or if the nominal predication is hidden inside a VP phase created by a copular verb, then there is no Distinctness violation. The structures are identical to those in (11) and (12), except that they have ‘rumor’ in the place of ‘girl’, and the subject of the predicate is an overt NP, not a gap bound by the head of the nominal as a whole.

Although full CPs with a finite complementizer (*dien*) cannot function as relative clauses in Sakha, they can function as complements to nouns like ‘rumor’. Hence, (14a) is possible as an alternative to (13a). Unlike the reduced participial clause, the finite CP is a phrase in its own right. We therefore predict that if a sentence like (14a) has a nominal predicate rather than a verbal one, no auxiliary ‘be’ is needed. The nominal predicate is inside the spell-out domain defined by the phase head C and the head noun ‘rumor’ is not, so there is no Distinctness violation. This prediction is correct, as shown by (14b).

- (14) a. En kel-li-ŋ dien surax  
 you come-PAST-2pP that rumor  
 ‘a rumor that you came’  
 b. ehigi professor-dar-gyt dien surax  
 You.PL professor-PL-2pS that rumor  
 ‘the rumor that you are professors’

Informally speaking, some relevant head must intervene between ‘rumor’ and ‘professor’ to separate the two instances of the same category, but either a V (‘be’) or a C (‘that’) is equal to the task, these both being phase heads.

### 3. Distinctness and Complementation

Consider next the fact that a copula is needed when a nominal predication functions as the direct argument of a verb, as shown in (5) and again in (15).

- (15) a. En (xohoon) aaq-ar-g-yn bil-e-bit.  
 You.SG poem read-AOR-2sP-ACC know-AOR-1pS  
 ‘We know that you read (poems).’
- b. En yraas-k-yn bil-e-bit.  
 you clean-2sP-ACC know-AOR-1pS  
 ‘We know that you are clean.’
- c. ??En byraas-k-yn bil-e-bit  
 you doctor-2sP-ACC know-AOR-1pS  
 ‘We know that you are a doctor.’
- d. En byraas buol-ar-g-yn bil-e-bit  
 you doctor be-AOR-2sP-ACC know-AOR-1pS  
 ‘We know that you are a doctor.’

At first glance, it seems like the Distinctness story is unlikely to generalize to explain the deviance of (5c) and (15c). Here a nominal predication is merged with a verb, rather than with a noun, so Distinctness should not apply in this case.

However, there are excellent reasons to say that the examples in (5) and (15) have a bit more structure than meets the eye. The participial phrases in (15a) have somewhat different properties from the participial phrases found in relative clauses like (4a). In particular, the participle must show agreement with the subject of the participial clause in (15a), whereas participles in relative clauses cannot show any agreement at all. Moreover, the agreement in (15) is possessive-type agreement, like the agreement that nouns have with their possessors. This suggests that the embedded clause in (15a) is “nominalized” in some sense.

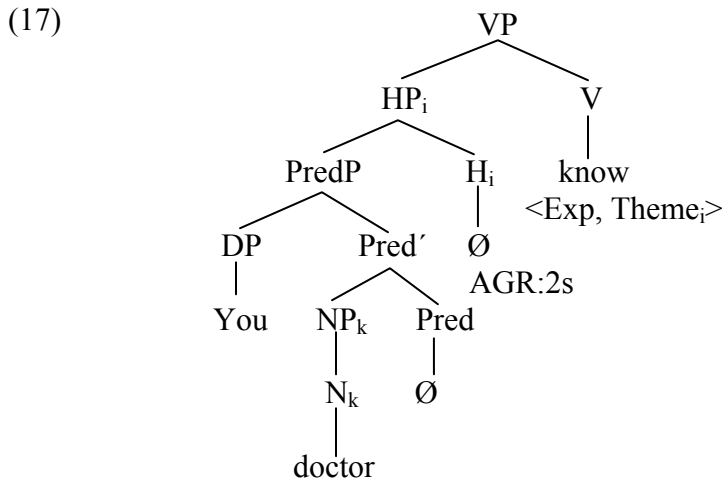
Indeed, there is plenty of additional evidence that this is the case. First, note that the clause in (15a) is (and must be) marked for accusative case, just as NP objects of verbs are in Sakha. When the complement of this type of verb is a pure CP, headed by the (historically verbal) complementizer *dien*, no such accusative case marking appears. Thus, one finds contrasts like the following:

- (16) a. Sardaana beqehee [bügün Aisen kel-er dien] ihit-te.  
 Sardaana yesterday today Aisen come-AOR that hearPAST.3sP  
 ‘Sardaana heard yesterday that Aisen is coming today’
- b. Min [ehigi бүгүн kyaj-byk-kyt-yn] ihit-ti-m.  
 I you today win-PAST-2pP-ACC hear-PAST-1sP  
 ‘I hear that you won today.’ (more lit. ‘I hear of your winning today.’)

