

RESEARCH

V1 in Kipsigis: Head movement and discourse-based scrambling

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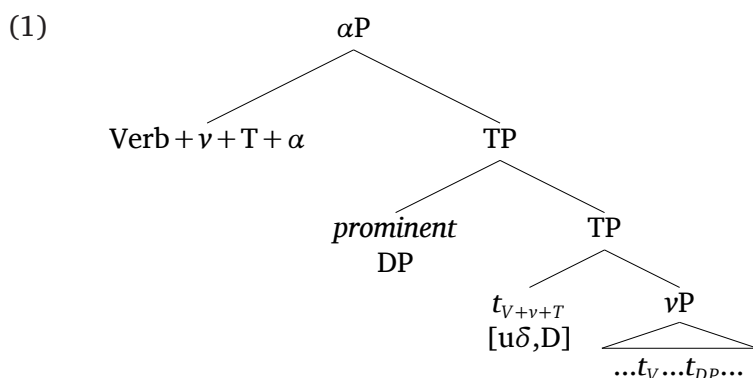
Kipsigis (Nilo-Saharan, Kenya) is a verb-initial language that exhibits a VSO/VOS alternation, in which the felicity of postverbal word orders is dependent on information structure. Specifically, the lexical item occupying the immediately postverbal position is discourse-prominent. We propose that V1 in Kipsigis results from head movement of the verb to a functional projection between TP and CP and that discourse-prominent material raises to Spec,TP. Movement to the immediately postverbal prominence position is a joint EPP/prominence effect (motivated by [D] and [uδ] features, respectively). We demonstrate that this prominence movement cannot be reduced to familiar notions like topic and focus, arguing that prominent phrases are highlighted or salient.

Keywords: Verb-initial languages; V1; head movement; scrambling; Nilotic languages; mixed A-/A'-effects

1 Introduction

Kipsigis is a Nilo-Saharan language of the Kalenjin subgroup spoken in western Kenya by approximately 1.9 million people (Eberhard et al. 2019; Lewis et al. 2016). Kipsigis is a verb-initial language that exhibits a widespread VSO/VOS alternation. Cross-linguistically, such VSO/VOS alternations can arise from many different sources including specificity, definiteness, animacy, phonological weight, and discourse status (Clemens & Coon 2018). We show that this Kipsigis word order alternation is driven by information structure, with discourse-prominent constituents scrambling to the immediately postverbal position (IPP).

To account for these patterns we propose a head movement analysis of Kipsigis in which the verb raises to a functional projection between CP and TP (termed α P by Miyagawa 2010) and discourse-prominent constituents move to Spec,TP. This prominence position has an EPP quality, preferring constituents with D-features:



Kipsigis is largely under-documented and there are few intensive syntactic analyses of most varieties within the Kalenjin group of Nilo-Saharan. There are several works on the morphology and phonology of Kipsigis, including Toweet (1979); Bii (2014); Bii & Chelimo (2014); Bii et al. (2014) and some work on noun phrase syntax (Kouneli 2017; to appear). The main contribution of this paper is to offer the first description and analysis of the basic properties of Kipsigis sentential word order.

In §2 we offer a descriptive overview of Kipsigis phrase structure, describing the core empirical patterns but reserving most analytic discussion for later sections. In §3 we consider head movement vs. predicate-fronting analyses of Kipsigis V1, concluding that only a head movement account is plausible for Kipsigis. §4 details our proposed scrambling analysis and defends this proposal with some additional supporting evidence. §5 discusses the interpretation of the immediately postverbal position and the virtues and drawbacks of the proposed prominence-based analysis. We consider outstanding issues and conclude in §6.

2 A descriptive overview of Kipsigis word order

2.1 Verbs come first

Kipsigis is a verb-initial language, as illustrated in (2):¹

- (2) a. Kii-Ø-geer dʒiita tɛta.
PST-3SG-see person cow
'A person saw a cow (long ago).'
- b. Kii-Ø-geer tɛta dʒiita.
PST-3SG-see cow person
'A person saw a cow (long ago).'

