

Forms of Predication in Sakha (Turkic):
Will the True Lexical Predicates Please Stand Up?

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There have been debates in the literature about which lexical categories are intrinsically predicates in which languages. A long-standing tradition in both syntax and semantics claims that all lexical categories—verbs, nouns, and adjectives—can be predicates in themselves, whereas Chierchia (1998) says that nouns are predicates in some languages but not others. In contrast to both of these views, Baker (2003) claims that only verbs are intrinsically predicates; nouns and adjectives can function as predicates only by combining with a predicative functional category, called Pred. Baker’s view fits well with the fact that copular verbs and particles must be used with predicate nominals and adjectives but not with verbs in many languages (*Chris *(is) a linguist*, *Chris *(is) tall*, but *Chris works*). But the distribution of copular elements is complex and highly variable across languages, and this can be used to challenge Baker’s view and support alternatives. For example, the Turkic language Sakha has a set of environments in which a copular verb must be used with a predicative nominal, but not with a predicative adjective or a verb. These environments include embedded clausal complements and relative clauses (among others). Vinokurova (2005) uses data like these to argue that adjectives are like verbs and unlike nouns in that they are intrinsically predicative, at least in Sakha and perhaps in all languages. In this article, we develop an alternative analysis of these facts which is consistent with Baker’s approach to lexical categories. We propose that, whenever a copula is needed with a nominal predicate but not an adjectival one in Sakha, this is to fulfill the Distinctness condition of Richards 2010.

1. The standard view, an alternative, and a problem for both

The standard view in both the syntax and semantics literatures has been that all three major lexical categories—verbs, nouns, and adjectives—are (or at least can be) intrinsically one (or more)-place predicates. All three categories have thus been taken to be on a par in terms of their most basic syntax and semantics. From a syntactic perspective, this supposed similarity is seen most clearly in so-called small clause contexts, in which a predication is embedded under a causative verb like *make* or an epistemic verb like *consider*. Such verbs can be followed by a constituent consisting of an NP/DP subject and a predicate headed by a verb, adjective, or noun, with no other overt supporting material, as shown by (1) (Stowell, 1983).

- | | | |
|-----|-----------------------------|----------------------|
| (1) | a. I made [Chris fall]. | Verbal predicate |
| | b. I made [Chris happy] | Adjectival predicate |
| | c. I made [Chris a captain] | Nominal predicate |

We do not, however, see such a neat parallelism across the lexical categories in simple matrix clause environments in English. There an asymmetry is found, with verb

phrases looking like simple predicates, whereas adjective phrases and noun phrases can only serve as predicates with the support of a copular verb, some form of the verb *be*.

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|-----|---------------------|--------------------------------|----------------------|
| (2) | a. Chris falls. | | Verbal predicate |
| | b. Chris is happy. | (*Chris happy; *Chris happies) | Adjectival predicate |
| | c. Chris is a hero. | (*Chris a hero; *Chris heroes) | Noun predicate |

The standard view takes (2) to be rather misleading, the result of surface morphological complications. In particular, it arises because (i) tense needs to be expressed overtly in main clauses in English, and (ii) tense is realized as a morpheme that can affix to a verb root, but not to an adjectival root or a noun root. As a result, a semantically vacuous copular verb must be included in the structure in (2b-c), so that the tense affix will have a root that it can attach to. The paradigm in (2) is thus explained in approximately the same way that *do*-support phenomena are explained in English, in the tradition going back to Chomsky (1957).

Encouragement for this standard view is the fact that in various other languages, predicates headed by the different lexical categories look more similar even in matrix clauses. For example, present tense is not morphologically realized in Semitic languages like Hebrew and Arabic; as a result “small clauses” like *John happy* and *John hero* can be used as matrix clauses in these languages (Benmamoun, 2000, Rapoport, 1987). In other languages, there is tense-agreement marking in the present, but the relevant morphology is less fussy, and can attach to roots of all lexical categories. Turkish is a familiar language of this sort (Baker, 2003:52, Stassen, 1997:46, Wetzler, 1996); so is its distant relative Sakha, as shown in (3). Here the same morpheme representing present tense and first person agreement features, *-bit* and its allomorphs, can attach to words of all lexical categories (Vinokurova, 2005):¹

- | | | |
|-----|--|-----------|
| (3) | a. Bihigi bil-e-bit
we know-AOR-1.PL
'We know' | Verb |
| | b. Bihigi bytaam-myt
we slow-1.PL
'We are slow.' | Adjective |

¹ Abbreviations used in the glosses include: ACC, accusative case; AGR, agreement; AOR, aorist (nonpast) participle; AUX, auxiliary root; CAUS, causative; DAT, dative case; FACT, factual mood; FUT, future tense/participle; GEN, genitive; LOC, locative; M, masculine; N, neuter; NEG, negation; NOML, nominalizer; NSF, inflectional noun suffix; NV, Vinokurova 2005; PART, past participle/remote past tense; PASS, passive voice; PAST, (recent) past tense; PL, plural number; PRT, particle; PUNC, punctual; SG, singular number; STAT, stative aspect; SUB, subject; 1, first person; 2, second person; 3, third person. The reader should also be aware that many phonological changes apply to suffixes in Sakha. It has a Turkish-style system of vowel harmony, and consonants undergo many assimilation processes. As a result, the same morpheme can have quite different looking allomorphs in different examples.

- c. Bihigi balyksyt-tar-byt Noun
 we fishermen-PL-1.PL
 ‘We are fishermen.’

So so far, so good for the standard theory.

But a serious drawback of the standard view is that it has no principled explanation for other, non-morphological differences between verbs on the one hand and adjectives and nouns on the other. Some of these are syntactic, apparently having little or nothing to do with morphology per se. For example, it is well-known since Belletti and Rizzi (1981) and Burzio (1986) that the post-verbal subjects of certain non-agentive verbs in Italian (so-called unaccusative verbs) can be expressed as a clitic *ne* attached to the tense node. However, the post-verbal subjects of most adjectival predicates and nominal predicates differ from those of thematically similar unaccusative verbs in that they cannot be expressed in this way (Baker, 2003, Cinque, 1990a):

- (4) a. Ne sono affondate due V: OK
 of.them are sunk two (Burzio, 1986, Cinque, 1990a)
 ‘Two of them sank.’
- b. *Ne sono buoni pochi (dei suoi articoli) A: bad
 of.them are good few (of his articles) (Cinque, 1990a:7)
 ‘Few of them are good.’
- c. ?*Ne sono professori molti N: bad
 of-them are professors many (Baker 2003)
 ‘Many of them are professors.’

This difference calls into question whether nominal and adjectival predicates really have the same syntactic status as verbal ones do.

A very similar phenomenon can be seen in languages that allow syntactic noun incorporation, such as Mohawk and Wichita. In these languages, the sole argument of a predicate can be incorporated into the predicate to form a kind of compound word when the predicate is an (unaccusative) verb, but never when it is an adjective or a noun:

- (5) a. Hánnhirh ta:c-ehe:k-?irhawi (Wichita: NI into V)
 ground.LOC T/AGR-cloth-be.lying (Rood, 1976:5)
 ‘The cloth is lying on the ground.’
- b. *né:rhír?as-tac tí-?i (OK: tac tí-?i né:rhír?a)
 buffalo-fat T/AGR-be fat T/AGR-be buffalo
 ‘The buffalo is fat.’ (Wichita: no NI into A; Rood 1976:13)
 (Also OK: *tac tí-ré:rhír?as-?i* ‘The buffalo is fat.’)
- c. *Ka-nerohkw-a-nuhs-a’ (OK: Ka-nuhs-a’ ne o-nerohkwa-kvha.)
 N.SG-box-Ø-house-NSF N.SG-house-NSF PRT N.SG -box-former

only when an adjective or noun is used predicatively, in both matrix clauses comparable to (2) and embedded contexts comparable to (1)—exactly the distribution one would expect if these are Pred heads in Baker’s sense.