This shows that participial complements are “more nominal” than CPs, in that they must be case-marked like NPs. Participial clauses also have exactly the same external distribution as NPs/DPs do in Sakha, whereas CPs headed by *dien* do not. For example, a participial clause can function as a syntactic subject, whereas a CP cannot, and participial clauses can be objects of postpositions like *kytta* ‘with’ and *dyly* ‘until’ in Sakha, whereas CPs headed by *dien* cannot. Finally, any argument can be extracted from a *dien* clause like (16a), whereas the more nominal participial clauses are islands for the extraction of anything but the subject of the participial clause (where agreement may play a role in licensing the trace).

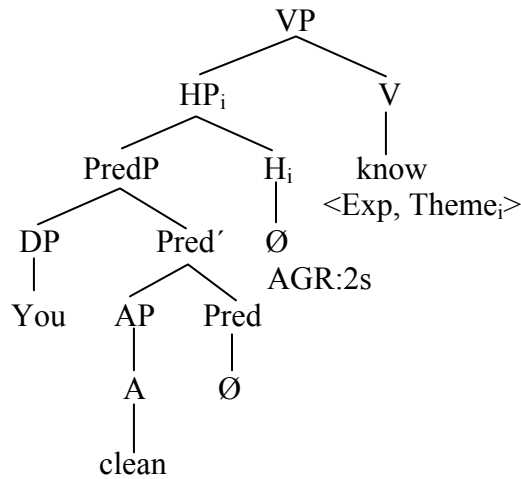
Now in general it seems that there is nothing intrinsically nominal about participles in Sakha. For example, they can be used in relative clauses (as in (4a)) and as main verbs in complex tenses, and in those contexts they have no detectable nominal properties. Let us say, then, that participle heads in Sakha are never nominal, nor are they themselves be probes for agreement. Their projections can, however, be used as the complement of an abstract head that is both nominal and bears case and agreement features. We call this abstract head H.

These considerations generalize immediately from the PtplP projections that constitute reduced clauses built out of a verbal predicate to the PredP projections that constitute reduced clauses built out of adjectival or nominal predicates. These projections also need to be embedded in an HP in order to act as an argument of the selecting verb. Given this, the structure of the matrix VP of (15c) is:



Now H, though probably not exactly a noun itself, certainly has many features in common with it, given that HP shares the gross distribution of NP and acts like NP for purposes of case theory. H can thus trigger a Distinctness violation if it is in the same spell-out domain as an NP predicate, according to (7). Indeed, H asymmetrically c-commands the NP in (17), there is no phase boundary between them, and H and NP share crucial features. Therefore (15c)/(17) is ruled out by Distinctness. In contrast, (15b) is possible because the AP predicate does not share features with H. Its representation would be (18).

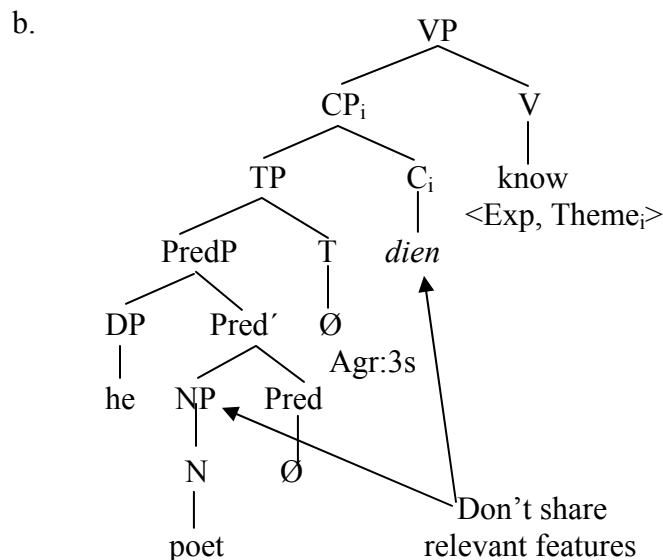
(18)



Finally, (15d) is possible because the NP predicate is contained in a VP headed by ‘be’, which is (by hypothesis) a phase. On the one hand, H cannot be left out in (15c), because PredP by itself has no referential index, hence it cannot be an argument of the verb. On the other hand, if H is included, it creates a Distinctness violation given its proximity to the nominal predicate it shares features with.

