

Predicate nominals in Tshila

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Tshila /tsh^hl̩à/ is a Kalahari Khoe language spoken in central-southeastern Botswana by approximately 300 people (Schwab & Collins 2024). It is an SOV language. Tshila has a copular predicate nominal construction with the word order [Noun Noun COP]. The nouns in this language can vary in size according to factors such as the projection of phi-feature morphology and the presence of constituent negation and focus. Also possible in Tshila is predicate inversion. The interaction of the size of the DPs along with the presence of inversion shows interesting constraints on nominative Case assignment and phi-agreement. The analysis of this construction supports a universal hierarchy of phi-features (Harley & Ritter 2002; Béjar 2003), not only within nominals but also on phi-probes. This analysis unifies Case assignment and phi-agreement as a single operation (Chomsky 2000; 2001; Platzack 2006; Legate 2008; Georgi 2017), which supports the view that Case assignment is not postsyntactic.

Keywords: predicate inversion, DP structure, PGN markers, nominative Case, constituent negation, Kalahari Khoe, Khoisan syntax

1. Introduction

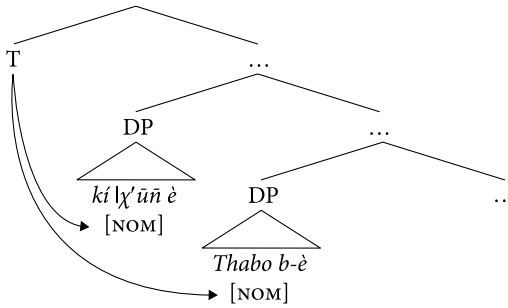
In the Kalahari desert in Botswana is spoken the Tshila (endonym: *Kua*) language. There are approximately 250 speakers in the village Kaudwane, and about 50 more in the Central Kalahari Game Reserve in and around the town Gope. It is a Kalahari-Khoe language closely related to the Cua and Gllana languages (Collins 2023a; Collins & Fehn 2024; Schwab & Collins 2024).

The Kalahari Khoe languages generally follow an SOV word order. Following some prior documentation of the language and closely related languages (cited above) and extensive data collection from fieldwork that took place between May 27, 2024 and June 11, 2024 in the village of Kaudwane with six native speaker con-

sultants between the ages of 50 and 80,¹ I present a novel cohesive analysis of predicate nominal constructions in Tshila. These invariably occur in the order [Noun Noun COP], with COP being the copular verb *ʔè*. Both predicational [Noun₁ Noun₂ COP] and specificational (inverted) [Noun₂ Noun₁ COP] orders are possible.

DPs in Tshila can maximally inflect for phi-features (PGN (person-gender-number) markers) and Case (NOM/ACC, also called subject/object markers). Tshila differs from Gllana in that only animate nouns appear with PGN markers (Collins 2023a; Letsholo 2016). I analyze the presence of PGN markers as the projection of a full set of phi-features in the DP, and the lack of PGN markers as evidence that a noun is phi-deficient. The subject marker I analyze as the realization of nominative Case assignment and the DP having undergone Agree with the phi-probe on T°. The presence of more than one subject marker, then, is taken to be an instance of T° Agreeing with and assigning nominative Case to two distinct nominals.

- (1) a. *kí |χ'ũñ è Thabo b -è ʔè*
 1SG name NOM Thabo PGN.M-NOM COP
 'My name is Thabo'
 b. Double nominative Case



Double nominative Case assignment does not always occur in predicate nominal sentences. The presence of PGN markers, specificational (inverted) word order, and the presence of other factors such as constituent negation and focus all play a factor in whether nominative Case can be doubly assigned.²

1. In addition to the six consultants who provided positive data, one native Tshila speaker consultant was able to provide negative grammaticality judgments. All sentences marked with an asterisk were not produced by the six consultants (nor were any similar constructions), and were also confirmed as ungrammatical by one consultant.

2. Other constructions such as yes/no question formation and embedded subjunctive clauses may also cause some issues with the assignment of nominative Case, but they are not the focus of this paper.

By analyzing predicate nominal inversion as a voice phenomenon involving smuggling, which is the movement of a constituent X within a larger constituent so that X can become a viable target for a syntactic operation (Collins 2005; 2024; Belletti & Collins 2021; Shlonsky 2023; 2024; Storment 2024; 2025), I demonstrate that double nominatives in Tshila predicate nominal constructions are a result of the phi-probe on T entering in two distinct Agree relations with two DP goals (Béjar & Kahnemuyipour 2017; Coon et. al 2017; Coon & Keine 2021). I crucially show that the cases in which nominative Case fails to be assigned to the lower nominal are instances of T failing to Agree with the lower DP goal (Preminger 2014).

The data collected from the Tshila people on predicate nominals in their language and the analysis of them that I develop in this paper not only shed light on how the Tshila language works, they make powerful insights into core theoretical syntactic questions. Namely, the agreement patterns with Tshila predicate nominals and how they are derived show a universal phi-feature hierarchy of $[D] > [\phi]$, with $[\phi]$ being internally decomposable into $\text{Person}(\pi) > \text{Number}(\#) > \text{Animacy}(\alpha) > \text{Gender}(\gamma)$ – present not only within the structure of nominals (Harley & Ritter 2002; Béjar 2003) but also on phi-probes – that determine the order in which probes initiate searches for relevant features. Additionally this work supports the view that Case assignment can be reduced to a consequence of phi-agreement (Chomsky 2000; 2001; Platzack 2006; Legate 2008; Georgi 2017; Poole 2024, a.o), suggesting that there is no need to conceive of Case assignment as a postsyntactic operation. The agreement data also demonstrate that predicate inversion is not a result of A-bar movement as it feeds new Agree relations and Case.

In Section 2 I discuss the syntax of PGN markers and the lack thereof, as well as their interactions with the subject marker (nominative Case morpheme). Section 3 lays out the facts on predicate inversion and details an analysis of this construction as a voice phenomenon. In the remainder of the paper I discuss the analysis of double nominative Case assignment with and without inversion (Section 4) and a situation in which phi-agreement is blocked (Section 5). Section 6 concludes.

2. PGN markers in Tshila

Some Tshila nominals obligatorily appear with a morpheme that encodes phi-feature information. These morphemes are referred to in the Khoisan descriptive literature as PGN (Person-Gender-Number) markers, though in Tshila they also encode information about animacy(α). Based on descriptive work on the Khoe-

Kwadi languages, there is considerable variation in the distribution of PGN markers crosslinguistically, and little to no theoretical work has been done on the underlying syntax of these morphemes (see descriptions of them in Güdelmann 2004; Visser 2022; Collins & Fehn 2024).

Tshila has PGN markers for masculine singular animate DPs (2), feminine singular animate DPs (3), and for general plural DPs (4).

- (2) ɲlíí-ṁ qχ'áò khò ṁ
 this-PGN.M man person PGN.M
 'This man'
- (3) ɲlíí-sì gllāē khò sì
 this-PGN.F woman person PGN.F
 'This woman'
- (4) ʔābā-ṅ ùē
 dog -PGN.PL all
 'All dogs'

There are other PGN markers in Tshila, like the PGN marker for third plural animate masculine DPs, which I give an example of in (5), although I mostly focus on *ṁ*, *sì*, and *ṅ* in this paper.

- (5) ɲlíí-llò qχ'áò khò llò
 this-PGN.3PLM man person PGN.3PLM
 'These men'

These PGN markers — *ṁ*, *sì*, and *ṅ* — are the bare forms of the PGN markers (Collins 2023a). Their forms change depending on their interactions with Case assignment.

2.1 Interaction with Case

PGN-marked DPs in subject position take the forms *bè*, *sè*, and *dè*, with the *è* (the subject marker) reflecting the assignment of nominative Case.

- (6) Thabo **b**-è kwà kúā qχ'úí
 Thabo PGN.M-NOM PROG Tshila speak
 'Thabo speaks Tshila'
- (7) dèē s-è háā
 mother PGN.F-NOM COP.LOC
 'My mother is here'

- (8) ʔābā d -è kùdū
 dog PGN.PL-NOM vicious
 ‘The dogs are vicious’

This same nominative Case morpheme obligatorily appears with pronouns in subject position.

- (9) kǐ -é gllámá gllàm-ā hǎ
 1SG-NOM God love -JCT PRF
 ‘I love God’
- (10) tsá -é kwà Neo s -àʔ gllám̃
 2SGM-NOM PROG Neo PGN.F-ACC love
 ‘You love Neo’
- (11) ítà -è kúā d -è ʔè
 1PL.EXCL-NOM Tshila PGN.PL-NOM COP
 ‘We are Tshila’

As objects, PGN-marked DPs obligatorily appear with a different morpheme, àʔ.³

- (12) Thabo b -àʔ kǐ -é gllám̃ ā hǎ
 Thabo PGN.M-ACC 1SG-NOM love JCT PRF
 ‘It is Thabo who I love’
- (13) tsá -é kwà Neo s -àʔ gllám̃
 2SGM-NOM PROG Neo PGN.F-ACC love
 ‘You love Neo’
- (14) ʔíá kwà jī d -àʔ líní-lìnì
 wind PROG tree PGN.PL-ACC shake
 ‘The wind is shaking the trees’

This same morpheme must appear with object pronouns.