- (7) a. $\acute{U}y\grave{i}$ $y\acute{a}$ [$\grave{e}m\acute{a}t\grave{o}n$ $p\grave{e}rh\acute{e}$] (also OK with only material in brackets)
 Uyi made metal be.flat ∇
 ‘Uyi made the metal be flat.’
- b. $\acute{U}y\grave{i}$ $y\acute{a}$ [$\grave{e}m\acute{a}t\grave{o}n$ *($y\acute{e}$) $p\grave{e}rh\grave{e}$] (same with only material in brackets)
 Uyi made metal Pred flat Δ
 ‘Uyi made the metal flat.’
- c. $\grave{O}z\acute{o}$ $y\acute{a}$ [$\acute{U}y\grave{i}$ *($r\grave{e}$) $\grave{o}kha\grave{e}mw\grave{e}n$] (same with only material in brackets)
 Ozo made Uyi Pred chief
 ‘Ozo made Uyi a chief.’

Baker goes on to claim that the similar looking paradigm in English (2) is a somewhat less direct reflection of the same underlying structural fact. Pred itself is phonologically null in English and most other languages in the greater European region (hence the difference between English (1) and Edo (7)), but the phonologically null Pred in (6b) and (6c) intervenes structurally between T and the A or N, thereby preventing T from affixing to A or N, making a verb root (*be*) necessary. In contrast, there is no corresponding functional head in (6a) to prevent T from affixing to the verb, and *be* is not necessary.

This account constitutes a minor advance over the standard account of (2), Baker claimed. As in the standard view, *be* is inserted to bear the Tense when T cannot affix to a suitable host. Unlike in the standard view, however, it is no longer necessary to stipulate which lexical categories are suitable hosts for T and which are not; this follows from independently motivated assumptions about the underlying syntactic structure. In the standard view, it would be slightly perverse but entirely possible for a language to have a tense marker that affixes only to (say) adjectives, but not to verbs or nouns. Such a language would have a paradigm like the one schematized in (8)

- (8) a. John is fall. Verbal predicate (hypothetical language, unattested)
 b. John happies. Adjectival predicate
 c. John is a hero. Noun predicate

But no such language is known, according to Stassen’s extensive survey of 410 languages (Stassen, 1997:41-43). On Baker’s account, this is not accidental. The structure of a verbal predication is intrinsically simpler than the structure of a nominal or adjectival predication. Thus, if it is ever possible for Tense to attach to the lexical head, it will predictably be possible in verbal sentences.

Now paradigms like (3) in Sakha show us that Pred does not always block T from affixing to A or N. Baker claims that present tense in languages like this is really a clitic rather than an affix; as such, it can attach to any phonological word that is string-adjacent to it on the surface, regardless of the word’s category or any intervening syntactic

tense, a copula must be present with a noun ((10c)) but not with an adjective ((10b)) in the immediate past.

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

Similar patterns are found in relative clauses, in noun complement clauses, and in complement clauses selected by verbs and adjectives, as we show shortly.

The pattern of facts in (10) does not correspond directly to the underlying reality about which categories are intrinsic predicates according to either the standard view or Baker’s alternative view. Both need to attribute it to other factors in some way. At first it might seem that the standard theory is in a better position to do this, since it already depends on morphological stipulations as to what kind of root a given affix can attach to. Perhaps, then, the past-third-singular affix *-E* in (10) is simply one that can attach to either verb roots or adjective roots, but not to noun roots. In terms of the category-defining features of Chomsky (1970), we could say that this particular affix selects roots that are [+V]. Baker’s view does not have this flexibility, since he tries to derive properties like this from basic syntactic configurations like those in (6). In his terms, it is not surprising when A and N are a natural class opposed to V in some relevant paradigms (as in (2) and (9)), but there is no convenient way to refer to A and V as a natural class opposed to N. According to that theory, A and N should always constitute a natural class when it comes to matters of theta-role assignment and predication.⁴

But the flexibility of the standard theory is also its weakness. Taking advantage of the same freedom that would allow it to account for the pattern in (10) would also allow it to account for unattested patterns like the one in (8). We seem, then, to have an unfortunate choice between a theory that is too restrictive and one that is not restrictive enough.

Vinokurova (2005) takes the pattern in (10) to be especially significant theoretically. She takes it as evidence for her position that adjectives and verbs are intrinsic predicates, and nouns are not. More specifically, she holds that nouns are zero-place, adjectives are one-place predicates, and verbs are two or more place predicates. Just as (1) and (3) are the most truthful paradigms on the standard view, and (2) and (9)

⁴ For Baker, verbs and adjectives do constitute a natural class in opposition to nouns in other respects: in particular, only nouns are “referential” and hence able to enter into binding relationships of various kinds. However, that point of similarity between V and A as opposed to N would not be expected to have anything to do with the distribution of the copula in predicative sentences.

are the most truthful on Baker’s view, so (10) is the most truthful on Vinokurova’s view. We thus now have a third contender to evaluate in this domain.

In this article, we explore this new pattern, to uncover its true significance for these matters. First we present more fully the range of contexts in which the verb-adjective versus noun pattern is observed in Sakha (section 2). We then show that Baker’s nonmorphological reasons for grouping A with N rather than V also hold for Sakha (section 3). Next we present a new proposal for why a copula is needed with noun predicates that has nothing to do with their intrinsic arity, but rather makes use of Richards (2010) Distinctness condition (section 4). A narrow goal of our work is to defend Baker’s theory of categories from the empirical challenge presented by data like (10).⁵ A broader goal is to extend Baker’s overall project of trying to do without stipulative features as a means of defining the differences between lexical categories, seeking instead to explain patterns in the data in terms of more fundamental considerations.

2. Verb and Adjective versus Noun in Sakha

Our first task, then, is to characterize the scope of the problem. We have already seen that, in the present tense, Sakha is like Turkish in that predicates of any category can be used without a copula. Agreement with the subject of predication in person and number attaches directly to the predicate, whether it is verbal (here a participle form), adjectival or nominal, as shown again in (11).

- | | | | | |
|------|----|--------|---------------------------|-----------|
| (11) | a. | En | aaq-a-qyn | Verb |
| | | you.SG | read-AOR-2.SG | |
| | | | ‘You read/will read.’ | |
| | b. | En | öjdöög-xün | Adjective |
| | | you.SG | clever-2.SG | |
| | | | ‘You are clever.’ | |
| | c. | En | saaxymatcyk-kyn | Noun |
| | | you.SG | chess.player-2.SG | |
| | | | ‘You are a chess player.’ | |

In contrast, a copular/auxiliary verb is needed with nominal predicates only in the recent past ((10)), and copular verbs are needed with both nominal and adjectival predicates in the future ((9)) and the remote past.

In addition to the recent past, Vinokurova (2005) identifies two other environments where verb and adjective contrast with noun in regards to the copula. The same categorial asymmetry is seen in 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

⁵ In fact, we do not make it back to the specific paradigm in (10) in any detail in this paper. See section 4.4 below, and Baker and Vinokurova 2009 for further discussion of this case.

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 agreement:

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

The third environment where Vinokurova finds this pattern is relative clauses. If a subject has been extracted from a relative clause in Sakha, the clause can consist of simply a participial form of the verb, together with its complements and modifiers, all appearing before the head noun; there is no Tense node, agreement, complementizer or relative pronoun.⁶ (13b) shows that a relative clause can also consist of just a bare adjective and its complements (if any). However, (13c) shows that a relative clause cannot consist of just a bare noun and its complements (if any). Rather, a participial form of ‘be’ is required.

- (13) 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 kyys (nominal predicate) (NV:258)
 Sargy-DAT guide girl
 ‘the girl who is a guide for Sargy’
- d. Sargy-ga sirdjit buol-ar kyys (nominal predicate) (NV:258)

⁶ Relative clauses in which something other than the highest subject is extracted are similar, except that possessive-style agreement must be present on the head of the relative clause that agrees with and assigns (genitive) case to the subject of the relative clause (see Kornfilt 2008 for some discussion). The distribution of the copular verb is the same in nonsubject relative clauses as in subject-extracted relative clauses, and we assume that the type of analysis we develop here can extend smoothly to them as well.

Sargy-DAT guide be-AOR girl
 ‘the girl who is a guide for Sargy’

To these three contexts where Vinokurova (2005) noticed a verb-adjective versus noun contrast, we can add a fourth.⁷ As in English, some nouns in Sakha can take clausal complements, including *sonun* ‘news’, *surax* ‘rumor’, and others. When the predicate of the complement clause is a verbal participle, it can be expressed in one of two ways.⁸ The participial verb can be uninflected, agreement with the subject appearing on complement-taking noun ((14a)). Alternatively, the participle itself can agree with its subject (using possessive type agreement); in that case, the head noun bears an invariant third person singular possessive suffix, presumably agreeing with the participial clause as a whole ((15a)). If the predicate is an adjective, exactly the same two options are found, shown in (14b) and (15b). However, if the predicate is a noun, the analogous forms are ungrammatical ((14c), (15c)). Rather, a participial form of ‘be’ must be used in both constructions ((14d), (15d)).