It is also worth noting that *dien* (although a referential index bearer) is less nominal than H, as shown by the Case theory difference in (16) and related distributional differences. Hence it is not surprising that this C, unlike H, does not force the use of ‘be’ with a nominal predicate:

- (19) a. Kini xohoonnjut dien bil-l-er. (NV:255)  
He poet(3sS) that know-PASS-AOR.3sS  
‘It is known that he is a poet.’



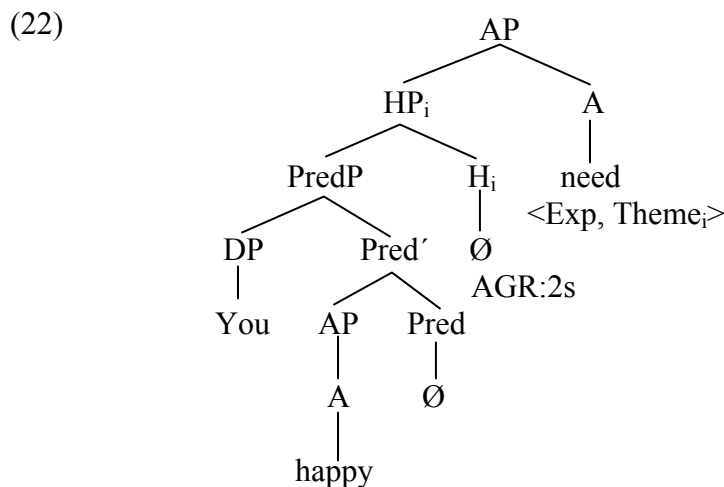
We have focused on clausal complements of V, but the same factors apply to any head that assigns a theta-role to a clausal complement. Hence, ‘be’ is also necessary when an NP functions as the clausal complement of an adjective, like *naada* ‘need’:

- (20) a. \*Miexe en balyksyt-yŋ naada.  
 (me.DAT) you fisherman-2sP necessary  
 ‘It is necessary (for me) that you be a fisherman.’  
 b. (Miexe) en balyksyt buol-ar-uŋ naada.  
 (me.DAT) you fisherman be-AOR-2sP necessary  
 ‘It is necessary (for me) that you be a fisherman.’u

Again, the main predicate ‘necessary’ and the embedded predicate ‘fisherman’ are of different categories, so one would not necessarily expect Distinctness to force there to be a copula here. But the clause is an argument of the adjective, so H is needed to “nominalize” it. The presence of the noun ‘fisherman’ and H in the same domain does then invoke distinctness considerations. The same also holds of clausal complements of nouns, giving us another possible analysis of constructions headed by ‘rumor’ and ‘news’ in Sakha.

Our proposal in terms of Distinctness makes one rather bold new prediction, concerning the use of copular verbs with AP predicates. We have seen that AP predicates do not need copulas when the clause-like construction formed from them is the complement of a verb (15b), nor when it is the complement of a noun like ‘rumor’ (13b). However, we might expect that a copula would be necessary in the special circumstance that a clause containing an adjectival predicate functions as the complement of an adjective. This is strikingly the case:

- (21) a. \* (miexe) en öjdööq-üŋ/djollooq-uŋ naada  
 (me.DAT) you clever-2sP/happy-2sP necessary  
 ‘It is necessary (for me) that you be happy/clever.’  
 b. (miexe) en öjdöox/djolloox buol-ar-yŋ naada  
 (me.DAT) you clever/happy be-AOR-2sP necessary  
 ‘It is necessary (for me) that you are happy/clever.’



In the structure in (22), ‘need’ and ‘happy’ share the category adjective, and ‘need’ asymmetrically c-commands ‘happy’. If we add the assumption that H is not a phase head (a matter that deserves further investigation), then no phase contains the one adjective but not the other. Hence, there is a need for a VP projection dominating the lower AP here, unlike in other structures that contain an AP predicate, including (18).<sup>5</sup> We take this otherwise quirky-seeming fact to be excellent evidence that something like Richards’ Distinctness condition is an important factor in determining the distribution of the copula in Sakha.