- (15) gllámá è kǐ -áʔ gllám̃ ā hǎ
 God NOM 1SG-ACC love JCT PRF
 ‘God loves me’
- (16) kǐ -é kwà kú à tsá -ʔ lχáè
 1SG-NOM PROG go and 2SGM-ACC visit
 ‘I am visiting you’

3. Sometimes this glottal stop is omitted and the object morpheme surfaces as à. Other times, it is reduced to just a glottal stop ʔ. These are all analyzed as underlyingly the same morpheme.

In double object constructions, both PGN-marked Theme DPs and PGN-marked Goal DPs appear with this object morpheme. I take this morpheme to be the overt realization of accusative (object) Case assignment.

- (17) k^í-é kwà Thabo b -àʔ Neo s -àʔ llhāā
 1SG-NOM PROG Thabo PGN.M-ACC Neo PGN.F-ACC point
 ‘I am showing Thabo(Theme) Neo(Goal)’

Bare PGN markers – those shown in Examples (2) through (4) – occur in possessive contexts.

- (18) Thabo m̄ gllāē s -è ʔè
 Thabo PGN.M woman PGN.F-NOM COP
 ‘It’s Thabo’s wife’
- (19) Thabo b -è Neo s̄ qχ’ádò ʔè
 Thabo PGN.M-NOM Neo PGN.F man COP
 ‘Thabo is Neo’s husband’
- (20) k^í-é kwà ʔābā ñ gúū múù
 1SG-NOM PROG dog PGN.PL house see
 ‘I see the dogs’ house’

Once again, possessive pronouns behave the same as possessive PGN-marked DPs in that they also surface in their bare forms (i.e., there is no Case morphology).

- (21) k^í ŋúū è !ádò-h̄
 1SG house NOM tall-PRED
 ‘My house is tall’
- (22) tsá lχ’ūñ k^í-áʔ bódōdī
 2SGM name 1SG-ACC tell
 ‘Tell me your name’

The bare form of all marked DPs also surfaces for DPs which are the object of a postposition.

- (23) k^í-é ká Thabo m̄ kà m̄ñ ḡtò̀m̄
 1SG-NOM PST Thabo PGN.M POST say hello
 ‘I said “Hello” to Thabo’
- (24) ʔè-d -è kwà k^í kà qχ’úí
 3 -PL-NOM PROG 1SG POST speak
 ‘They are talking about me’

Tshila PGN-marked DPs and phi-specified pronouns show the same Case morphology: namely, both sets of nominals appear with *-è* when nominative, *-à* when accusative, and appear as their bare forms when genitive or as the object of a postposition. What PGN-marked DPs and pronouns have in common is that they both bear a full set of phi-features.

2.2 PGN markers as the projection of phi-features

Pronouns in Tshila vary by their specifications for person (1st/2nd/3rd), inclusivity (inclusive/exclusive), number (singular/plural, and dual when animate), animacy (animate/inanimate), and gender (masculine/feminine, and neuter when inanimate plural or animate dual/plural). As such, the possible combinations of these specifications yield 30 distinct pronoun forms, which can further vary by Case morphology. The same pronoun distinctions are made in related languages such as Kuasi (Collins 2023a).

(25) Tshila pronoun paradigm

Person	Number	Gender	Subject	Object	Bare	Subjunctive		
1	singular	n	kíé	kíá	kí	kíé		
		dual	m	átsàbè	átsàbà	átsàm	tsàm	
			f	ásàbè	ásàbà	ásàm	sàm	
	plural	n	ákhàbè	ákhàbà	ákhàm	khàm		
		m	f	állàè	állà	állà	llà	
			f	ádzè	ádzà	ádzì	dzi	
			n	átàè	átà	átà	tà	
	1 excl	dual	m	ítsàbè	ítsàbà	ítsàm	ítsàm	
			f	n	ísábé	ísàbà	ísàm	ísàm
				n	íkhàbè	íkhàbà	íkhàm	íkhàm
plural		m	íllàè	íllà	íllà	íllà		
		f	n	ídzè	ídzà	ídzi	ídzi	
			n	ítàè	ítà	ítà	ítà	
			n	ítàè	ítà	ítà	ítà	
2		singular	m	tsáé	tsá	tsá	tsì	
			f	sáè	sá	sá	sì	
		dual	m	ítsòè	ítsòà	ítsò	tsò	
	f		n	ísòè	ísòà	ísò	sò	
			n	íkhòè	íkhòà	íkhò	khò	
	plural	m	íllòè	íllòà	íllò	llò		
		f	n	ídzòè	ídzòà	ídzò	dzò	
			n	ítòè	ítòà	ítò	tò	
			n	ítòè	ítòà	ítò	tò	

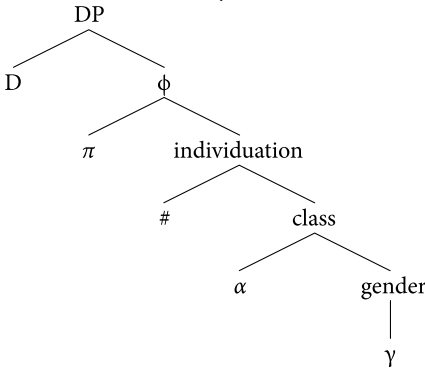
Person	Number	Gender	Subject	Object	Bare	Subjunctive
3	singular	m	ʔèbè	bà	ʔèm	ʔèm
		f	sáè	sá	ʔèsì	ʔèsì
		n	ʔè			
	dual	m	ʔètsèdè	ʔètsèdà	ʔètsèn	ʔètsèn
		f	ʔèsèdè	ʔèsèdà	ʔèsèn	ʔèsèn
		n	ʔèkhòdè	ʔèkhòdà	ʔèkhòn	ʔèkhòn
	plural	m	ʔèllòè	ʔèllòà	ʔèllò	ʔèllò
		f	ʔèdzè	ʔèdzà	ʔèdzi	ʔèdzi
		n	ʔèdè	ʔèdà	ʔèn	ʔèn

In order to derive these detailed patterns, pronouns must obey a systematic paradigm of phi-feature specification. These features must be hierarchically ordered. This is because some features entail the presence of other features (Harley & Ritter 2002; Béjar 2003; Béjar & Rezac 2003; Coon et. al 2017). For example, in Tshila, the presence of a gender feature (masculine/feminine) entails the presence of a +animacy feature, as inanimate DPs are not marked for gender. The presence of an animacy feature entails the presence of a number feature as only animate DPs inflect for dual person. The presence of a number feature entails the presence of a person feature, as all number-marked DPs are also specified for person (i.e. there is no generic plural marker that is not sensitive to person information).

There is a pronoun which is underspecified for number, person, animacy, and gender features, which is ʔè. This pronoun is always third person, though. This is evidence that, even in the absence of any other phi-feature information, person remains. This means that, in a hierarchical projection of phi-features, person is at the top.

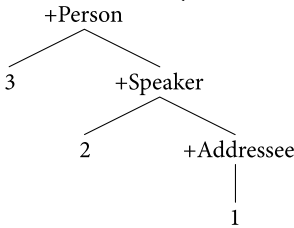
Keeping in mind the phi-feature information relevant in Tshila, and the geometric paradigm analysis of phi-features (Harley & Ritter 2002; Béjar 2003; Baier 2018), I give the following phi-feature hierarchy of Tshila DPs, written as person(π) > number($\#$) > animacy(α) > gender(γ).

(26) Phi-feature hierarchy of Tshila DPs



Within the given terminal nodes, the information of a specific phi-feature value may be further specified. For example, the person node can be expanded to detail the exact combination of sub-features needed to derive third, second, and first person (Forchheimer 1953; Benveniste 1971; Harley & Ritter 2002; Béjar 2003).

(27) Person node fully articulated for speaker and addressee information



The precise articulation of features within a given phi-head (e.g. π) I do not discuss here in further detail. What is most relevant for this analysis is the fact that the phi-features are arranged hierarchically within the DP.

PGN markers on nouns show phi-feature information.