- (14) a. En kel-bit suraq-yn (noun complement, type 1)
 you come-PART rumor-2.SG
 ‘a rumor that you came’
- b. En djolloox suraq-yn
 you happy rumor-2.SG
 ‘the rumor that you are happy’
- c. *Masha professor suraq-a
 Masha professor rumor-3.SG
 ‘the rumor that Masha is a professor’
- d. Masha professor buol-ar suraq-a
 Masha professor be-AOR rumor-3.SG
 ‘the rumor that Masha is a professor’
- (15) a. En kel-bit-ij suraq-a (noun complement, type 2)
 you come-PART-2.SG rumor-3.SG
 ‘a rumor that you came’
- b. en djollooq-uj suraq-a
 you happy-2.SG rumor-3.SG
 ‘the rumor that you are happy’

⁷ Vinokurova 2005 also gives two other arguments for her view of adjectives as one-place predicates: the distribution of impersonal subjects, and the use of the copula to create generic readings for sentences that would not otherwise have them. These arguments have a rather different character from the ones reviewed here, and we do not discuss them in this paper.

⁸ It is also possible for the complement of a noun like ‘rumor’ to be a full finite CP; see below for some discussion. In that case, the distribution of the copula depends on the tense of the embedded clause, in exactly the same way as in matrix clauses.

- c. *en ojuun-uj suraq-a
 you shaman-2.SG rumor-3.SG
 ‘the rumor that you are a shaman’
- d. en ojuun buol-ar-yŋ suraq-a
 you shaman be-AOR -2.SG rumor-3.SG
 ‘the rumor that you are a shaman’

In conclusion, we see that 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. Therefore, this is not just an isolated morphological quirk of one morpheme or one construction in Sakha, but a recurring pattern in the language.

As mentioned in section 1, Vinokurova (2005) gives this pattern a theoretical interpretation, in which it supports a rather different theory of the lexical category distinctions from that of Baker (2003). She claims that both adjectives and verbs are intrinsically predicates (at least in Sakha, although she implies that this might be universal), and nouns are the only lexical category that is not intrinsically predicative. More specifically, she 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 purely 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 sortal, having a referential index) to draw the distinction between nouns and adjectives. And it cannot be denied that these patterns in Sakha make Vinokurova’s view look very plausible, at least for this language.

3. Noninflectional differences between verbs and adjectives

One solution to the issue raised by (10)-(15) above could be to say that Sakha does not have a distinct class of adjectives. What we call adjectives are really a semantically coherent subclass of verbs in Sakha—specifically, verbs that are both aspectually stative and logically monadic. This is reasonable a priori, and clearly true in some languages (e.g. Mohawk) (see also Dixon 1982 and Stassen 1997 for general typological remarks, among others). If that were true for Sakha, then the puzzle posed by the data in the previous section would disappear. Sakha would simply have the usual distinction between verbal predicates and nonverbal predicates, nonverbal predicates needing a copula (sometimes overt) and verbal predicates not needing one. The only difference would be a lexical one, concerning what category certain predicates belong to. For example, we would say that the predicate ‘happy’ happens to be of category adjective in English, but of category verb in Sakha, and similarly for ‘clever’, ‘interesting’, ‘slow’, and so on.

Plausible and uncontroversial as this view is for Mohawk and many other languages, it seems unlikely in Sakha, given that there are some straightforward inflectional differences between uncontroversial verbs and putative adjectives. For example, all true verbs in Sakha—even stative verbs—require some sort of tense-like

suffix, either a true tense marker like *-dI*, or a participle ending like *-a(r)*- ‘aorist’. Uncontroversial verbs cannot be used as bare roots, nor can they be used with only a subject agreement marker attached. This is illustrated in (16).

- (16) a. En utat-ty-ŋ (*utak-kyn)
 you thirst-PAST-2.SG thirst-2.SG
 ‘You are thirsty.’ (or ‘You have become thirsty.’)
- b. En balyk söbül-üü-gün (*söbülee-qin)
 you fish like-AOR-2.SG like-2.SG
 ‘You like fish.’

In contrast, “adjectival” roots can stand alone, with no (overt) tense-aspect marker, having only a subject agreement marker, as in examples like *En öjdöox-xiin* (you clever-2.SG ((11b)); see also (3b)). Similarly, this view would not have any easy way to account for the fact that tense suffixes like the future *-yAk* can attach to true verb roots but not to “adjectives” like ‘happy’ or ‘clever’ (see (9)). Hence, “adjectives” are not as similar to verbs in terms of inflectional tense-aspect morphology in Sakha as they are in languages that uncontroversially lack a class of adjectives distinct from the class of verbs.^{9 10}

The category difference between adjectives and verbs in Sakha can be confirmed by certain syntactic tests, namely by unaccusativity diagnostics. Since early cross-linguistic work by the Relational Grammarians, it has been known that, in languages where “adjectives” are really stative verbs, they are more specifically unaccusative verbs. Hence, predicates like ‘be good’ or ‘be big’ behave syntactically like verbs such as ‘fall’ or ‘die’ or ‘break’, not with unergative verbs like ‘work’ or ‘laugh’ (Perlmutter and Postal, 1984:98). In contrast, in languages in which adjectives are a distinct class, most canonical adjectives behave like unergative predicates. For example, we mentioned in section 1 that some verbs—specifically unaccusative verbs—allow their sole argument to be incorporated in Mohawk ((17a)) and Wichita ((5a)). In contrast, unergative verbs do not allow this ((17b)) (Baker, 1996).

- (17) a. Wa’-ka-wír-v’-ne’ (unaccusative verb)
 FACT-N.SG-baby-fall-PUNC
 ‘The baby fell.’

⁹ Typically “adjectives” in languages like Mohawk can only take a proper subset of the tense-aspect morphemes that combine with other verbs, presumably for semantic reasons: some aspect markers are semantically incompatible with the intrinsic stativity of these predicates, much as stative predicates do not naturally appear in the progressive in English (??*Chris is liking fish*). Semantic restrictions of this kind might explain why some tense-aspect affixes cannot go on “adjectives” in Sakha, but are unlikely to explain why none of them do, other than null present/past. For example, there are no obvious aspectual restrictions on the future in Sakha, but the future nevertheless cannot attach to an “adjective” (see (9b)).

¹⁰ The same issue arises with derivational morphology as well as with inflectional morphology. Many languages have a causative affix that attaches to verbs but not to other categories, and this can be used to distinguish verbs from adjectives in languages like Mohawk and Chichewa (see Baker 2003:sec. 2.6 for discussion). Sakha also has a morphological causative *-t/-tar* which attaches productively to verbs, including stative verbs (*yla-t-ta* ‘be.tired-CAUS-PAST.3.SG’), but it cannot attach to a root like ‘happy’, suggesting that such roots are adjectives, not verbs (**djolloox-tor-do*, ‘happy-CAUS-PAST-3.SG’).

- b. *Wa'-t-ka-wir-ahsv'tho- (unergative verb)
 FACT-DUP-N.SG-baby-cry-PUNC
 'The baby cried.'

Inflectional evidence suggests that words with meanings like 'be big' are stative verbs in Mohawk, whereas they are true adjectives in Wichita. Thus, subject agreement, stative aspect marking, and past tense all attach directly to the root meaning 'be big' in Mohawk, whereas tense and agreement must attach to a copular verb distinct from the word *tac* 'fat' in Wichita:

- (18) a. Ra-kowan-v-hne' ne Sak (Mohawk, Baker 1996)
 M.SG-be.big-STAT-PAST PRT Sak
 'Sak used to be big.'
- b. tac ti-?i né:rhir?a (Wichita, Rood 1976:13)
 fat T/AGR-be buffalo
 'The buffalo is fat.'