#### 4. Distinctness and the Recent Past Tense

There is thus rather compelling evidence that a Distinctness condition is at work in Sakha, forcing copular verbs to be used in some cases—often with nominal predicates, but occasionally also with adjectival predicates. The remaining question, then, is whether Distinctness is always the reason for nominal predicates needing a copular verb when adjectival ones do not, or whether there are also other factors at work—perhaps including Vinokurova’s (2005) idea that adjectives are more predicative than nouns.

The other notable place in Sakha where copular verbs are used with predicate nouns but not verbs or predicate adjectives is in the simple (recent) past tense, as shown originally in (3), repeated and expanded in (23). This tense can be signaled in one of two ways. It can be expressed in a “full” form, by having the lexical predicate—a participial verb, an adjective, or a noun—followed by the dummy auxiliary *e-*, plus past tense marker *-dI* (an affix that can also attach directly to bare verb stems), plus an agreement marker. Alternatively, this tense can be signaled by a “short form”, in which the auxiliary root and tense marker are omitted and agreement attaches directly to the lexical predicate. This short form is possible with verbal and adjectival predicates, but not with nominal ones:

- (23) a. Baaska ülelii-r e-t-e *OR* Baaska ülelii-r-e.  
 Baaska work-AOR AUX-PAST-3sP Baaska work-AOR-3sP  
 ‘Baaska was working.’
- b. Baaska bytaan e-t-e *OR* Baaska bytaan-a.  
 Baaska slow AUX-PAST-3sP Baaska slow-3sP  
 ‘Baaska was slow.’
- c. Baaska byraas e-t-e *BUT not* #Baaska byraah-a.  
 Baaska doctor AUX-PAST-3sP Baaska doctor-3sP  
 ‘Baaska was a doctor.’ (OK only as ‘Baaska’s doctor’)

Let us consider then what would be involved in attributing this pattern also to the Distinctness condition, even though there is no obvious nominal element other

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<sup>5</sup> This effect happens only if one A c-commands the other A, which happens only if the clause is an internal argument of the matrix A, not if it is a thematic subject. Hence, the copula is needed only if the matrix verb is an “ergative adjective” in the sense of Cinque 1990, not if it is an adjective like ‘good’. See BV 2009 for an example and some discussion.

than the predicate. More specifically, we entertain the possibility that this is a Distinctness violation triggered by the proximity to the nominal predicate of a time-denoting pronominal element—a ZP, as in the theory of Stowell (1996).

#### 4.1. *Possessive versus Predicative Agreement*

As a first step toward building an analysis of (23) in terms of Distinctness, we ask what actually signals the past tense in the short forms of (23a) and (23b). While it is common for auxiliary roots to disappear in shortened synthetic forms, it is somewhat surprising that the tense marker is also absent in the short forms, leaving only an agreement marker. The question arises, then, as to what differentiates past tense from present tense in these forms. The answer is the type of agreement marker: in the present tense, the predicate bears agreement from what Vinokurova (2005) calls the predicative agreement paradigm, whereas in the past tense it bears an agreement morpheme drawn from what Vinokurova calls the possessive agreement paradigm. (24) gives a minimal pair.

- (24) a. Min bil-e-*bin*. (NV:236)  
I know-AOR-1sS  
'I know'  
b. Min bil-er-*im*. (NV:226)  
I know-AOR-1sP  
'I used to know.'

As its name suggests, the kind of agreement used in the past tense also appears on nouns that agree with their possessors. Thus it is also seen in (25).

- (25) Min kinige-ler-*im* (NV:154)  
I book-PL-1sP  
'my books'

But this should not be taken as meaning that (24b) is nominalized in any sense. "Possessive agreement" is also prominent in the verbal system of Sakha. For example, it is used also with the future tense:

- (26) Min aaq-yaq-*ym* (cf. NV:221)  
I read-FUT-1sP  
'I will read.'

Indeed, possessive agreement is used more widely in the verbal system than predicative agreement is. It is used everywhere except in the simplest tense—present—and in certain complex tenses that are constructed out of the present ("past resultative"—similar to a present perfect in English—and "past episodic"). All other tenses use "possessive" agreement, including future, immediate past, remote past, past imperfect, pluperfect, and pluperfect episodic (Vinokurova 2005:238). What then should be made of the fact that the same agreement

morphemes are used in a part of the nominal system and in a part of the verbal system?