Any word order in which the verb is not clause-initial is consistently ungrammatical:

- (3) a. *Dʒiita kii-Ø-geer tɛta. *SVO
b. *Tɛta kii-Ø-geer dʒiita. *OVS
c. *Dʒiita tɛta kii-Ø-geer. *SOV
d. *Tɛta dʒiita kii-Ø-geer. *OSV

Although standard declarative sentences are V1 in Kipsigis, there are two left-peripheral particles—*nɛ* and *ko*—which allow for the fronting of lexical material before the verb:

- (4) a. Lakwɔ-nɔɔn nɛ Ø-Ø-tʃaum-e-gee.
child-that REL.SG PRES-3SG-love-PROG-REFL
'It is that child that loves him/herself.'
- b. Lakwɔ-nɔɔn ko Ø-Ø-tʃaum-e-gee.
child-that KO PRES-3SG-love-PROG-REFL
'That child loves him/herself.'

¹ All data are the result of fieldwork performed at Pomona College with three Kipsigis language consultants. Our conclusions are largely based on elicitation interviews, but take into account analysis of four narrative texts. [g] and [ɣ] are allophones of the /k/ phoneme, which we write as 'g' following common orthographic conventions. Vowel length and ATR quality play a significant lexical and grammatical role in Kipsigis (e.g. pluralization via a shift in ATR). We have attempted to transcribe these distinctions as carefully as possible, though some inaccuracies certainly remain. However, these distinctions are not central to the syntactic analysis offered here. Finally, tone marks nominative case; subject NPs bear tones in a different pattern than in citation forms and in non-subject roles (Jake & Odden 1979). Because an analysis of Kipsigis tone in sentential contexts is not yet published, we have chosen not to transcribe tone to avoid misrepresenting the data. The main syntactic influence of tone is nominative case marking, which is retrievable from our translations. Many thanks to Maria Kouneli for helpful discussion of Kipsigis phonology and morphology.

The particle *nɛ* leads to a focused interpretation of the fronted constituent, generally best translated as an it-cleft. The particle *ko*, on the other hand, generates a topicalized and sometimes generic interpretation of the fronted constituent.

2.2 VSO/VOS alternation

Like many other V1 languages, Kipsigis exhibits a VSO/VOS alternation, as seen in (2a) and (2b). This word order “flexibility” is far-reaching in the language, extending to ditransitives and adjuncts.² In ditransitive sentences, all six V1 word orders containing a verb, subject, direct object, and indirect object are grammatical:³

- (5) a. Koo-Ø-gootʃi laakwɛt tɛta baandeek.
 PST-3SG-give child cow maize
 ‘The child gave the cow some maize.’
- b. Koo-Ø-gootʃi laakwɛt baandeek tɛta. VS-DO-IO
 c. Koo-Ø-gootʃi baandeek laakwɛt tɛta. V-DO-S-IO
 d. Koo-Ø-gootʃi baandeek tɛta laakwɛt. V-DO-IO-S
 e. Koo-Ø-gootʃi tɛta laakwɛt baandeek. V-IO-S-DO
 f. Koo-Ø-gootʃi tɛta baandeek laakwɛt. V-IO-DO-S

The addition of a temporal adverb to a sentence containing a verb, subject, and object likewise allows for all six possible word orders in which the verb comes first:

- (6) a. Koo-Ø-e tuuga peek amut.
 PST-3PL-drink cows water yesterday
 ‘The cows drank the water yesterday.’
- b. Koo-Ø-e tuuga amut peek. VS-Adv-O
 c. Koo-Ø-e peek tuuga amut. VOS-Adv
 d. Koo-Ø-e peek amut tuuga. VO-Adv-S
 e. Koo-Ø-e amut tuuga peek. V-Adv-SO
 f. Koo-Ø-e amut peek tuuga. V-Adv-OS

Although our consultants deem each sentence in (5) and (6) grammatical, there are constraints on the discourse contexts in which the different word orders may be used (see §2.8).