(28) Thabo **b** -è kwà lʔā̃m-lʔā̃m
 Thabo PGN.M-NOM PROG whisper-REDUP
 ‘Thabo is whispering’

(29) kí kũî s -è !áò-hĩ
 1SG sibling PGN.F-NOM tall-PRED
 ‘My sister is tall’

In these Examples (28) and (29), the PGN markers encode information not only about gender, but about person, number, and animacy. In fact, the PGN marker that surfaces as *b*- in (28) *only* appears with third person singular animate masculine DPs, and the PGN marker that surfaces as *s*- in (29) *only* appears with third

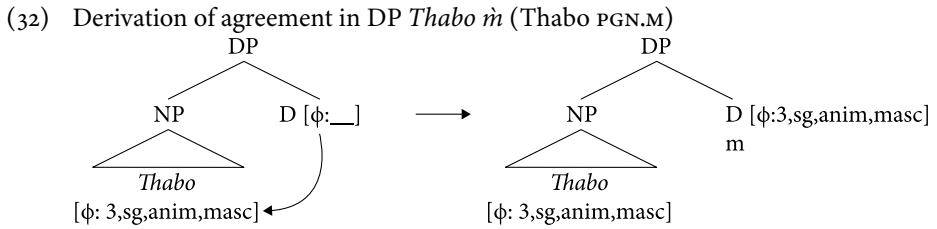
person singular animate feminine DPs. So, the PGN markers in (28) and (29) carry information about all possible phi-feature specifications in Tshila, not just grammatical gender, which is at the bottom of the hierarchy in (26).

Similarly, if a nominal appears with the plural PGN marker, it *must* encode plural features. Not only this, it must also encode third person, as the plural marking for first and second person is distinct.

(30) kǐ -é kwà lχāĩnì *(d) -ǎʔ múù
 1SG-NOM PROG star *(PGN.PL)-ACC see
 ‘I see stars’

(31) íllò -è kúā *(d) -è ʔè
 2PLM-NOM Tshila *(PGN.PL)-NOM COP
 ‘Y’all(masc.) are Tshila’

As such, I take PGN markers to be the overt realization of a full set of phi-feature specifications on the nominal. More specifically, I take them to be the phi-specified forms of an otherwise null determiner, derived by the determiner agreeing with its complement.



This is parallel to determiner agreement in other languages, such as Spanish (Contreras 1968; Otheguy 1977). Example shown is from a Google search (Collins 2023b).

(33) La gente necesita los sueños (Google)
 the.FSG people.FSG needs the.MPL dreams.MPL
 ‘People need dreams’

The presence or absence of the PGN-marked D heads has nothing to do with semantic notions of definiteness, as the PGN markers can surface in both definite and indefinite contexts (Collins 2023a; Collins & Fehn 2024).

Determiner agreement happens whenever NPs are specified for phi-features. In other words, if a DP (other than a pronoun) bears a non-deficient set of phi features, it will take a PGN marker. Lack of agreement with a DP which lacks phi-features surfaces as a null determiner.

2.3 Feature-deficient nominals

It is now necessary to discuss cases in which a PGN marker is not realized on a nominal. This is the case with most Tshila nouns aside from given names, some kinship terms, and plural nouns. Kalahari Khoe languages vary in the degree to which their nouns take PGN markers (Collins 2024; Collins & Wellstood 2024).

Most singular nouns obligatorily appear without a PGN marker.

(34) kǐ-é kwà ʔābā llhāā
 1SG-NOM PROG dog point
 ‘I am pointing at the dog’

(35) kǐ-é ká lɣāā qɣ’óō
 1SG-NOM PST meat eat.meat
 ‘I ate meat’

Non-PGN-marked DPs still receive nominative Case. This is still realized as the è morpheme even though there is no PGN marker that it combines with.

(36) kǐ tūi è ʔím -hǐ
 1SG nose NOM be.stuff-PRED
 ‘My nose is stuffy’

(37) ʔābā è ŋlǎũ háā
 dog NOM there COP.LOC
 ‘The dog is there’

Interestingly, the non-PGN-marked DPs are not able to appear with the accusative marker -àʔ (or any of its allomorphs) in the contexts where PGN-marked DPs do.

(38) kǐ-é kwà Neo s-àʔ lʔéé llhāā
 1SG-NOM PROG Neo PGN.F-ACC fire point
 ‘I am showing Neo the fire’

(39) kǐ-é kwà gúū (*-àʔ) llʔāñ
 1SG-NOM PROG house(*-ACC) build
 ‘I am building a house’

Non-PGN-marked DPs are also bare in their possessive forms.

(40) kǐ-é kwà ʔābā gúū múũ
 1SG-NOM PROG dog house see
 ‘I see the dog’s house’

Even non-PGN-marked DPs whose referent could be considered semantically animate do not appear with the accusative marker.

- (41) kí-é kwà kúá-ťáo múù
 1SG-NOM PROG toktokkie see
 ‘I see a toktokkie’

Furthermore, DPs whose referent is easily identifiable as having real-world values corresponding to a full set of specified phi-features do not always appear with PGN markers. For example, the Tshila word for God *gllámá* obligatorily does not appear with PGN markers or the accusative morpheme, despite the referent being third person, singular, animate, and masculine. See Examples (9) and (15), replicated below.

- (42) kí-é gllámá gllám-ā hā
 1SG-NOM God love -JCT PRF
 ‘I love God’
- (43) gllámá è kí-á? gllám-ā hā
 God NOM 1SG-ACC love -JCT PRF
 ‘God loves me’

What these Examples (40)–(43) show is that the projection of a set of a phi-feature values is not a semantic notion, but a syntactic one (which certainly in many cases has semantic consequences). This is not in any way specific to Tshila; similar phenomena can be observed in a variety of languages (Wurmbrand 2016).

- (44) To děvče je {mile /*milá} Czech (Wurmbrand 2016)
 this.NSG girl.NSG is {nice.NSG/*nice.FSG}
 ‘This girl is nice’

In this example, the adjective ‘nice’ agrees with the DP ‘the girl’ for its grammatical gender, which is neutral, not its semantic “real world” gender, which is feminine. This means that one cannot always assume that a DP is specified for phi-features based off of the semantic characteristics of the DP’s referent. Instead, morphosyntactic evidence such as agreement is needed.

2.4 Testing the predictions: Concord agreement

Agreement within the DP can be observed whenever there is an element such as a demonstrative or an attributive adjective. This agreement only surfaces with PGN-marked DPs.

- (45) ǰá-m̄ qǰ’áò khò b-è kwà kúā qǰ’úí
 this-PGN.M man person PGN.M-NOM PROG Tshila speak
 ‘This man speaks Tshila’

- (46) ɲíí-sì gllāē khò s -àʔ kí -é ʔáā̄ -nā hǎ
 this-PGN.F woman person PGN.F-ACC 1SG-NOM know-JCT PRF
 ‘I know this woman’
- (47) χáè-llò qχ’áo khò llò -è háā̄
 this-PGN.3PLM man person PGN.3PLM-NOM COP.LOC
 ‘These men are here’

Demonstrative agreement is only seen with PGN-marked DPs. PGN-marking is not possible on the demonstrative or the nominal in (48)–(50).

- (48) a. χáè dzèdā è gúbà ʔè
 this bird NOM hornbill COP
 ‘This bird is a hornbill’
 b. χáè jī è †χádò ʔè
 this tree NOM buffalo.thorn COP
 ‘This tree is a buffalo thorn’
- (49) kí -é kwà ʔáā bálò kínī
 1SG-NOM PROG that axe want
 ‘I want that axe’
- (50) ɲíí ʔābā è cúá kùdū
 this dog NOM NEG.ADJ vicious
 ‘This dog is not vicious’

Preliminary data suggests that this kind of DP-internal PGN agreement is also possible with attributive adjectives (52), and no such agreement appears with attributive adjectives that modify non-PGN marked DPs⁴ (53).

- (51) dèē sì t’úí s -è kùàà
 mother PGN.F beautiful PGN.F-NOM come.PROG
 ‘My beautiful mother is coming’
- (52) kí -é kwà gūū gʔî-hǎ ɲlòà-hǎ múú
 1SG-NOM PROG house fat -PRED red -PRED see
 ‘I see the big red house’

These DP-internal agreement facts show that the same phi-features that cause the determiner agreement (PGN-marking) also trigger phi-agreement on other DP-internal elements such as demonstratives and attributive adjectives. That is, demonstratives and attributive adjectives agree with the same set of phi-features

4. For a more fleshed-out discussion of attributive adjective agreement on PGN-marked DPs in a closely related language (Gllana/Kuasi), see the discussion of attributive adjectives in Collins (2023a).

that the determiner does. These agreement patterns are typically referred to as concord (Collins 2023a), which I assume is DP-internal agreement that functions much the same as any other kind of agreement (Baker 2008; Danon 2011; Larson 2022).

The fact that demonstratives and attributive adjectives modifying non-PGN-marked DPs cannot show any kind of concord agreement is further evidence that these DPs do not project phi-features at all. They are phi-deficient. This is relevant not only for concord agreement, but for probe-goal agreement and the assignment of nominative Case, which I discuss further on.

3. Predicate nominal inversion

In this section I explore the predicate nominal construction in Tshila and the patterns observed with nominative Case morphology on the DPs. I then show how the patterns work out in an inverted (specificational) nominal structure.