Exploring the parallelism further, it might be relevant that part of the so-called predicative agreement paradigm is also used on nouns. In particular, third person singular  $-\emptyset$  and third person plural  $-lar$  also appear on nouns; in this context, they mark whether the noun is (third person) singular or plural. So we have the following additional parallel between noun inflection and verb inflection:

- (27) a. kinige-( $\emptyset$ ) book-SG(3rd) '(the) book'  
 b. kinige-ler book-PL(3rd) '(the) books'  
 c. bil-er-( $\emptyset$ ) know-AOR-(3sS) 'he/she/it knows'  
 d. bil-el-ler know-AOR-3pS 'they know'

We can capture the generalization if  $-lar$  is a realization of agreement in (third person and) number on an otherwise empty D head with its NP complement.<sup>6</sup> In other words, third person plural features acquired by agreement are spelled out as  $-lar$  on both a D agreeing with its NP complement and a T agreeing with its NP/DP subject. Similarly, third person singular features acquired by agreement are spelled out as  $\emptyset$  on both D and T.

What then would possessive agreement be, from this perspective? We can think of it as the morphological realization of a D that agrees twice, once with its NP complement, and once with its specifier. (See Baker 2008: Sec. 3.3.3, among others, on the possibility of a single head agreeing with more than one NP.) The complement of D is always third person,<sup>7</sup> so agreement with this NP will only be realized as  $-lar$  or  $-\emptyset$ , but its specifier (the possessor) can have any combination of person and number features. On this view, the form  $-(t)E$  from the "possessive" paradigm would be analyzed as an affix that shows agreement with two distinct third person singular NPs, the complement of D and the specifier of D. In contrast,  $-IEr-E$  (also from the possessive paradigm) is an affix that shows agreement with two third person NPs, at least one of which is plural:

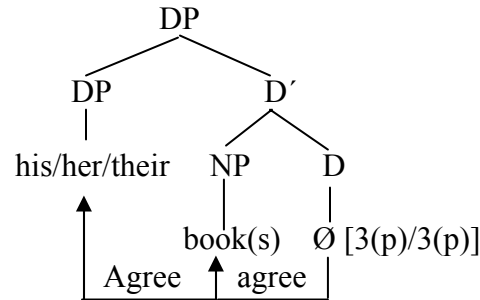
- (28) a. kinige-te; kinige-ler-e  
 book-3+3(+SG) book-PL-3+3  
 'his/her book' 'their book' or 'his books' or 'their books'

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<sup>6</sup> Plural marking is determiner-like in Sakha in another respect: it is incompatible with pseudo-noun incorporation, unlike in Hindi and Hungarian, where plural marked nominals can be (pseudo)-incorporated (Veneeta Dayal, personal communication). The might be a sign that the plural morphemes in Hindi and Hungarian are true number markers on N, whereas  $-lar$  is a kind of agreement on D in Sakha. The contrast would follow from this difference in the grammatical status of the plural marker, plus the known fact that D blocks pseudo-incorporation in all languages.

<sup>7</sup>Unless perhaps one analyzes local pronouns into component parts...something we do not attempt here.

b.



The next question is, can we extend this double agreement view to the use of  $-\emptyset$  and  $-lar$  versus  $-(t)E$  and  $-lEr-E$  on verbs, as seen in (29)?

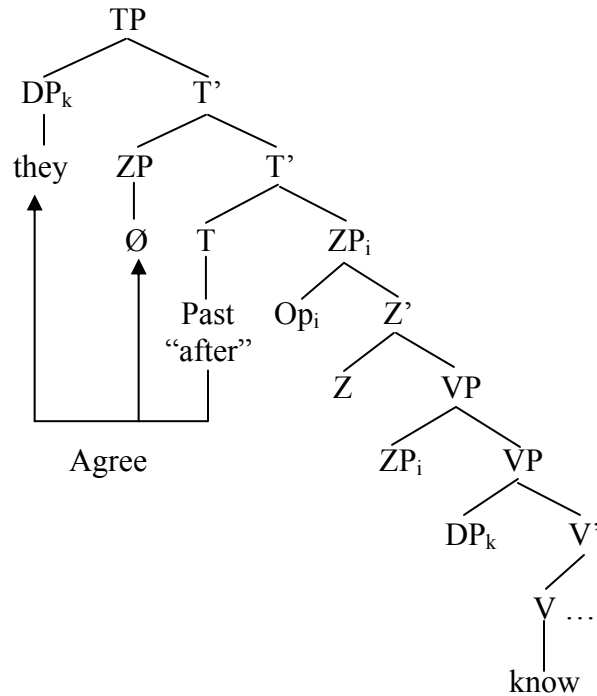
- |      |    |                        |                  |                     |
|------|----|------------------------|------------------|---------------------|
| (29) | a. | bil-er-( $\emptyset$ ) | know-AOR-3s      | 'he knows'          |
|      | b. | bil-el-ler             | know-AOR-3p      | 'they know'         |
|      | c. | bil-er-e               | know-AOR-(3s).3s | 'he used to know'   |
|      | d. | bil-el-ler-e           | Know-AOR-(3s).3p | 'they used to know' |