This goes along with the fact that *owanv* 'be-big' is like an unaccusative verb in Mohawk in allowing its subject to incorporate. In contrast, *tac* 'fat' is a true adjective in Wichita, and it does not allow its argument to incorporate:

- (19) a. Ka-nuhs-owan-v thikv. (Mohawk).
 N.SG -house-be.big-STAT that
 'That house is big, That is a big house.'
- b. *né:rhir?as-tac ti-?i. (Wichita; Rood 1976:13)
 buffalo-fat T/AGR-be
 'The buffalo is fat.'

See Baker (2003:ch.2) for much discussion of unaccusativity diagnostics like this one, and how they relate to the verb-adjective distinction in a variety of languages.

With this as background, we can investigate what unaccusativity diagnostics tell us about the categorial status of words like 'clever' and 'happy' in Sakha. We know of two unaccusativity diagnostics in the language that can be applied. The first is somewhat similar to noun incorporation in Mohawk. Like Turkish (Enç, 1991, Öztürk, 2005), direct objects in Sakha can be "incorporated" into the adjacent verb. When this happens, they are not marked for number or case, they have a nonspecific indefinite interpretation, they must be strictly adjacent to the verb, and they are pronounced under the same intonational contour as the verb. An example is:

- (20) Erel kinige (*türğennik) atyylas-ta (Vinokurova, 2005:322)
 Erel book quickly buy-PAST.3.SG
 'Erel bought a book/books (quickly).'

This sort of (pseudo) incorporation is also possible for the subjects of unaccusative verbs, although it is harder to recognize because nominative case in Sakha has no overt morphological marker. If, however, the argument of an unaccusative verb is nonspecific, adjacent to the verb, and not marked for number inside a relative clause, one can omit agreement with that argument on the head noun of the relative clause, whereas agreement on the head noun with the subject is otherwise obligatory in relative clauses whenever something other than the subject has been extracted. This is shown in (21).

- (21) a. sibekki tyll-ar kem
flower bloom-AOR time
‘a time when flowers bloom’
- b. oton buh-ar sir
berry ripen-AOR place
‘a place where berries ripen’

In contrast, a similar structure is out when the verb is unergative; here agreement on the head noun with the subject of the relative clause is required, even if the subject is nonspecific, unaffixed, and adjacent to the verb:

- (22) a. *taba meccij-er sir (OK with *sir-e* ‘place-3.SG’)
reindeer graze-AOR place
‘a place where reindeer graze’
- b. *kihi tabaxtyy-r sir (OK with *sir-e* ‘place-3.SG’)
person smoke-AOR place
‘a place where people smoke’

Normally, an agreeing D on the head noun is required to assign (genitive) case to the subject of the participial verb, because there is no Tense node in the relative clause to assign the subject nominative case (Baker and Vinokurova, 2010b, Kornfilt, 2008). This accounts for (22). But in (21) the subject has incorporated into the verb, and hence does not need to be assigned case. As in Mohawk, this sort of incorporation is possible only if the verb is unaccusative.

Now we can apply this as a test to predicates like ‘good’ and ‘happy’, to see if they are verbs. If they are verbs, they should be unaccusative verbs. If they are unaccusative verbs, then they should allow their subjects to avoid the Case filter by (pseudo)-incorporating, making agreement on the head noun of the relative clause optional. However, they cannot incorporate in this way, as shown in (23).

- (23) a. oton ücügej kem-*(e)
fruit good time-(3.SG)
‘a time when fruit is good’
- b. oqo djolloox sir-*(e)
child happy place-(3.SG)

‘a place where children are happy’

So “adjectives” in Sakha pattern with true adjectives in Wichita, rather than with comparable stative verbs in Mohawk. That suggests that they are true adjectives in Sakha too. Note also that the subject of a nominal predicate also cannot undergo (pseudo)-incorporation, as expected under Baker’s (2003) assumptions:

- (24) a. byraas djaxtar buol-ar sir-*(e)
doctor woman be-AOR place-(3.SG)
‘a place where doctors become women’
- b. oqo sallaat buol-ar sir-*(e)/ kem-*(e)
child soldier be-AOR place-(3.SG)/time-(3.SG)
‘a place/time where a child becomes a soldier’

This is comparable to nouns not incorporating into nouns in Mohawk (see (5c), Baker 2003). Thus, adjectives behave like nouns in Sakha, rather than like the semantically most comparable class of verbs. That fits with Baker’s view that adjectives, like nouns, are not intrinsically predicative.¹¹

The second unaccusativity diagnostic that we know of in Sakha involves possessor raising. If the argument of an unaccusative verb stays inside VP, its possessor can move out of the possessed DP. As a result, it can be separated from the possessed noun by an adverb that modifies the verb. However, this sort of possessor raising is only possible with unaccusative verbs like ‘die’ or ‘break’ or ‘become sick’, not with unergative verbs like ‘bark’ or ‘cry’.

- (25) a. Masha aaspyt tüün yt-a öl-lö/ *ür-de
Masha last night dog-3.SG die-PAST.3.SG / bark-PAST.3.SG
‘Last night Masha’s dog died/*barked on her.’
- b. Masha aaspyt tüün oqo-to yaryj-da/ *ytaa-ta
Masha last night child-3sP fall.sick-PAST.3.SG/ cry- PAST.3.SG
‘Last night Masha’s child fell sick/*cried.’

We do not profess to have a fully developed analysis of this contrast, which identifies just what syntactic condition is violated in the bad sentences but not the good sentences. However, similar conditions on “possessor raising” are known from other languages, including Hebrew (Baker, 2003, Borer and Grodzinsky, 1986). We can tentatively attribute it to something like the subject condition/condition on extraction domains

¹¹ Cinque (1990) shows that, while most adjectives contrast with comparable verbs in behaving like unergative predicates in Italian, there is a small semantically-coherent class of adjectives that do behave like unaccusative predicates. It is thus not quite right to say that true adjectives are always unergative predicates; the more accurate statement is that the dividing line between unaccusative and unergative falls in a different place for adjectives than for verbs. This is also true in Sakha: the two adjectives ‘necessary’ and ‘existent’ are possible in relative clauses in which the head does not agree with their argument—the exception that proves the rule.

(Huang, 1982): one can move an NP X out of a larger NP Y only if the larger phrase Y was merged directly with some lexical head. That is the case for unaccusative verbs but not for unergative ones, by hypothesis.

Now we can apply this diagnostic to putative adjectives, to see if they act like unaccusative verbs or not. In fact, possessor raising is not possible from the sole argument of a canonical adjective, such as ‘happy’. (26) gives particularly clear minimal pair, comparing ‘be happy’ to ‘become sick’.

- (26) a. Masha kuorak-ka aqa-ta yaryj-da
 Masha town-DAT father-3.SG fall.sick-PAST.3.SG
 ‘Masha’s father fell sick in town.’
- b. *Masha kuorak-ka aqa-ta djolloox.
 Masha town-DAT father-3.SG happy
 ‘Masha’s father is happy in town.’

This is expected on Baker’s account, if ‘happy’ is a true adjective, hence not intrinsically predicative. That means that the subject ‘Masha’s father’ is not generated inside AP, but rather in the Spec, PredP position (see (6b)). As such, ‘Masha’s father’ is not the direct argument of a lexical head, and ‘Masha’ cannot raise out of it—a kind of subject condition violation (whatever principle this ultimately reduces to). We also note that possessor raising from the subject of a nominal predicate is also ruled out, as expected:

- (27) *Misha Moskva-qa aqa-ta administrator
 Misha Moscow-DAT father-3.SG administrator
 ‘Misha’s father is an administrator in Moscow.’

So adjectives pattern with nouns rather than with (the relevant subclass of) verbs for this syntactic test as well. We thus have converging evidence that adjectives are a distinct category from verbs in Sakha. More than that, adjectives pattern with nouns rather than with verbs in ways that Baker (2003) explained by saying that adjectives and nouns have the same intrinsic argument structures; neither is inherently a predicate. If Vinokurova (2005) were right about adjectives (but not nouns) being intrinsic one-place predicates in Sakha, we would expect them to behave like unaccusative verbs, which they do not.

4. Distinctness and the distribution of copular verbs

If this is true, then we need another account of the facts that motivated Vinokurova’s proposal in the first place. We need to say why, in several environments, nominal predicates require a copular verb but adjectival ones do not. If both need help in the form of a Pred head in order to become predicates, why is this manifested overtly for nouns but not adjectives in these particular contexts?