3.1 The distribution of nominative Case

When two phi-feature-bearing DPs appear in a predicate nominal structure, both appear with the nominative Case morpheme.

(53) kǐ -é Thabo b -è ʔè
 1SG-NOM Thabo PGN.M-NOM COP
 ‘I am Thabo’

(54) sá -é Neo s -è ʔè
 2SGF-NOM Neo PGN.F-NOM COP
 ‘You(fem.) are Neo’

(55) ŋlǐ̃ -llò qχ’áo khò llò -è kúā d -è ʔè
 this-PGN.3PLM man person PGN.3PLM-NOM Tshila PGN.PL-NOM COP
 ‘These men are Tshila’

Both of these nominative morphemes are obligatory with two phi-specified (PGN-marked) DPs.

(56) *kǐ -é Thabo ò ʔè
 1SG-NOM Thabo PGN.M COP
 int: ‘I am Thabo’

(57) *kí Thabo b -è ?è
 1SG Thabo PGN.M-NOM COP
 int: 'I am Thabo'

(58) *kí Thabo m̀ ?è
 1SG Thabo PGN.M COP
 int: 'I am Thabo'

When the external argument DP bears phi-features and the predicate DP does not, the external argument is the only DP that is marked for nominative Case. The predicate DP is not.

(59) kí*(-è) kúā (*è) ?è
 1SG*(-NOM) Tshila (*NOM) COP
 int: 'I am Tshila'

When the external argument is phi-deficient and the predicate DP is specified for phi-features, both DPs obligatorily receive nominative Case. See Example (1) copied here.

(60) kí lχ'ũñ é Thabo b -è ?è
 1SG name NOM Thabo PGN.M-NOM COP
 'My name is Thabo'

When both the external argument DP and the predicate DP are phi-deficient, only the external argument DP receives nominative Case.

(61) gllámá *(è) gllámá (*è) ?è
 God *(NOM) God (*NOM) COP
 int: 'God is God'

(62) †χádò *(è) jīī (*è) ?è
 buffalo.thorn *(NOM) tree (*NOM) COP
 'The buffalo thorn is a tree'

Given these facts in (53)–(62), I summarize the patterns in the table below, with '+φ' representing phi-specified DPs and '-φ' representing phi-deficient DPs.

(63) Nominative Case assignment in predicate nominal constructions

	Configuration	NOM assignment
1	+φ > +φ	Both NOM
2	+φ > -φ	Only higher NOM
3	-φ > +φ	Both NOM
4	-φ > -φ	Only higher NOM

Note that the structurally highest DP always receives nominative Case, no matter its PGN specification. This table, of course, refers to the surface order in non-inverted predicate nominal constructions. That is, the higher DP in the above examples is always the external argument DP, and the lower DP is always the predicate DP. Let us now turn to when this order is switched, and the external argument DP comes after the predicate DP.

3.2 Predicate inversion

I now focus on what is referred to as the specificational copular construction (Higgins 1976). In a specificational construction, the predicate DP precedes the external argument DP. Sufficient evidence and prior research shows that specificational copula constructions are derived from predicational copular sentences via inversion (Moro 1997; Heycock 2012; Hartmann & Heycock 2020; Gravely & Krapp López & Greeson 2024; Krapp López & Gravely 2024; a.o). See the following English examples from Heycock (2012) showing the difference between predicational and specificational copula structures.

- (64) a. Su is the cleverest woman in the room (predicational)
 b. The cleverest woman in the room is Su (specificational)

According to Heycock (2012), the specificational structure is distinguished from the predicational structure in that the first noun phrase does not refer straightforwardly to an individual, while the second does (see Heycock's paper for a detailed discussion of the difference between predicational and specificational predicate nominal structures, and why it is advantageous to conceive of specificational as an inverted predicate structure).

The following is a predicative structure according to several diagnostics presented in prior research⁵ (Higgins 1976; Akmajian 1979; Declerck 1988; Mikkelsen 2005; den Dikken 2017).

- (65) Thabo b*(-è) kí lχ'ũñ (*è) ?è
 Thabo PGN.M*(-NOM) 1SG name (*è) COP
 'Thabo is my name'

5. These diagnostics, such as which DP may receive focus, which DP is referential, and which DP is attributive, only disambiguate the type of copular clause of a given sentence to the degree that the sentence itself is disambiguated, as many copular sentences are themselves ambiguous between being specificational, predicational, or identificational (Kripke 1972; Higgins 1976; Mikkelsen 2005; den Dikken 2017). As such, any example presented in this paper as a given type of copular sentence does not forego the possibility that it may also function as a different type under a different reading.

Now, see the specificational copular structure (again determined as such according to diagnostics from the literature cited above) derived from this sentence via inversion.

- (66) kɪ lχ'ũn *(é) Thabo b*(-è) ʔè
 1SG name *(NOM) Thabo PGN.M*(-NOM) COP
 'My name is Thabo'

Now see a predicational structure in which both the external argument DP and the predicate DP are phi-deficient.

- (67) ŋlĩĩ ʔābā *(è) kɪ gʔũā.ʔò (*è) ʔè
 this dog *(NOM) 1SG friend (*NOM) COP
 'This dog is my friend'

In the specificational structure, the predicational DP is in first position and receives nominative Case, while the external argument DP in the second position does not.

- (68) kɪ gʔũā.ʔò *(è) ŋlĩĩ ʔābā (*è) ʔè
 1SG friend *(NOM) this dog (*NOM) COP
 'My friend is this dog'

With two phi-specified DPs, the facts for the inverted structure are the same as the predicational structure: both DPs must receive nominative Case.

- (69) Neo s-è dèē s-è ʔè (predicational)
 Neo PGN.F-NOM mother PGN.F-NOM COP
 'Neo is my mother'
- (70) dèē s-è Neo s-è ʔè (specificational)
 mother PGN.F-NOM Neo PGN.F-NOM COP
 'My mother is Neo'
- (71) kɪ-é Thabo b-è ʔè (predicational)
 1SG-NOM Thabo PGN.M-NOM COP
 'I am Thabo'
- (72) Thabo b-è kɪ-é ʔè (specificational)
 Thabo PGN.M-NOM 1SG-NOM COP
 'Thabo is me'

The last possibility is that the inverted predicate DP is phi-deficient, and the external argument DP in second position bears phi-features. In these cases, both DPs receive nominative Case. The predicational (non-inverted) structure is different because there the phi-deficient DP does not receive nominative Case.

- (73) $\eta\hat{\text{li}}\text{-m}$ $q\chi'\text{áò khò}$ $b\text{-è}$ $kú\bar{a}$ $*(\text{è})$ ʔè (predicational)
 this-PGN.M man person PGN.M-NOM Tshila *(NOM) COP
 ‘This man is Tshila’
- (74) $kú\bar{a}$ è $\eta\hat{\text{li}}\text{-m}$ $q\chi'\text{áò khò}$ $b*(-\text{è})$ ʔè (specificational)
 Tshila NOM this-PGN.M man person PGN.M*(-NOM) COP
 ‘Tshila is this man’

The data from Tshila inverted predicate nominal constructions show the exact same patterns of nominative Case assignment as the non-inverted sentences. These data, then, conform to the generalizations laid out in the table in (63).

In specificational copular constructions, the linearly first DP always receives nominative Case, and DPs which bear a set of phi-features always receive nominative Case, regardless of position.

The fact that the Case assignment patterns are the same in both predicational and specificational sentences shows that the inversion of the predicate DP to a position above the external argument DP takes place *before* nominative Case assignment. In other words, assuming that nominative Case assignment is a result of DPs agreeing with a phi-probe on T (Chomsky 1995; 2000; 2001; Pesetsky & Torrego 2004; 2007; Platzack 2006; Legate 2008; Georgi 2017; Poole 2024, a.o), this means that predicate nominal inversion allows for new phi-agreement relations that the non-inverted structure does not allow for. As such, our theory of predicate inversion (and certainly any theory of inversion more generally) must account for this. That is, it cannot be the case that inversion is a result of A-bar movement or any other operation that derivationally follows A-movement and Agree (Bruening 2010; 2016).

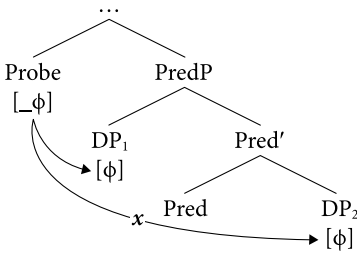
In a predicational (non-inverted) predicate nominal structure, two DPs appear before the copular verb ʔè . Tshila is an SOV language, so the first DP in the non-inverted structure is the subject, and the second DP is the predicational DP.

Following work on the syntax of predication (Bowers 1993; 2001), I assume the existence of a functional projection PredP that combines the external argument DP (as its specifier) with that which is being predicated (in these cases, a nominal introduced by a copular verb). The PredP combines these two constituents to form a proposition (Bowers 1993).