The answer would be yes if we could say that past tense and future tense verbs agree with a second NP-like element, something that is not there in the present tense. What could that be? The answer, we suggest, is a ZP, in the sense of Stowell 1996.

#### 4.2. The Syntactic Representation of Tense

Building on earlier work by Zagana, Stowell (1996) takes the view that tenses are semantically predicates that take two time-denoting expressions as their arguments. The internal argument of a T(ense) head is a time-denoting expression constructed from VP: it refers to the time at which the event denoted by VP takes place. The external argument of a Tense head is a null pronoun-like entity, which Stowell calls ZP (for 'zeit phrase'). In simple matrix clauses (more generally, in the absence of an overriding control relationship), this null ZP, having no descriptive content of its own, can only refer to the time when the sentence is uttered. On Stowell's assumptions, then, a past tense sentence like (29d) has the syntactic structure in (30).

(30)



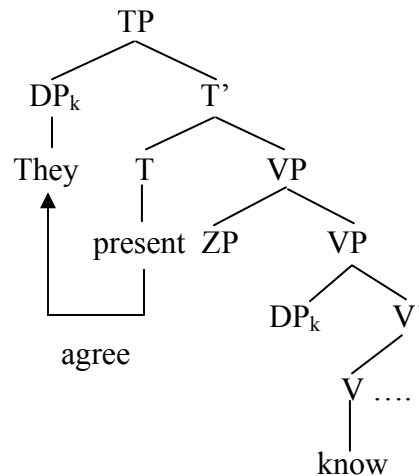
Stowell takes the past tense morpheme to mean ‘after’, and its two semantic arguments are the null ZP and (something that contains) the VP. (Stowell technically assumes that VP is embedded inside another ZP, thereby creating a time-denoting relative clause, much as VP embedded in a DP might constitute a thing-denoting relative clause, but these details are not crucial here.) Since the null ZP must refer to the time of the utterance, the sentence as a whole means “Now is after the time when they knew that...”—an appropriate rendition of what ‘They used to know that...’ actually means. The subject ‘they’ is not a semantic argument of Tense; it is an argument of the verb (or *v*), and so is generated originally inside VP/*v*P. It raises into the (outer) specifier of Tense because of an EPP feature on T, just as in the baseline minimalist theory. The difference is that Tense has two specifiers on Stowell’s account, not just one.

The structure in (30) has an interesting consequence for agreement. We can now say that T in Sakha is like D in Sakha: it agrees twice, once with each of its two specifiers. More specifically, T agrees first with its original specifier, ZP, and second with its derived specifier, the subject, in much the same way that D agrees first with its NP complement and second with its NP/DP specifier in (28b). The first of these agreements is even more limited on T than it is on D: ZP is always third person singular, since there is only one time “now”, and that time is neither the speaker nor the addressee of the sentence. The first agreement is thus always phonologically null in Sakha. However, we can detect that it happened because it affects the form of the agreement with the subject. That is now the *second* agreement, so we observe a form from the “possessive” agreement paradigm. This account easily generalizes to the fact that possessive agreement is

used with the subject also in the future tense and the remote past tense. These have the same structure as (30) on Stowell’s view; the only change is the lexical meaning of the T: the future marker means ‘before’ instead of ‘after’; the remote past marker means something like ‘long after’. Since the phrasal configuration is the same, and agreement is defined over this configuration, the kind of agreement that is used is predictably the same in all of these tenses.

Why then is there a different kind of agreement in present tense only? Here we depart somewhat from Stowell. He assumes (tentatively) that present tense also has the structure in (30), but present tense means ‘simultaneous with’. With that change, the meaning would be ‘Now is simultaneous with the time that they know that...’. But since simultaneity is a kind of identity, it is a trivial relation, and there is a more direct way to express this. One can get the same effect simply by saying ‘They know that ... now.’ Suppose, then, that present Tense is technically meaningless in Sakha; it appears in a structure for purely formal reasons (as the bearer of agreement and an EPP feature). It has no ZP argument, and combines only with a VP, resulting in a structure like (31).