4.1 Relative clauses

In order to get a handle on this, let us focus first on the fact that nominal predicates need a copula in relative clauses, but verbal participles and adjectives do not, as shown in (13). 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 this 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 at best unnatural to say that a copula is needed with the noun in order to bear the affix. So it seems that a syntactic solution to this problem is called for, rather than a morphological solution.¹² Let us consider what that solution might be for the case of relative clauses, and then see how far it naturally extends.

What sort of syntactic condition might rule out a bare nominal predicate from functioning as a relative clause, while allowing verbal and adjectival predicates to do so? We suggest that this pattern calls to mind the Distinctness condition of Richards (2010: ch.2). Richards documents an extensive and diverse 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 his observation 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.

(28) Distinctness: If a linearization statement $\langle X, X \rangle$ is generated, the derivation crashes. (p. 5)

Since Richards adopts the currently-standard view that spell-out and hence linearization happens one phase at a time, this amounts to the condition 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 (29).¹³

(29) Distinctness: A structure will be filtered out at PF if it contains two expressions, X and Y, such that X asymmetrically c-commands Y, X and Y are contained in

¹² Of course there *could* be an affix that attaches to verbs and adjectives but not nouns, even though it is phonologically null. An abstract morphological solution of this sort cannot be entirely ruled out (as shown by the distribution of *do*-support in English; Halle and Marantz 1993). But it is reasonable to use it only as an analysis of last resort.

¹³ Richards assumes that the Distinctness condition only applies to functional categories, not to lexical categories. In contrast, we understand Distinctness as applying in principle to lexical categories as well as functional categories, so that we can capture contrasts like (30) and (31) (as well as many others in this article) even in a language like Sakha which (we believe) does not have nonpossessive determiners. The fact that in some languages (e.g., Hebrew, for Richards) having two Ds in the same phase triggers a Distinctness violation but having two Ns does not could be attributed to variation in the features Z in (29).

the same spell-out domain, and X and Y both have the same categorial features Z.¹⁴

Of the many instances of distinctness Richards discusses, some involve having two noun projections in the same local domain. For example, there is the 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.

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

These violate (29) 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 (31).

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

Richards (2010:40) assumes that PPs are phases; hence, when the *P of* is included, *destruction* and *city* are no longer contained in the same phase. One is spelled out before the other, and their similarity in category does not lead to confusion and crash at PF.

Even closer to the cases that concern us, Richards (2010:34-36) claims that the Distinctness condition applies to nonfinite relative clauses in English and to all relative clauses in Romance languages, accounting for contrasts like the following:

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

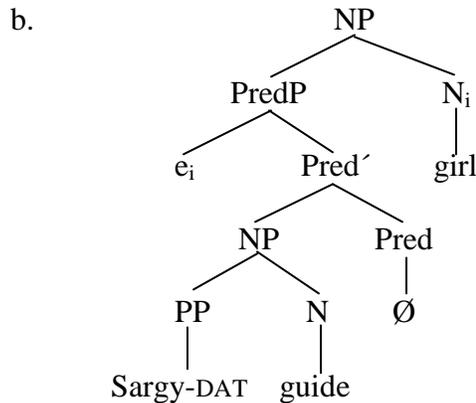
The ungrammatical (32b) has an NP *whom* in Spec CP of the infinitival clause. This relative clause is merged with the nominal *person*, such that *person* asymmetrically c-commands *whom*, and the two are of the same category (NP or DP). Finally, since *whom* is at the edge of the CP phase (the relative clause), it is not spelled out with the rest of this phase, but survives to be linearized along with the higher phase. Therefore, (32b) violates the Distinctness condition, much as (30) does. In contrast, (32c) 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,

¹⁴ The condition in (29) is phrased in terms of “categorial features” rather than simply in terms of category, because Richards (2010:6) allows for a certain amount of crosslinguistic variation (parameterization) in precisely what shared properties cause Distinctness violations. For example, he claims that all DPs count as being the same in some languages, whereas only DPs that have the same value for case, or gender, or animacy count as the same in others. An anonymous reviewer expresses concern that this loophole in the Distinctness condition makes it rather weak and unsatisfying, since one cannot predict where Distinctness violations will and will not occur in a given language. We share this concern to some extent, but do not make aggressive use of the loophole in what follows. The only distinctness interactions we discuss here for Sakha involve major category features: N interacting with N, A interacting with A, and N interacting with H, a nominalizing head that is functional rather than lexical, but clearly patterns with N in many ways.

(32a) 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 in a different spell out domain from *person* in this example, and there is no violation. Hence, the contrast between (32a) and (32b) is explained in the same way as the similar-looking contrast between (30) and (31)—an advance over classical case theory, which applied only to (30)-(31). (See also Pesetsky and Torrego 2006 for a related way of capturing the same parallelism.)

Now there is a clear similarity between these cases analyzed by Richards and the examples we are trying to find an explanation for. In particular, the ungrammatical case of a bare nominal predication functioning as a relative clause such as (33a) has the structure in (33b).¹⁵

- (33) a. *Sargy-ga sirdjit kyys (nominal predicate, =(13c))
 Sargy-DAT guide girl
 ‘the girl who is a guide for Sargy’



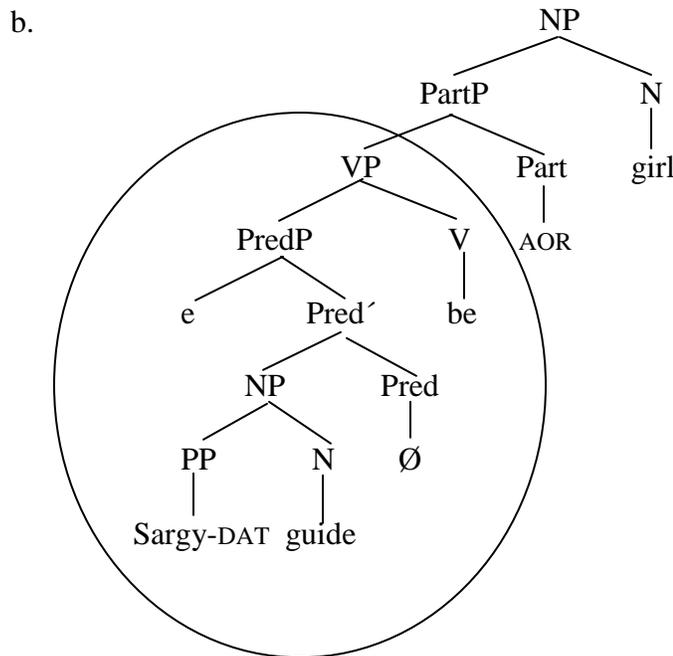
In this structure, it is clear that ‘girl’ asymmetrically c-commands ‘guide’, and has the same category features as it. The main question, then, is whether the NP predicate is in the same spell-out domain as the head of the relative clause or not. It is plausible to say that it is: clearly there is no overt verb, or adposition, or complementizer that heads a projection that contains one and not the other. Here it is presumably important that Sakha has reduced, participial relative clauses, not full finite CP relative clauses (cf. Krause 2001, among others); such participial clauses are plausibly not phases. Indeed the only head other than the nouns that is certainly present here is Pred, and that is presumably not a phase head. Assuming this, then the representation in (33b) violates the Distinctness condition, and is ruled out.¹⁶

¹⁵ We leave open the exact relationship between the head of the relative clause and the subject gap in Sakha. One possibility is a head-raising account, in which the nominal headed by ‘girl’ itself raises from the Spec, PredP position, and directly binds a trace/copy there. Another possibility is that there is an empty operator that moved from Spec, PredP to adjoin to PredP, making PredP into a predicate that merges with an NP headed by ‘girl’. Presumably these details are independent of the question of whether there is a Distinctness violation in (33b) or not.

¹⁶ One question that arises, however, is whether the subject of predication itself creates a distinctness violation with the nominal predicate. We tentatively claim that the answer is yes, and this explains why the subject of a nominal predication cannot receive a low, existential reading, even when the noun is arguably stage-level, whereas the subject of (some) adjectival predications can (see Diesing 1992). *So Children are*

Now compare this with the grammatical version of (33a), in which a participial form of the copula ‘be’ is included. Its overall structure is rather similar to (33b), but it has projections of at least two extra heads, V and the participle morpheme that it bears.