While Bowers (1993) has the predicational DP as the complement of PredP (which this is indeed the consensus view on the structure of predicate nominal clauses), a structure in which the external argument DP and the predicative DP are respectively the specifier and complement of the same functional head raises fundamental issues for any theory of predicate nominal constructions in which the predicative DP may also appear as the subject.

Under a minimalist probe-goal theory of Agree which involves a phi-probe $[_\phi]$ searching and agreeing with the closest suitable phi-goal $[\phi]$ (Chomsky 2000; 2001; see also Béjar 2003; Preminger 2014; Coon & Keine 2021; a.o), a phi-probe which appears above a Bowers-style predicate nominal structure cannot ever access the predicational DP, which I label DP_2 in the following structure, assuming that the external argument DP (DP_1) is not phi-deficient.

(75) Bowers (1993) predication structure

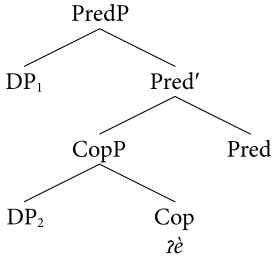


Any Agree operation which targets DP_2 to the exclusion of DP_1 in the structure given in (75) is a violation of minimality. No probe externally merged above $PredP$ is able to target DP_2 to the exclusion of DP_1 (without the stipulation of some arbitrary set of features on DP_2). Even under an Attract Closest framework with some notion of equidistance (Chomsky 1995; 2000; 2001), there is no way around the fact that DP_1 is closer to any phi-probe merged above $PredP$ than DP_2 is under any notion of closeness under c-command (Ura 2000b). Indeed, this fact poses a significant issue for any conceptualization of equidistance which must posit the “suspension” (Longenbaugh & Polinsky 2018) of not only locality but minimality as well. Any theory in which a phi-probe targets DP_2 over DP_1 – be it T^o or some other functional projection (Krapp López & Gravely 2024) – must contend with the fact that DP_1 clearly asymmetrically c-commands DP_2 in (75), and is thus always closer to a phi-probe which c-commands the two DPs.

Attempting to move DP_2 over DP_1 into a position in which it can be viable target for Agree operations via the movement of a larger constituent containing DP_2 is also not possible in (75), as there is no maximal projection which contains DP_2 and not DP_1 . In other words, there is no maximal projection that can be targeted to move DP_2 over DP_1 . As such, the Bowers-style predication structure is not conducive to any kind of smuggling analysis, either (Belletti & Collins 2021), as it is not possible to move DP. Thus, the structure in (75) is a major obstacle for any theory which takes a specificational copular construction to an inverted predicational copular construction, as there is no available mechanism for inverting the order of the two DPs without violating both minimality and locality.

As such, I present the following structure for predicate nominal constructions in Tshila (underlying structure; pre-A-movement).

(76) Predicate nominal structure



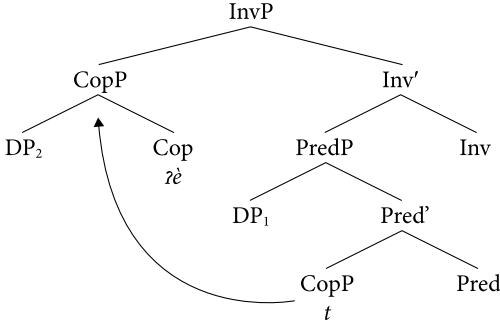
In this new structure given in (75), the predicative DP_2 is externally merged inside of a copula phrase (CopP), which is selected as the complement of PredP. The external argument DP_1 is located in Spec,PredP. Now, even though DP_1 still asymmetrically c-commands DP_2 in the positions in which they are externally merged, it is still possible to move the predicate DP to a position above the external argument DP via the movement of a constituent that contains DP_2 : the CopP. The copular verb in this structure is also externally merged as the head of CopP, and it raises from this base position to T via head movement.⁶

Given this discussion, I propose a smuggling mechanism for predicate inversion in which the predicate DP is promoted to a position above the external

6. This analysis of the position of the copular verb causes the structure of copular verbs to look quite like that of other verbs: that is, the copula starts out very low in the structure, where it projects a phrase that introduces a DP argument, which is in turn selected by a phrase that introduces an external argument, and then the copula moves up to a higher position via head movement. Cast in this light, the main difference between copular verbs and other verbs is that the copula's DP arguments do not receive theta-roles (at least, not in the same way as arguments of lexical verbs do). To me, this is an advantage as it concretizes the intuition that copular *verbs* are just that: verbs (at least in the case of predicate nominals; I am aware that a different analysis of copular verbs in constructions like predicative adjective constructions in English may be necessary, although it is worth noting here that the copula *zè* does not appear in predicative adjective constructions in Tshila). Here I go against the notion that the copula verb in predicate nominal constructions is base-generated above PredP (Bowers 1993; Mikkelsen 2005), or that it is, as one anonymous reviewer put it, the "manifestation of the Pr head" (Matushansky 2019); indeed, there is a completely different morpheme in Tshila – *hî* – which looks like the manifestation of $Pred^0$, which is absent from predicate nominal sentences altogether, though I do not spend time analysing that here. Parts of this analysis are certainly not incompatible with the idea that the copula is base-generated above PredP, but that would require the stipulation of additional functional structure, the replacement of CopP as it is presented here with some arbitrary projection XP, and the loss of the parallels drawn between this copula and other verbs.

argument DP via the movement of the maximal projection CopP in which it is contained. See the inverted structure below.

(77) Inverted predicate nominal structure



Smuggling is an operation by which syntactic elements are moved within larger constituents in which they are embedded, rather than directly being the target of a movement operation (Belletti & Collins 2021; Collins 2005; 2024; Roberts 2010; 2019; 2024; Gotah 2024; Shlonsky 2024; Stegovec 2024; Sulemana 2024; Thoms 2024; a.o). This functional projection InvP (inversion phrase) is a type of voice phrase (Collins 2024) that extends the argument domain and mediates between the arrangement of arguments in their theta positions (argument structure) and their mappings onto A-positions. InvP selects the closest verbal projection for movement to its specifier (without creating anti-locality). The presence of InvP and the smuggling of a lower argument above a higher one creates new possibilities for agreement relations and A-movement. In other words, InvP allows for smuggling of a lower argument to a position above a higher one, which then creates new A-dependencies.

Given the structures above – the predicate nominal structure in (76) and its inverted counterpart in (77) – it is now possible to account for the way that agreement and nominative Case assignment work in Tshila predicate nominal structures.

4. Two goals, one probe

I analyze double nominative Case assignment in Tshila as a case of a phi-probe on T° entering into an Agree relation with two distinct goals (Ura 1996; 2000a; Hiraiwa 2001; Pesetsky & Torrego 2004; 2007; Coon & Keine 2021; a.o). I now explain the details how this is derived, and in the following section I explain what

prevents nominative Case from being assigned to the lower DP in cases where the lower DP lacks phi-features.

Agreement probes vary in the degrees to which they are articulated (Coon & Keine 2021: 664). This means that, crosslinguistically, probes may differ with respect to which features they search for (Béjar 2003, Béjar & Rezac 2009; Preminger 2014; 2019 ; Oxford 2019; a.o). Thus, a given probe that searches for a specific phi-feature value ($[\#]$, for instance) in one language may in another language search for any DP bearing any phi-feature value $[\phi]$, or even any element bearing a only nominal $[D]$ feature. I adopt the following syntactic definition of Agree (Coon & Keine 2021: 665).

(78) Agree (from Coon & Keine 2021: 665)

A probe segment $[uF]$ agrees with the closest accessible DP in its domain that bears $[F]$. If Agree is established, the hierarchy of segments containing $[F]$ is copied over to the probe, valuing and thus removing $[uF]$.

I assume – as Coon & Keine (2021) do – an Obligatory Operations model of Agree (Preminger 2014) in which a probe must obligatorily search for a suitable goal bearing the relevant features that the probe is specified to search for, but failure to find a suitable goal does not cause the derivation to crash. This moves away from a “derivational-time bombs” model of Agree in which leftover unvalued features on a phi-probe always result in ungrammaticality. As such, I use the notation $[_F]$ as opposed to $[uF]$ throughout this paper.

The relevant features for the agreement probe on T in Tshila are a nominal feature $[D]$ and a phi-feature $[\phi]$ (whose internal structure is not relevant to the probes discussed here). T must initiate its search for these features separately, in a specific hierarchical order (Taraldsen 1995; Preminger 2011; 2014; Halpert 2019; Hoover 2021; Fernández-Serrano 2022).

This order reflects the entailment relations that exist between phi-features (Harley & Ritter 2002), as well as the hierarchical specification of the relevant features within the potential goals. For example, a probe with a $[_\pi]$ and $[_{\text{PARTICIPANT}}]$ feature searches first for a goal bearing a $[\pi]$ since Person entails Participant (but not vice-versa) (Coon & Keine 2021), and since Person is geometrically arranged above Participant. Similarly, a probe bearing a $[_D]$ and $[_\phi]$ feature searches first for an element bearing a $[D]$ feature since the presence of $[\phi]$ unilaterally entails the presence of $[D]$.