2.3 Pragmatically neutral word order

“Out of the blue” diagnostics show that VSO is the most pragmatically neutral word order. In the context below, a newscaster for a Kipsigis broadcast gets on the air and wants to announce new information to the audience. This diagnostic assumes that the newscaster does not know the audience’s familiarity with the situation under discussion and thus cannot assume any shared knowledge (Bailyn 2012, see also Gundel 1974/1988; Chafe 1976; Givón 1976). As a result, we expect the most appropriate response to display the non-context-dependent word order:

- (7) a. Koo-Ø-min laagook baandeek komie.
 PST-3PL-plant children maize well
 ‘The children planted the maize well.’

² We use the term “flexible” as a cover term for the grammaticality of many different word orders. We do not mean to suggest that there are no syntactic mechanisms behind this flexibility or that there are no interpretive consequences. As we will show, there are clear information structure effects of this word order variation.

³ We include many examples with multiple word order permutations. These are translated the same way unless an additional translation is provided.

- | | | |
|----|-------------------------------------|------------|
| b. | #Koo-∅-min laagook komie baandeek. | #VS-Adv-O |
| c. | #?Koo-∅-min baandeek laagook komie. | #?VOS-Adv |
| d. | #?Koo-∅-min baandeek komie laagook. | #?VO-Adv-S |
| e. | #Koo-∅-min komie laagook baandeek. | #V-Adv-SO |
| f. | #Koo-∅-min komie baandeek laagook. | #V-Adv-OS |

VSO-Adv word order surfaces most naturally here, showing that it is the most pragmatically neutral word order of the language.⁴

2.4 Non-verbal predicate constructions

As in many other languages, Kipsigis verbs represent just one type of sentence-initial predicate (see Clemens & Polinsky 2017 and references therein). Non-verbal predicates—NP (8a), AP (8b), and locations (8c)—all appear in the clause-initial position, though for convenience we continue to label the Kipsigis word order pattern verb-initial (V1):

- (8) a. [Kaaneetiindet nɛ-mie] Kiproono.
 teacher REL.SG-good.SG Kiproono
 ‘Kiproono is a good teacher.’
- b. [Eetfeen] aarto-tju.
 big.PL goats-these
 ‘These goats are big.’
- c. [Mii mbareet nɛ-oo] Kiproono.
 COP field REL.SG-big.SG Kiproono
 ‘Kiproono is in the big field.’

2.5 (Lack of) grammatical factors in VSO/VOS alternation

In many VSO/VOS alternating languages, there are grammatical differences between the object of a VSO sentence and that of a VOS sentence. For instance, England (1991) notes that in Mayan VSO tends to occur when objects are animate, specific, definite, or phonologically heavy. Chung (1998) observes that VSO/VOS alternations in Maori are affected by the agency and (pro)nominal status of the object. Massam (2001) and Coon (2010) argue that in Niuean and Chol, respectively, the object in VSO constructions is a full DP, while the object in VOS constructions is a bare NP.⁵

No such phonological or morphosyntactic factors dictate the VSO/VOS alternation in Kipsigis. Phonological weight does not determine VSO vs. VOS word order, as phonologically heavy constituents—*lagojataap tjeptoo* ‘Cheptoo’s orange’ in (9)—can surface in either postverbal position:

- (9) a. ∅-∅-Am-e Kiproono lagojat-aap tjeptoo.
 PRES-3SG-eat-PROG Kiproono orange-POSS Cheptoo
 ‘Kiproono eats Cheptoo’s orange.’
- b. ∅-∅-Am-e lagojat-aap tjeptoo Kiproono.

⁴ We annotate gradations in naturalness judgments as ‘#’ vs. ‘#?’ based on the ‘*’ vs. ‘*?’ convention for marking gradations of grammatical acceptability.

⁵ Massam (2001) and Coon (2010) argue that V1 in Niuean and Chol is derived by predicate fronting; NPs stay VP-internal and are fronted with the VP, whereas DPs undergo object shift and the VP undergoes remnant movement, creating VSO word order. In more recent work, Clemens & Coon (2018) re-analyze VOS in Chol as derived via head movement, with bare NPs arriving immediately postverbally via postsyntactic prosodic restructuring.