- (34) a. Sargy-ga sirdjit buol-ar kyys (nominal predicate (=13d))
 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 (2010) argue that all VPs in Sakha are phases for purposes of case assignment. Carrying that assumption over the VP headed by ‘be’ in (34b), there will be no Distinctness violation in this structure. Just as including additional PP structure avoids a distinctness violation between two NPs in the English examples in (31) and (32), so including extra VP structure avoids one here.

Suppose that the predicate inside the relative clause is an AP rather than an NP. Then no copular verb is required. This is now expected: a structure like ‘Sargy-DAT interesting girl’ would have exactly the same structure as (33b), but the complement of Pred would be AP, not NP. This AP does not 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 also extends immediately to the noun complement constructions illustrated in (14), in which a clausal constituent is merged with a noun like ‘rumor’ or

needed for the play has an existential reading of children, but *Children are passengers on this plane* does not, and the Sakha analogs are similar. Thus, NP must raise out of the Spec, PredP position if the predicate is nominal in both languages, on pains of violating Distinctness.

‘news’. Such constructions are different from relative clauses in various syntactic and semantic respects. However, they are like relative clauses in that a reduced clause (less than a CP) merges with a nominal head. When the reduced clause contains only a nominal predication, a Distinctness violation results between the nominal head and the nominal predicate. If the predicate is not nominal, or if the nominal predication is hidden inside a VP phase defined by a copular verb, then there is no Distinctness violation. The structures are identical to those in (33) and (34), except that they have ‘rumor’ in the place of ‘girl’, and the subject of the predicate is an overt NP, not a gap that is somehow linked to 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, (35b) is possible as an alternative to (35a) (=14a) from above).

- (35) a. En kel-bit suraq-ɣŋ (noun complement, type 1)
 you come-PART rumor-2.SG
 ‘a rumor that you came’
- b. En kel-li-ŋ dien surax (noun complement, type 3)
 you come-PAST-2.SG that rumor
 ‘a rumor that you came’

The finite CP with an overt complementizer in (35b) is a phrase in its own right. We therefore predict that if a sentence like (35b) had a nominal predicate rather than a verbal one, no auxiliary ‘be’ would be needed. The nominal predicate would be inside the spell-out domain defined by the phase head C and the head noun ‘rumor’ would not be, so there would be no Distinctness violation. That is correct: the equivalent of (35a) with a nominal predicate needs a copula, but the equivalent of (35b) does not need one.

- (36) a. ehigi professor-dar *(buol-ar) surax-xyt (noun complement, type 1)
 you.PL professor-PL *(be-AOR) rumor-2.PL
 ‘the rumor that you are professors’
- b. ehigi professor-dar-gyt dien surax (noun complement, type 3)
 you.PL professor-PL-2.PL that rumor
 ‘the rumor that you are professors’

Intuitively put, 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’) can be equal to the task, these both being phase heads. This confirms that we are on the right track in using Richards’s Distinctness condition, for which phase boundaries are crucial.

4.2 Complement clauses

Consider next the fact that a copula is needed when a nominal predication functions as the direct argument of a verb, as shown in (12). A second paradigm is given in (37).

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

At first glance, it seems like the Distinctness account is unlikely to generalize to explain the deviance of (37c). Here a nominal predication is merged together with a verb, rather than with a noun. Since verbs and nouns are clearly different categories, it seems like Distinctness could not apply to (37c), and some other factor must force the use of the copula here.

However, there are excellent reasons to say that the examples in (37) have a bit more structure than meets the eye. The participial phrases in (37) have somewhat different properties from the participial phrases found in relative clauses. In particular, the participle must show agreement with the subject of the participial clause in (37), whereas participles in relative clauses cannot show any agreement at all. Moreover, the agreement in (37) is drawn from the possessive paradigm in Sakha; it is like the agreement that nouns show with their possessors. This suggests that the embedded clause in (37a) is “nominalized” in some sense.

Indeed, there is plenty of additional evidence that this is the case. For example, the embedded clause in (37a) is (and must be) marked for accusative case, just as an NP object of a verb must be in Sakha. When the complement of this type of verb is a pure CP, headed by the complementizer *dien*, no such accusative case marking appears. Thus, one finds contrasts like the following:

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

This shows that participial complements are “more nominal” than CPs, in that they must be case-marked like NPs.

Another consideration that confirms this is that participial clauses are like NPs in that they trigger dative case on another NP in the same VP in a causative construction, whereas *dien* clauses do not (see Baker and Vinokurova 2010 for details on dative case assignment in Sakha).

- (39) a. Sargy Keskil-i [Aisen kel-ie dien] eren-ner-de
 Sargy Keskil-ACC Aisen come-FUT.3.SG that hope-CAUS-PAST.3.SG
 ‘Sargy promised (made hope) Keskil that Aisen will come.’
- b. Sargy Keskil-ge/*Keskil-i [Aisen kel-er-in] eren-ner-de
 Sargy Keskil-DAT /*ACC Aisen come-AOR-3.SG.ACC hope-CAUS-PAST.3.SG
 ‘Sargy promised (made hope) Keskil that Aisen would come.’

Participial clauses also have 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:

- (40) a. [Ucuutal oqo-nu kyrbaa-byt-a] bihigi-ni sohup-put-a
 teacher child-ACC beat-PART-3.SG we-ACC surprise-PART-3.SG
 ‘That the teacher beat the child surprised us.’
- b. *[Saaska Baaska-ny üöx-te dien] bihigi-ni sohup-put-a
 Saaska Baaska-ACC scold-PAST-3.SG that we-ACC surprise-PART-3.SG
 ‘That Saaska scolded Baaska surprised us.’

Similarly, participial clauses can be objects of postpositions like *kytta* ‘with’ and *dily* ‘until’ in Sakha, whereas CPs headed by *dien* cannot.

Theoretical considerations also suggest that some kind of nominalization is at work in (37). According to Baker (2003), a category must be nominal in the sense of having a referential index in order to receive a thematic role from a verb—hence the ubiquity of NP/DP arguments, as opposed to the rarity of AP or VP arguments. In contrast, relative clauses are adjuncts that do not receive thematic roles, so it is expected that they would not be nominalized, but would remain as verbal as possible (cf. the Noun Licensing Condition of Baker 2003). (For more on the noun-like properties of participial clauses, and how they compare to both finite CPs and gerunds, see Baker 2011.)

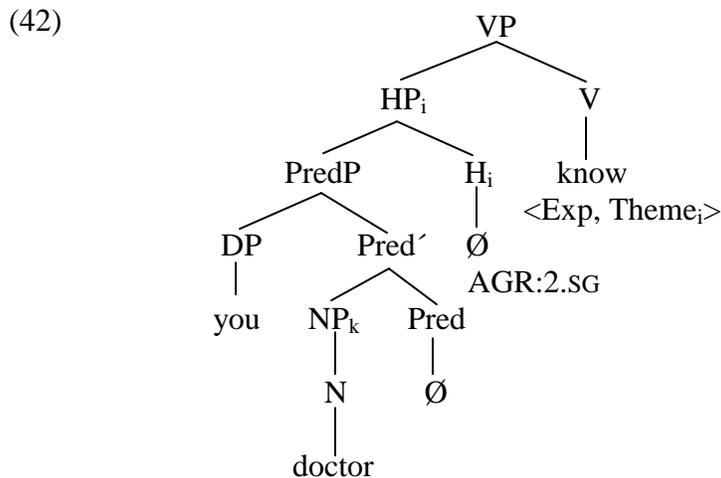
We could conceivably say that the participle morpheme itself is optionally nominal. However, the data suggest that there is nothing intrinsically nominal about participles, nor do they in themselves have the capacity to agree. The use of participles in relative clauses is one indication of this. The use of participles with auxiliaries in complex tense constructions is another. Here too, participles do not bear agreement, and they must not be intrinsically nominal, because there is no theta-role for them to receive in this context.

- (41) a. Min bil-er-(*im) e-ti-m
 I know-AOR-(1.SG) AUX-PAST-1.SG
 ‘I used to know.’

- b. Min alta-qa ahaa-byt-(*ym) e-ti-m
 I six-DAT eat-PART -(1.SG) AUX-PAST-1.SG
 ‘I had already eaten at 6:00.’
- c. En aaq-yax-(*yŋ) e-ti-ŋ
 You read-FUT-(2.SG) AUX-PAST-2.SG
 ‘You would read.’