I now show how these stipulations on the mechanism of Agree derive the grammatical patterns of agreement in Tshila predicate nominal constructions, and rule out anything which is not grammatical.

4.1 Agreement in action

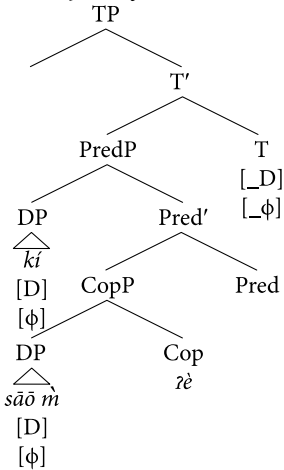
As detailed above, the phi-probe on T has a $[_D]$ and $[_\phi]$ feature. The probe initiates its search for a $[D]$ -bearing element first, followed by the search for the $[_\phi]$ -bearing element. The search terminates upon finding $[_\phi]$ as there are no more unvalued features on the probe.

In a situation where the external argument DP is closest to the probe and lacks $[_\phi]$, while the predicate DP is farther and valued for $[_\phi]$, both DPs receive nominative Case via agreement with T. I show now how this plays out for the predicational copular example below.

- (79) kí -é sāō b -è ʔè
 1SG -NOM father PGN.M-NOM COP
 ‘I am (your) father’

First, the DP *my name* appears as the external argument, and the DP *Thabo* appears within the complement of PredP. PredP is the complement of TP, the head of which is the probe bearing the features $[_D]$ and $[_\phi]$.⁷

- (80) *I am (your) father*: Underlying structure

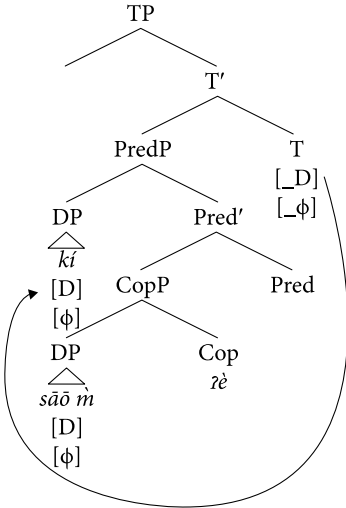


The phi-probe on T initiates its search triggered by the presence of the $[_D]$ feature. The closest viable goal to T is the external argument DP *kí* ‘I’, which bears a feature $[D]$ feature and a $[_\phi]$ feature; however, the probe at this point only targets

7. I ignore head movement of the copular verb ʔè to from its base position into T° for now as it is not completely relevant to the discussion of nominative Case assignment; however, I implicitly assume that it takes place due to a separate set of unvalued features on T (and on Pred°) that trigger verbal head movement through the clausal spine.

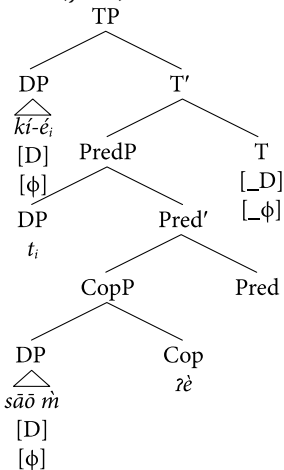
the [D] feature of the external argument, assuming that probes specified to search for multiple features must do so discretely and in a hierarchical, fixed order determined by entailment relations that exist between said features (i.e., [ϕ] unilaterally entails [D]) (Harley & Ritter 2002; Béjar 2003; Storment 2025).

(81) *I am (your) father*: probe searches for [D], finds external argument DP



As an consequence of being the first element that T enters into an Agree relation with, the external argument DP *my name* moves to Spec,TP. This movement is fed by agreement (Chomsky 1995; 2000; 2001; Miyagawa 2010; Preminger 2014). Nominative Case is also assigned to the external argument as a result of this Agree relation.

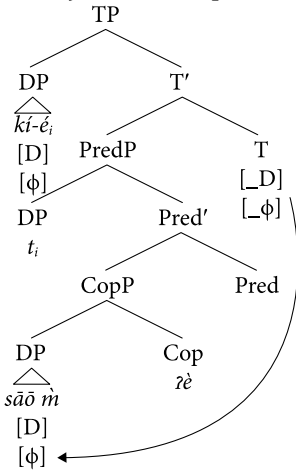
(82) *I am (your) father*: movement of the external argument DP to Spec,TP



At this point the $[_D]$ feature on T has been valued. If $[_\phi]$ were also valued at this point, then the probe would have no reason to initiate another search, and thus nominative Case assignment to the lower DP would be impossible, even though nominative Case on phi-bearing DPs in the lower position is obligatory. This analysis suggests that feature copying is not coarse for phi-Agree in Tshila (Preminger 2014), meaning that a probe's search for a feature $[F]$ triggered by the presence of an unvalued feature on the probe $[_F]$ may only target and copy $[F]$, and not any other features that exist in an entailment relationship with $[F]$.

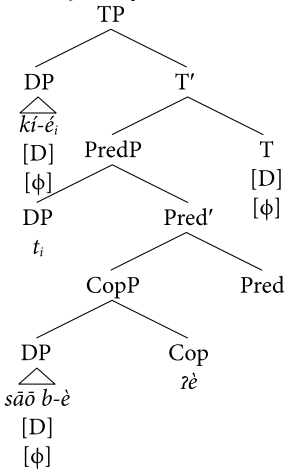
Since the probe only copied back $[D]$, the phi-probe initiates another search for $[\phi]$ based on its unvalued feature $[_\phi]$.

(83) *I am (your) father*: probe searches for $[\phi]$, finds predicate DP.



The $[_\phi]$ feature on T is now valued as well, since the predicate DP bears a set of phi-features (as evidenced by the PGN marker), but no EPP movement occurs as Spec,TP has already been filled by the external argument DP. As a result of Agree, DP₂ also receives nominative Case.

(84) *I am (your) father*: double nominative Case assigned



Crucially, the T probe must initiate two searches separately and in hierarchical order: first, a search for an element bearing the feature [D] triggered by the [_D] feature on T, and, second, an element bearing phi-features triggered by the feature [_φ].

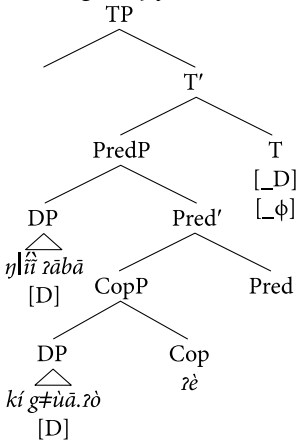
The analysis here shows that the Activity Condition is necessary to derive the agreement facts in Tshila predicate nominal constructions (Chomsky 2000; Oxford 2017; Kalin 2020), as any potential goal bearing the feature [φ] is not eligible to satisfy the needs of the probe if it has already undergone Agree and nominative Case assignment.

If one search could value both of the unvalued features on the probe, or if two searches could value the unvalued features on the probe by agreeing with the same DP, then we would not expect two phi-bearing DPs to both receive nominative Case.

I now show how the same mechanism of Agree that marks all phi-bearing DPs as nominative is responsible for the lack of nominative Case on lower phi-deficient DPs. Take the following Example (67), repeated here.

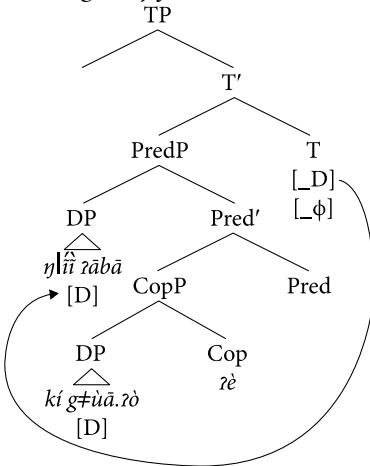
(85) ɲlɪ̃ ʔābā *(è) kɪ ɡʔùā.ʔò (*è) ʔè
 this dog *(NOM) 1SG friend (*NOM)COP
 ‘This dog is my friend’

(86) *This dog is my friend*: underlying structure



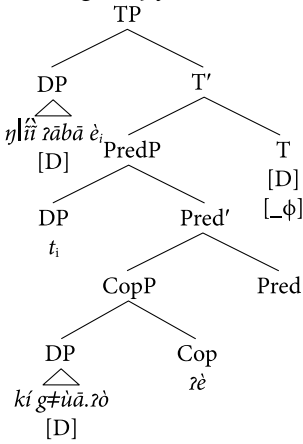
Here, both DPs are phi-deficient, as evidenced by the fact that they are not PGN-marked. The first search initiated by the phi-probe only targets the closest element to the probe containing a [D] feature, which in this case is the external argument $\eta/\hat{n}i$ 'this dog'.