In example (10) from a spoken narrative, we see a similar outcome; the heavy NP *koita ne kimi ngweny* ‘stone that was on the ground’ precedes bare noun subject *moset* ‘monkey.’ This is the opposite word order as would be predicted if phonologically heavy phrases move rightward to create VSO/VOS word order alternations (see (59) for an example that makes the same point):⁶

- (10) Kingoit tabandab ainet, [kokwai koita ne kimi ngweny moset]
 when.he.arrived bank.of river collected stone that was ground monkey
 ak kolany ketit.
 and climbed tree
 ‘When he arrived at the river bank, the monkey collected a stone that was on the
 ground and climbed up the tree.’

Likewise, we have not observed any definiteness restrictions; both VSO and VOS word orders are grammatical with objects that are bare nouns (11) and objects that are unambiguously DPs, containing demonstratives (12) :

- (11) a. Ø-Ø-Keer-e Kiproono peek.
 PRES-3SG-see-PROG Kiproono water
 ‘Kiproono sees water.’
 b. Ø-Ø-Keer-e peek Kiproono.
- (12) a. Ø-Ø-Keer-e Kiproono peeg-ɕu.
 PRES-3SG-see-PROG Kiproono water-this
 ‘Kiproono sees this water.’
 b. Ø-Ø-Keer-e peeg-ɕu Kiproono.

The animacy facts paint a similar picture. When the subject is animate and the object inanimate, VSO and VOS are acceptable (13) and both remain equally viable in sentences with inanimate subjects and animate objects (14):

- (13) a. Kii-Ø-wirta Kiproono koita.
 PST-3SG-throw Kiproono rock
 ‘Kiproono threw the rock.’
 b. Kii-Ø-wirta koita Kiproono.
- (14) a. Kii-Ø-tel rootweet Kiproono.
 PST-3SG-cut knife Kiproono
 ‘The knife cut Kiproono.’
 b. Kii-Ø-tel Kiproono rootweet.

These patterns suggest that there are no purely phonological or morphosyntactic factors motivating the VSO/VOS alternation in Kipsigis.

2.6 Word order patterns with CP-level phenomena

V1 word order and postverbal word order flexibility are preserved under different kinds of CP-material. Example (15) shows the VSO/VOS alternation under declarative-embedding complementizers:⁷

⁶ Here we simplify our glosses into word-by-word translations for ease of exposition. In addition, (10) is not transcribed in IPA, but rather with the Kipsigis writing conventions offered by our consultants.

⁷ In (15)–(19), only a subset of the six grammatical embedded word orders are shown, but all possible embedded V1 word orders are acceptable.

- (15) a. Koo-Ø-ger Kiproono kɔɛ koo-Ø-min laagook baandeek komie.
 PST-3SG-say Kiproono that PST-3PL-plant children maize well
 ‘Kiproono said that the children planted the maize well.’
 b. Koo-Ø-ger Kiproono kɔɛ koo-Ø-min baandeek laagook komie.

Example (16) shows the VSO/VOS alternation inside of relative clauses:

- (16) a. Koo-a-geer mbarɛɛt nɛ koo-Ø-min laagook baandeek komie.
 PST-1SG-see field REL.SG PST-3PL-plant children maize well
 ‘I saw the field where the children planted the maize well.’
 b. Koo-a-geer mbarɛɛt nɛ koo-Ø-min baandeek laagook komie.

Finally, (17)–(18) show that this word order flexibility persists inside topicalization (KO) and focus (NE) cleft structures:

- (17) a. En oosneet ko koo-Ø-iri laagook keetit.
 in forest KO PST-3PL-break children stick
 ‘As for (in) the forest, the children broke the stick there.’
 b. En oosneet ko koo-Ø-iri keetit laagook.
 (18) a. Keetit nɛ koo-Ø-iri laagook amut.
 stick REL.SG PST-3PL-break children yesterday
 ‘It is the stick that the children broke yesterday.’
 b. Keetit nɛ koo-Ø-iri amut laagook.