(31)



Here there is no extra ZP argument, and we did not bother making VP into a time-denoting expression. With no substantive interpretation for ‘present’, the sentence means simply ‘They know that ... at time t, referred to by ZP’. Since ZP has no descriptive content, in the absence of some control relationship it can only refer to ‘now’, the time of the utterance. (31) thus means ‘they know that ... now’. In essence, a present tense meaning can be constructed out of a proper subpart of Stowell’s structure, without assigning any distinctive meaning to the present tense morpheme, simply because that is the interpretation that an unbound null ZP receives anyway. Suppose, then, that present Tense (at least in Sakha) is a degenerate instance of tense in this way.

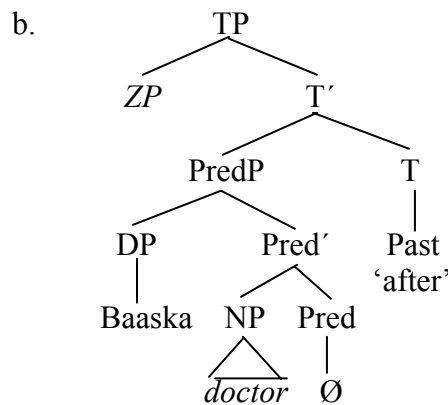
This has the desired consequence for agreement. In the present, T has only a single specifier, the raised subject, with no additional ZP argument. Hence it agrees only once, with its subject. The result is “predicative agreement”—the same kind of agreement found on a D that has a complement but no specifier.

The key correlation that we capture in this proposal is that tenses with a more complex semantic structure—past and future tenses, as opposed to present—also use a more complex agreement form—the sort of agreement found in relatively complex possessed NPs rather than in simple unpossessed NPs. By including ZPs in nontrivial tenses only, we can say that this parallelism is syntactically significant, not just a morphological accident of Sakha.

#### 4.3. Implications for Distinctness

The upshot of this, then, is that there is a ZP pronoun in past tense clauses but not in present tense clauses. Moreover, it is clear that this ZP must have features in common with NP/DP. Not only is it a pronoun-like expression that can refer to an individual (a time), as in Stowell’s conception, but it is like an NP in that it participates to some extent in agreement relationships. Given that it has features in common with NP, it can cause a Distinctness violation when it c-commands a predicate nominal within the same spell-out domain. This could explain the badness of the short form of (23c), repeated here as (32a), the structure of which would be as in (32b).<sup>8</sup>

- (32) a. #Baaska byraah-a.  
 Baaska doctor-3sP  
 Bad as: ‘Baaska was a doctor.’ (OK as ‘Baaska’s doctor’)



In contrast, the auxiliary *e-* in the long form of (32c) (*Baaska byraas e-t-e*, ‘Baaska doctor AUX-PAST-3sP) counts as a phase head, separating the predicate nominal from the ZP.<sup>9</sup> Hence, this long form does not violate the Distinctness

<sup>8</sup> We leave entirely open here just how a time-denoting expressing is constructed out of PredP, the internal argument of T in (32b). It is possible that this will require some extra structure, like the ZP layer in Stowell’s structure in (30). That should not matter for our purposes, as long as none of the additional heads (e.g., Z) is a phase head.

<sup>9</sup> One detail, which we hope is not too important, is the fact that the dummy verb root used in (3c)/(23c) is different from the dummy verb root used in (4c) and (5d). The latter have forms of *buol-*, a normal verb root that otherwise means ‘become’. The former has the morphologically defective verb root *e-*, which is used only as an auxiliary in the past tense. We tentatively assume

condition.<sup>10</sup> This then extends our account to the distribution of auxiliaries in the past tense in a way that coheres with other grammatical properties of Sakha.