Let us say, then, that participle heads in Sakha are never probes for agreement, and are never nominal. Their projections can, however, be used as the complement of an abstract head that is both nominal and bears agreement features, in particular possessive-style agreement. Let us call this abstract head H.¹⁷

These considerations generalize immediately from the PartP projections that constitute reduced clauses built out of a verbal predicate to the projections that constitute reduced clauses built out of an adjectival or nominal predicate. These projections also need to be embedded in an HP in order to get a thematic role from the selecting verb. Given this, the structure of the matrix VP in (37c) is (42):

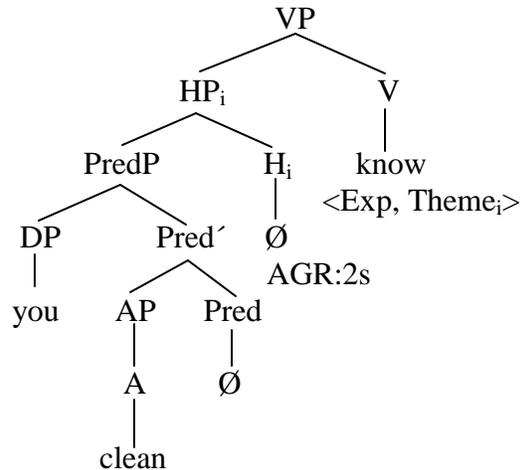


Now H, though probably not exactly a noun itself, certainly has many features in common with it, given that HP has a referential index like NP, shares the gross distribution of NP, and acts like NP for purposes of Case theory. H can thus trigger a Distinctness violation if it is in the same spell-out domain as an NP predicate. Indeed, H asymmetrically c-commands the NP in (42), there is no known or suspected phase boundary between them, and H and NP share crucial features. Therefore (37c)/(42) is

¹⁷ It is tempting to equate this H head with the head D(eterminer). However, the case that H assigns to the subject of the participial clause under agreement is nominative, whereas D assigns genitive; see Baker 2011 for further discussion of the distinction between H and D in Sakha. The difference between H and D is not crucial to this article however, since either would potentially be nominal enough to trigger a Distinctness violation when it is close to a nominal predicate.

ruled out by Distinctness. In contrast, (37b) is possible because the AP predicate does not share features with H. Its representation would be (43).

(43)

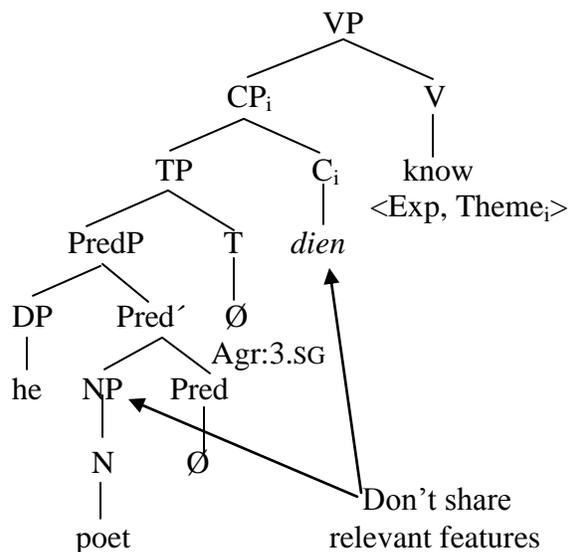


(37d) is also possible, because the NP predicate is contained in a VP headed by ‘be’, which is (we assume) a distinct phase. But (37c) finds itself in a bind. On the one hand, H cannot be left out in (37c), because PredP by itself has no referential index, so it cannot get a thematic role from the verb. On the other hand, if H is included, it creates a Distinctness violation given its proximity to the nominal predicate with which it shares features.

It is also worth noting that *dien* (although a referential index bearer) is less nominal than H, as shown by the Case theoretic and distributional differences in (38)-(40). Hence it is not surprising that this C, unlike H, does not force the use of ‘be’ with a nominal predicate even when it c-commands that predicate:

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

b.



In course of this discussion, 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’:

- (45) a. * (Miexe) en balyksyt-yŋ naada
 (me.DAT) you fisherman-2.SG 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-2.SG necessary
 ‘It is necessary (for me) that you be a fisherman.’

Again, the main predicate ‘necessary’ and the embedded predicate ‘fisherman’ are of different categories, so one might not 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” the embedded clause. The presence of the noun ‘fisherman’ and H in the same domain then does invoke distinctness considerations.

Also, not surprisingly, Distinctness applies to the clausal complement of N. We saw that there are two forms that a participial clause can take when in construction with a noun like ‘rumor’ (see (14) and (15)). We interpret the difference as follows: a clause can be adjoined to ‘rumor’ (like the gapless relative clauses attested in, for example, Japanese) or it can be a true argument of ‘rumor’. If it is adjoined to ‘rumor’, there is no need for H, but Distinctness applies between ‘rumor’ and the nominal predicate, forcing a copula, as already discussed in section 4.1.¹⁸ This gives the paradigm in (14). Alternatively, if the clause is a true complement of ‘rumor’, then an HP projection is needed; Distinctness holds between H and the predicate, again forcing a copula. This gives the paradigm in (15). Thus a copula is necessary in either structure.

Our proposal in terms of Distinctness does make one new prediction, however. This concerns the use of copular verbs with AP predicates. We have seen that AP predicates do not need to have copulas when the clause-like construction formed from them is the complement of a verb ((37b)), nor when it is the complement of a noun like ‘rumor’ ((15b)). However, we predict that a copula would be necessary in the very special circumstance that a clause containing an adjectival predicate functions as the complement of an adjective. This prediction is strikingly correct, as shown by the contrast in (46).

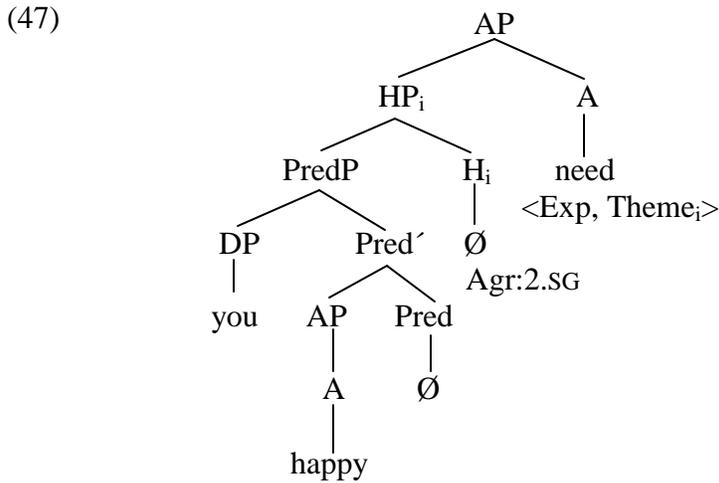
- (46) a. * (miexe) en öjdööq-üŋ/djollooq-uŋ naada
 (me.DAT) you clever-2.SG/happy-2.SG necessary

¹⁸ We also expect a distinctness interaction between H and ‘rumor’. Apparently there is one, and it is resolved by genitive case assignment to HP from D and/or by the movement of HP to spec, DP. As a result, there is possessive agreement on ‘rumor’ when it takes a participial clause complement, although not when it takes a CP complement headed by *dien*, as can be seen by comparing (15a) and (35b). Exactly how the possessive DP layer avoids distinctness issues we may leave open here, simply noting that it also avoids a Distinctness violation in a simple possessive DP like *Masha aqa-*(ta)* ‘Masha father-3.SG’.

‘It is necessary (for me) that you be happy/clever.’

- b. (miexe) en öjdöox/djolloox buol-ar-yη naada
 (me.DAT) you clever/happy be-AOR-2.SG necessary
 ‘It is necessary (for me) that you are happy/clever.’

The relevant substructure for (46a) would be as in (47).