(87) *This dog is my friend*: T encounters external argument DP bearing [D]



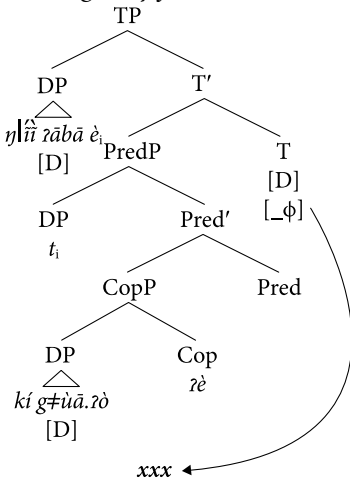
From here, T enters in to an Agree relation with the external argument DP. This causes said DP to move to Spec,TP, to receive nominative Case, and to be inactive for further Agree searches.

(88) *This dog is my friend*: external argument DP receives nominative Case



At this point the phi-probe on T must obligatorily search for an element bearing [φ], but both DPs are phi-deficient in this derivation (and, even if the higher DP had [φ], it has been rendered inactive). As such, [-φ] cannot be valued, and the unvalued feature remains on the probe, which does not result in ungrammaticality (Preminger 2014).

(89) *This dog is my friend*: No suitable [φ]-bearing goal



The same mechanism of Agree derives all the patterns of nominative Case assignment in Tshila predicative copular constructions with two DPs. I now go on to show how it derives the same patterns for specificational (inverted) copular structures.

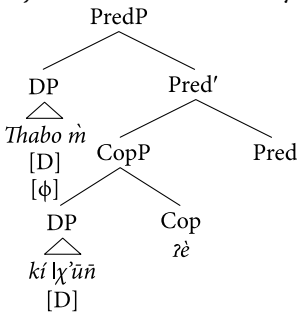
4.2 Agreeing into inversion

As mentioned before, predicate inversion is a result of smuggling driven by a functional projection *InvP*, which creates new A-dependencies. In inverted structures, the same phi-probe on T initiates the same searches – first for [D], then for [ϕ], again due to the hierarchical ordering of these features on the probe and the coarseness of feature copying – as it does when searching into a non-inverted structure (that is, no *InvP*), the difference being that this time the predicate DP is closer to the probe than the external argument DP. In other words, we now deal with a $DP_2 > DP_1$ order.

We know that the predicate DP is closer to the probe than the external argument DP because non-PGN-marked predicate DPs are able to receive nominative Case when inverted, and non-PGN-marked external argument DPs are not able to do so. For inverted structures, the phi-probe remains the same; the only difference is that the smuggling of the copular phrase into *InvP* causes the predicative DP to be the first accessible goal. See the following derivation of the specificational copular sentence given below.

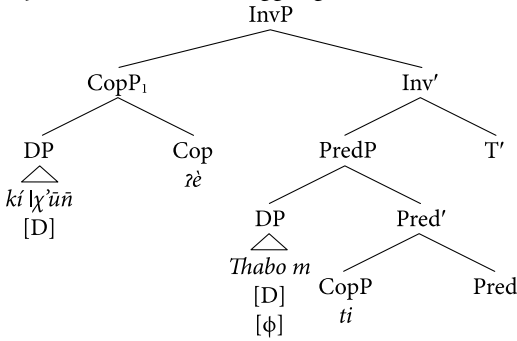
- (90) kǐ lχ'ũñ *(é) Thabo b*(-è) ʔè
 1SG name *(NOM) Thabo PGN.M*(-NOM) COP
 'My name is Thabo'

- (91) *My name is Thabo*: underlying form



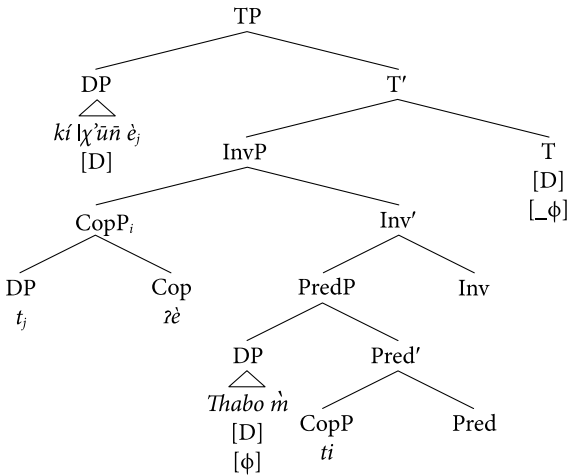
First, *InvP* is projected, and *CopP* (which contains the predicative DP) is moved to *Spec,InvP*.

(92) *My name is Thabo: smuggling*



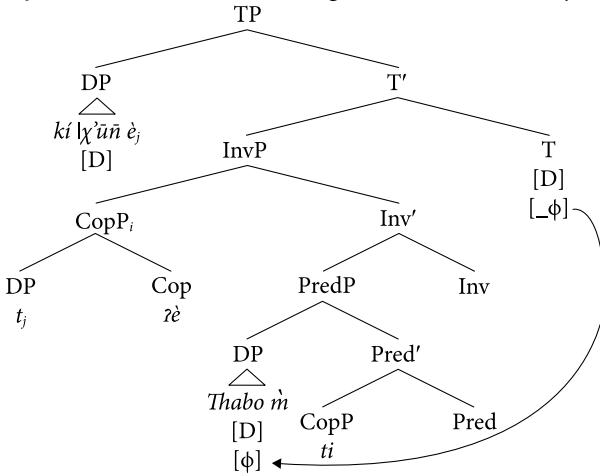
Above this structure, TP is externally merged, with a phi-probe on T that bears the same specifications as before: namely, [_D] and [_φ]. As before, the phi-probe initiates a search for an element bearing a [D] feature, but this time it finds the predicative DP first due to the smuggling.

(93) *My name is Thabo: T finds predicative DP, which Agrees and receives nominative Case*



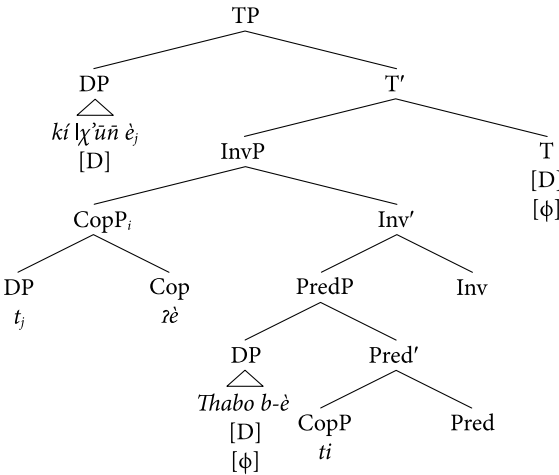
At this point, the phi-probe has a remaining unvalued feature [_φ], so it initiates a second search, upon which it finds the external argument DP (now located below the predicative DP).

(94) *My name is Thabo*: external argument DP is found by T's search for [ϕ]



This results in nominative Case being assigned to the external argument DP as well.

(95) *My name is Thabo*: external argument DP undergoes Agree, receives nominative Case

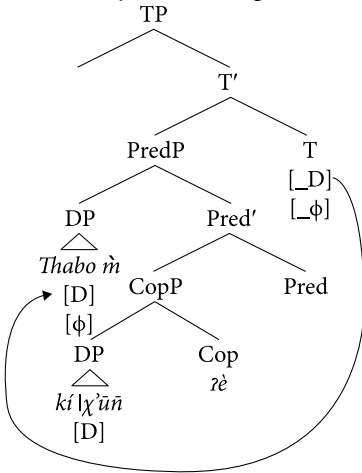


The inversion structure here is necessary to derive the data, as the predicative DP must move to a position where it is visible to the phi-probe. In the non-inverted (predicational) variant of this sentence, the predicative DP may not receive nominative Case.

- (96) Thabo b*(-è) kí lχ'ũñ (*è) ?è
 Thabo PGN.M*(-NOM) 1SG name (*è) COP
 'Thabo is my name'

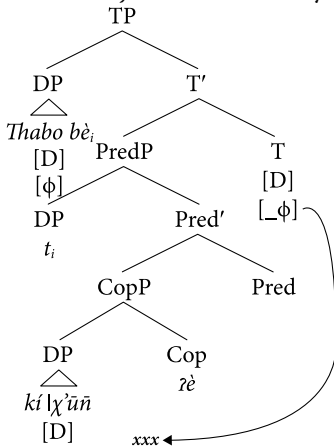
It may not receive nominative Case because, without smuggling, the phi-deficient predicative DP *kí lχ'ũñ* 'my name' will never be visible to the phi-probe. I show this now.

- (97) *Thabo is my name*: T Agrees with external argument DP



This causes the external argument DP to move to Spec,TP, receive nominative Case, and be inactive for further probing. As such, there is no longer a suitable goal for [-φ].