This analysis is more speculative than the ones offered in Baker and Vinokurova 2009, and reviewed in sections 2 and 3. In addition to Distinctness, it makes crucial use of a less-familiar syntactic category (ZP) in a novel way. It also reads much significance into an apparent parallelism between the use of agreement morphemes on possessive NPs and the same agreement markers on past tense verbs. It is possible that we are overinterpreting this morphology, and the parallelism is a diachronic “accident”, without the syntactic significance we have suggested.<sup>11</sup> The alternative would be to say that the short form in (32a) is not used because of a form of morphological blocking. Possessive-type agreement appearing on a noun does have another obvious meaning—it can express true possession—and perhaps speakers reserve the form for this, preventing an interpretation of such forms as past tense predications. We are not sure this blocking account would really be any simpler to work out in detail than our proposal, but we leave it open as another, more conservative possibility.<sup>12</sup>

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a morphological approach to this: a semantically empty verb node is spelled out as /e/ at PF before the past tense morphemes *-dl* and *-BYT* and as /buol/ elsewhere (cf. Vinokurova 2005: 291, 227). More research would be needed to see whether or not there is more to this difference than this.

<sup>10</sup> See note 4 for some remarks about Distinctness interactions between the subject and the nominal predicate. We also need to be sure that ZP doesn't have an unwanted Distinctness interaction with the NP/DP arguments of a verb. Direct objects that stay in VP will be in a different phase from ZP. Direct objects that scramble out of NP are embedded in a KP (“case phrase”) anyway (perhaps to avoid a Distinctness violation with the subject); that will repair/avoid a distinctness violation with ZP. The main remaining issue, then, is Distinctness between ZP and the subject. The kind of movement mentioned in note 4 might be relevant to this as well.

<sup>11</sup> Yet another way in which the analysis in this section is more speculative than those reviewed in section 2 and 3 is that it crucially uses a more controversial aspect of Richards's Distinctness condition. Richards formulates his principle such that it filters out both cases in which one instance of a category XP contains another instance of category XP and cases in which one instance of a category XP merely c-commands a second instance of category XP in the same phase. Although Richards gives many interesting illustrations of his condition at work, he does not explain away many superficial counterexamples, and most of the obvious ones are problems for the c-command case rather than the containment case (e.g., double object constructions in English, or two adjectives modifying the same noun inside the same DP). It is possible, then, that one should split the phenomena, and have Distinctness per se only apply to situations in which one instance of category XP contains another instance of that category. This retreat would leave the analyses in sections 2 and 3 intact, but not the analysis here in section 4. (We thank Marcel den Dikken, David Adger, and Jacque Lamarche for discussion of this point.)

Another issue to clarify is the fact that ZP interacts with the NP predicate for purposes of Distinctness even though ZP is phonologically null, and hence does not need to be pronounced at PF. This is different from Richards's interpretation of the contrast between (10a) and (10b) in English.

<sup>12</sup> As an example of the difficulties a blocking analysis would face, we mention that it is common to use the affix *-lar* on referential nouns (as a plural marker), but this does not block *-lar* being used as a subject agreement on predicative nouns, as for example, in (i).

- (i) Bu uolat-tar biir xamaanda-lar.  
This boy-PL one team-(3)PL  
'These boys are a team.'

#### 4. Conclusion

In this paper, we have investigated environments in which adjectival predicates do not need a copular verb but nominal predicates do in the Sakha language. We have shown that one need not accept Vinokurova's (2005) argument that these environments show that adjectives have different argument structures from nouns, ones that include a subject argument. Rather, the patterns in question can be nicely explained by Richards's (2006) Distinctness condition. This implies that nominal predicates need a copula specifically when they merge with some other nominal head. Moreover, this distinctness analysis extends from the more obvious cases discussed in Baker and Vinokurova (2008) to the distribution of the auxiliary in the immediate past tense, if we accept the presence of Stowellian ZPs which refer to the utterance time as important features of the structure of a clause in all tenses other than the simple present tense. There is, then, no compelling reason in this data to say that adjectives and nouns differ in intrinsic predicativeness; on the contrary, unaccusativity diagnostics support the idea that adjectives and nouns are actually the same in this regard, as predicted by Baker's (2003) theory of the lexical categories. We conclude that the rather complex and unusual distribution of the copula in Sakha does not show that Baker's theory of lexical categories is not applicable to Sakha, but rather that Richards's theory of Distinctness is applicable to Sakha. An even broader implication of this study is that Baker's project of deducing differences among the lexical categories from a single core difference plus independent principles can be extended to this new range of data.

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Similarly, the agreement morpheme  $-(t)E$  is not impossible as a possessive marker on Adjectives, even though it can be on predicate in (23b). It often looks easy to say one form blocks another, but turns out to be far from easy to say in a principled way why sometimes there is blocking and sometimes there is not.

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