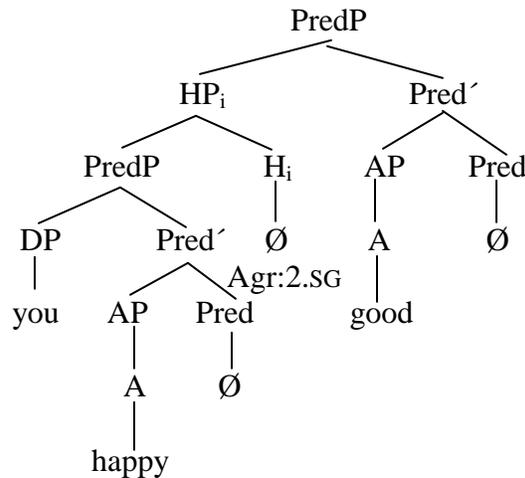
Here, ‘need’ and ‘happy’ share the category adjective, ‘need’ asymmetrically c-commands ‘happy’, and no phase contains the one but not the other (assuming that H is not a phase head here—perhaps surprisingly). Hence, there is a need for a VP projection dominating PredP in order to form a grammatical structure.

It is crucial to this prediction that the matrix adjective be one of the relatively rare sort that takes an internal argument (a “Cinque-adjective”, cf. note 11). If HP functioned as an external argument of the adjective, it would be generated as the specifier of a PredP, where the matrix adjective is the complement of Pred. Then neither adjective would asymmetrically c-command the other, and no Distinctness violation is triggered. And, in fact, there is no need for a copular verb in (48), which contrasts minimally with (46a).

- (48) En djollooq-uη ücügej
 you happy-2.SG good
 ‘It is good that you are happy.’

The relevant substructure for (48) would be roughly as (49).

(49)



The two adjectives induce a Distinctness violation in (47), but not in (49), as desired. We know of no other reason to suspect this three-way contrast, that a copula is needed in (46), but not in (48) or (37b). We take this to be strong confirmation for our hypothesis that the Distinctness condition is a primary factor in determining the distribution of the copula with nonverbal predicates in Sakha.

4.3 Comparison with Turkish

We mentioned above that Sakha and Turkish have both similarities and differences when it comes to the distribution of the copula in nonverbal predications. In both languages, there is no obvious copula in present tense predications, whereas there is a copula with nouns and adjectives but not verbs in the future and other marked tenses. As far as we know, however, Turkish has no paradigm in which adjectival predicates pattern with verbs in not needing a copula while nominal predicates do need one. In particular, adjectives are like nouns in needing an overt copula in Turkish in both relative clauses and in clausal complements, as shown in (50) and (51).

(50) a. pencere-yi kir-an taş (Underhill, 1976:277)
window-ACC break-SUB.PART stone
'the stone that broke the window'

b. pek sıcak ol-ma-yan su
very hot be-NEG-SUB.PART water
'the water, which is not very hot'

c. üniversite-de hoca ol-an o kadın
university-LOC teacher be-SUB.PART that woman
'that woman, who is a teacher at the university'

(51) a. Ben Ahmed-in öl-düğ-ün-ü duy-du-m. (Kornfilt, 1997:50)

I Ahmet-GEN die-NOML-3.SG-ACC hear-PAST-1.SG
 ‘I heard that Ahmet died.’

- b. Orhan’-in deli ol-duğ-un-a karar ver-dik
 Orhan’-GEN crazy be-NOML-3.SG-DAT for? decide
 ‘We decided that Orhan was crazy.’ (Underhill 1976:309)

(See also Underhill 1976:309 for examples with subordinating morpheme *-mA*.)

All things being equal, we would expect Distinctness considerations to apply in Turkish in the same way as in Sakha, with perhaps some variation in exactly which categorial features trigger a Distinctness violation when they are shared. But all things are not equal. Unlike Sakha, Turkish has special embedding morphemes that must be used when one clause is embedded in another; these include “subject participle” *-yAn*, “verbal noun” *-mA*, and “nominalizer” *-dIG*. The terminology is confusing, since there are endings called “participle” and “nominalizer” in both languages. But they are quite different. These Turkish morphemes are used only on the verbs of embedded clauses, whereas the participle morphemes in Sakha are all used on matrix verbs, as components of the tense-mood-aspect system. Suppose, then, that we follow Kornfilt (2008) and identify these markers of subordination in Turkish as members of category C (or perhaps as confluents of C with other kinds of clausal heads). As C heads, we expect them to be phase heads, and the CPs projected from them contain the embedded predicate but not the matrix item. Therefore, no Distinctness violation arises. Given this difference in how subordination is marked, we do not expect to see a difference between nominal predicates and adjectival predicates after all.

Even more than this, these C-like heads are affixes in Turkish, and as such their affixation requirements also come into play. More specifically, we claim that they are true affixes rather than clitics. As such, their affixation needs are disrupted by a null Pred head, such that they can attach only to verbal stems, just as many tense markers do in both Sakha and Turkish (as recognized by Underhill 1976). It follows that a verbal copula (*ol-*) is needed to bear these C-like heads with both nominal and adjectival predicates in Turkish. This requirement hides any narrower affect that the Distinctness condition might have. One crucial factor in the special distribution of the copula in Sakha, then, is the fact that it has no distinctive markers of subordination (other than the independent complementizer *dien*). Hence there is nothing to conceal Distinctness violations.

4.4 A note on the past tense

We showed in section 1 that there is a fourth situation in Sakha where copular verbs are used with predicate nouns but not verbs or predicate adjectives, namely the simple (recent) past tense, as illustrated in (10) and repeated in (52).

- (52) a. Baaska ülelii-r-e.
 Baaska work-AOR-(PAST)3.SG
 ‘Baaska was working.’

- b. Baaska bytaan-a.
 Baaska slow-(PAST)3.SG
 ‘Baaska was slow.’
- c. Baaska byraas e-t-e *BUT not* #Baaska byraah-a.
 Baaska doctor AUX-PAST-3.SG Baaska doctor-(PAST)3.SG
 ‘Baaska was a doctor.’ (OK only as ‘Baaska’s doctor’)

It is far from obvious that the Distinctness account that we have given for (12)-(15) and related data can extend to this case, since the predication in (52c) does not merge with any detectable nominal head. There are two logical ways to proceed. One is to say that (52c) is also a case of Distinctness, because there is some rather well-hidden nominal category present in past tense sentences (but not present tense ones like (3c)) which interacts with the nominal predicate. In Baker and Vinokurova 2009, we explored this line of analysis, suggesting that the badness of (52c) without a copular verb is a Distinctness violation triggered by the proximity to the nominal predicate of a time-denoting pronominal element—a ZP (zeit phrase)—in the theory of Stowell 1996. Since present tense sentences do not invoke a time distinct from the time of utterance, they do not need to have a time-denoting expression in their syntactic representation, and there is no comparable Distinctness violation in (3c). This somewhat radical proposal also fits with the fact that the agreement on the past tense verb in (10a) looks like the agreement found on a noun with its possessor, whereas the agreement on a present tense verb like (3a) does not. We claim that this morphological difference is the effect of having or not having agreement with the ZP reflected in the agreement borne by T. However, this analysis is somewhat speculative, it draws on some controversial and less-familiar assumptions (those of Stowell 1996), and we have no conclusive proof that it is correct. Therefore, we do not repeat it here, and also mention the second alternative—which is to simply stipulate that it is a morphological property of this tense that it cannot be attached to nouns. Although rather shallow and stipulative, this approach may not be unmotivated: this form of the past tense happens to be homophonous with possessive agreement. It is possible, then, that the obvious meaning of ‘Baaska’s doctor’ simply blocks associating the meaning ‘Baaska was a doctor’ with the potentially ambiguous phonological form *Baaska byraah-a*. For purposes of this paper, we leave open which of these two approaches is correct for (10)/(52).

5. Conclusion

In this article, we have investigated three 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, argument structures that include a subject argument. Rather, the patterns in question can be nicely explained by Richards’s (2010) Distinctness condition. This implies that (putting aside (52)) nominal predicates need a copula specifically when they merge with some other nominal head, whether overt (the heads of relative clauses, nouns like ‘rumor’) or covert (the null

nominal head H involved in clausal complementation). There is, then, no compelling reason in this data to say that adjectives and nouns differ in intrinsic predicativeness; on the contrary, two unaccusativity diagnostics (pseudo-noun incorporation and possessor raising) support the idea that adjectives and nouns are actually the same in this regard, in line with Baker's (2003) theory of the lexical categories. We conclude that the 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. 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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