- (98) *Thabo is my name*: invisibility of predicative DP to T



4.3 A note on closeness

It is necessary to address how, in the inversion structure, the search path of the probe encounters the predicate DP before the external argument DP. While the maximal projection containing the predicate DP (CopP) has moved above the external argument DP and asymmetrically C-commands it, the predicate DP and the external argument DP exist in no C-command relationship anymore. Therefore, closeness to the probe can no longer be defined with respect to these two goals strictly in terms of the goals C-commanding one another. How the predicate DP is closer to the goal than the external argument DP in the inverted structure, then, must be clarified, since it is clear by the patterns of Case assignment that it is closer.

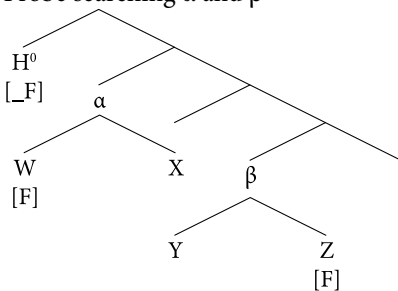
The probe T in this example asymmetrically C-commands the CopP (which contains the predicate DP) in Spec,InvP. It also asymmetrically C-commands the external argument DP in its base position. The CopP asymmetrically C-commands the external argument DP. As such, I propose the following condition on the search path of the probe.

(99) Closeness Without (Direct) C-Command

For a configuration in which a probe on a head H^0 asymmetrically C-commands two non-terminal nodes α and β , and α asymmetrically C-commands β , the probe will search the entirety of the structure dominated by α for a relevant goal before it searches the structure dominated by β .

So, in the following structure, P finds W before it finds Z, even though the closeness of W over Z cannot be established under typical notions of closeness via C-command (Ura 2000b).

(100) Probe searching α and β



The conceptualization of Agree presented here bears on the issue of parsing algorithms in syntax: namely, whether or not probes perform Depth-First Searches (DFS) or Breadth-First Searches (BFS) (Milway 2023). This conceptualization certainly supports a DFS algorithm for Agree, which “starts at the root of an object

and searches to a terminal node before backtracking” (Milway 2023: 13), as otherwise it is not clear how closeness could be determined between two elements that do not stand in an asymmetrical c-command relation to one another, especially concerning the accessibility of these elements to the operation Agree. DFS in Agree has been suggested elsewhere in the literature, with stipulations (Preminger 2019; Ke 2019; Brannan & Erlewine 2022).

With these considerations on inversion and Agree, it is now possible to detail what happens when double nominative Case is *not* assigned in Tshila predicate nominal constructions.

5. Blocked phi-goals: Constituent negation and focus

There are some cases still in which DPs that do bear a set of phi-features do not receive nominative Case. This is when those DPs are embedded within a constituent negation or constituent focus structure (Klima 1964; Horn 1989; Sánchez López 1999). I detail here how such structures work in Tshila.

DPs under constituent negation that appear in the second position in predicate nominal structures obligatorily lack nominative Case marking, even if those DPs are specified for phi-features.

- (101) kǐ-é Thabo ìn bèē (*è) ʔè
 1SG-NOM Thabo PGN.M NEG (*NOM) COP
 ‘I am not Thabo’

Conversely, constituent-negated DPs that appear in the first position (that is, external argument DPs and inverted predicate DPs) obligatorily receive nominative Case. The nominative Case morpheme appears immediately to the right of the negation morpheme *bèē*, and is not adjacent to the DP being negated.

- (102) kǐ bèē *(è) Thabo b -è ʔè
 1SG NEG *(NOM) Thabo PGN.M-NOM COP
 ‘It is not me who is Thabo’ (lit: ‘Not I am Thabo’)

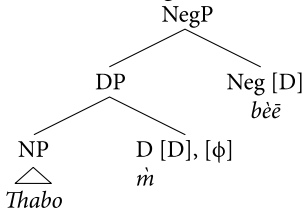
Preliminary data shows that the constituent focus morpheme *χáá* looks to behave similarly (if not the same), but considerably more data on constituent negation was gathered by the time of writing this. After the following two examples, I primarily refer only to constituent negation, but I assume that the structure for constituent negation broadly applies to constituent focus as well.

- (103) Neo s -è sá χáá (*è) ʔè
 NEO PGN.F-NOM 2SGF FOC (*NOM) COP
 ‘Neo is *you*’

- (104) kí χáá *(è) kwà kúā qχ'úí
 1SG FOC *(NOM) PROG Tshila speak
 'It is me who speaks Tshila'

The position of the nominative Case morpheme in (102) and (104) as well as the position of the PGN marker in (103) between the NP and negation reveal the following structure of constituent negation.

- (105) Constituent negation of the DP *Thabo ì* in (101)



Here the DP appears as the complement of the head of the NegP *bèē*. The DP *Thabo ì* and its features [D] and [φ] are embedded within the NegP. I treat the NegP as an extension of the nominal projection domain; in other words: a functional projection modifying the DP⁸ (Kim & Sag 2002; Borschev et. al 2006; Etxepare & Uribe-Etxebarria 2017). As such, it bears a [D] feature. There is no reason to believe that the phi-features of the NP cascade up to NegP; in fact, there is only evidence to the contrary. I explained in Section 2.2 how D undergoes phi-Agree with the NP, but there is no such phi-probe on Neg^o. Regardless of the phi-feature specification of the DP being modified, NegP is visible to a probe as lacking phi-features.

Constituent negation creates a “shell” around the DP, and the probe on T cannot access the DP inside. DPs constitute phases (Citko 2014). The NegP extends the phase domain of the DP. As such, the Neg and Foc heads constitute a phase edge. Therefore, anything below the edge of the phase (that is, the Neg head) is not accessible to the probe. The fact that nominals with constituent negation (and focus) are always visible to the T probe as phi-deficient explains why NegP nominals must receive nominative Case in first position, but cannot receive it in second position.

This DP-internal negation is significantly higher in the nominal structure than in a language such as English, where negation of a DP does not seem to

8. This does not preclude the existence of the verbal NegP, which certainly also exists. This characterization of NegP treats it as a kind of projection that can appear in both verbal and nominal projection domains, as has also been proposed for FocP and TopP (Giusti 1996).

have such an influence on phi-agreement. That is, this phenomenon of NegP/FocP shells blocking phi-agreement is not universal.

The “shell” status of NegP and FocP in Tshila has to do with the fact that these phrases are part of the nominal projection domain and have a [D] feature. One anonymous reviewer asks why FocP and NegP create these shells, but CopP does not. The obvious answer is that CopP as a ‘verbal’ projection does not project a [D] feature (and certainly does not project [ϕ]) and is therefore not relevant to a phi-probe which is specified to find [D] and [ϕ]. The other answer is that CopP in no way constitutes a phase. If it did, no predicative DP argument would ever be visible to the phi-probe as it is not situated at the edge of CopP. Thus, the analysis of DP negation and focus as blockers to a search for [ϕ] do not complicate the analysis of clausal structure presented here.

6. Conclusion

In this paper I have presented a coherent and effective analysis of predicate nominal constructions in Tshila. This construction reveals quite a bit about the nature of several syntactic phenomena which is relevant not only for the understanding of Tshila but for the understanding of syntactic theory as a whole.

First, I give support to the view that Case assignment and phi-agreement part of the same operation, as Case assignment in Tshila is driven by the phi-feature specification on the probe.

Second, phi-features are projected in a hierarchical, uniform manner. This applies to nominals as well as phi-probes. This phi-feature hierarchy dictates that certain features are searched for by a phi-probe before others. I take this hierarchy to be universal, though the specific features that a given probe searches for may vary within and across languages (for example, the fact that English T probes for [π] and [#] instead of [D] and [ϕ]).⁹ This phi-feature hierarchy unifies the internal structure of both nominals and probes.

Third, this analysis demonstrates that inversion feeds phi-Agree and other A-dependencies. Case assignment in inverted predicate nominal sentences depends on the surface order, not the underlying order. Predicate inversion feeds new

9. English also differs from Tshila in that feature copying is coarse, meaning that a goal bearing both [π] and [#] can satisfy both the unvalued [π] and the unvalued [#] feature on T. So, two separate searches by T are not obligatory in every case, but happen in cases where the first goal encountered by T is deficient. I suspect that the English kind of feature copying is coarse, unlike in Tshila, because [π] and [#] are both subclasses of [ϕ], whereas [D] and [ϕ] are not subclasses of the same category. For more on this, see Storment (2025).

agreement relations. This data is incompatible with the view that inversion takes place as an A-bar operation or some kind of PF/LF condition. Since Case assignment and agree are part of the same operation, this is parallel to the following English example.

- (106) a. Your cats {are/*is} what I love about you
 b. What I love about you {are/is} your cats

The interesting data from the Tshila language, spoken by very few people in a remote part of the world, has impactful theoretical implications for syntactic theory as a whole.






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