V1 and word order flexibility also persist in yes-no questions, another presumably CP-level phenomenon. Yes-no question formation in Kipsigis has two morphophonological effects: the addition of an epenthetic vowel at the end of the clause (when the clause-final word ends in a consonant) and the addition of a high tone to the final syllable of the clause:⁸

- (19) a. Koo-Ø-min laagook baandeek amut-í?
 PST-3PL-plant children maize yesterday-Q
 ‘Did the children plant maize yesterday?’
 b. Koo-Ø-min laagook amut baandeeg-í?
 c. Koo-Ø-min baandeek laagook amut-í?
 d. Koo-Ø-min baandeek amut laagook-í?

We assume that the epenthetic vowel is in a C head, which is either right- or left-facing. A right-facing C head straightforwardly accounts for the clause-finality of the epenthetic vowel, while a left-facing C head requires its complement to be raised in a roll-up style movement to derive the surface word order. For our current purposes these analyses are equivalent; V1 and word order flexibility are retained regardless of CP-level phenomena, suggesting that the position of the verb and all other syntactic movements (that derive postverbal word order) are below the CP domain.

2.7 The position of *wh*-words

Wh-words surface most naturally in the immediately postverbal position (IPP). The examples in (21) show the most pragmatically neutral word orders for three interrogatives in which different constituents are questioned:

⁸ Any word order with the epenthetic vowel and high tone on a non-clause-final constituent is strictly ungrammatical.

- (20) Koo-Ø-ɔl giirwaagiindet aartɛt amut.
 PST-3SG-buy chief goat yesterday
 ‘The chief bought the/a goat yesterday.’
- (21) a. Koo-Ø-ɔl ŋoo aartɛt amut?
 PST-3SG-buy who goat yesterday
 ‘Who bought the/a goat yesterday?’
- b. Koo-Ø-ɔl nee giirwaagiindet amut?
 PST-3SG-buy what chief yesterday
 ‘What did the chief buy yesterday?’
- c. Koo-Ø-ɔl au giirwaagiindet aartɛt?
 PST-3SG-buy when chief goat
 ‘When did the chief buy a goat?’

Although there are other grammatical *wh*-question word orders (§5), those in (21) are most natural and most discourse-neutral.

2.8 Word order patterns in response to *wh*-questions

2.8.1 New information focus surfaces immediately postverbally

Q&A congruence shows that a constituent bearing new information focus (i.e. the target information of a *wh*-question) surfaces most naturally in the immediately postverbal position (IPP). Consider the following object-oriented question and the most felicitous responses:⁹

- (22) Koo-Ø-min nee laagook komie?
 PST-3PL-plant what children well
 ‘What did the children plant well?’
- (23) a. Koo-Ø-min laagook baandek komie. VSO-Adv
 ‘The children planted the maize well.’
- b. Koo-Ø-min baandek laagook komie. VOS-Adv
- c. Koo-Ø-min baandek komie laagook. VO-Adv-S

VSO-Adv, VOS-Adv, and VO-Adv-S word orders are most appropriate responses to an object question. The felicity of VSO-Adv in (23a) is unsurprising because it is the basic word order, but (23b) and (23c) are just as appropriate; the phrase bearing new information focus (the object) is in the IPP. The remaining word orders (VS-Adv-O, V-Adv-SO, V-Adv-OS) are infelicitous.

In response to subject questions, VSO-Adjunct and VS-Adjunct-O word orders are most felicitous and other word order options are degraded in comparison, including VOS (25c):

- (24) Koo-Ø-e ŋoo peek amut?
 PST-3SG-drink who water yesterday
 ‘Who drank water yesterday?’
- (25) a. Koo-Ø-e tuuga peek amut. VSO-Adv
 ‘The cows drank water yesterday.’
- b. Koo-Ø-e tuuga amut peek. VS-Adv-O
- c. #?Koo-Ø-e peek tuuga amut. #?VOS-Adv

⁹ For each question our consultants performed pairwise comparisons of all possible variants of a response, which produced a ranking of best-to-worst for all permutations of V1 word order; non-V1 sentences were not considered. We annotate our examples on a 3-point scale of felicitous (unmarked), moderately felicitous (#?), and infelicitous (#).

As previously, other V1 word orders not presented are infelicitous. Subject questions therefore prohibit VOS word order in the response, in contrast to object-oriented questions. The emerging pattern is that constituents targeted by the *wh*-question occur most felicitously in the IPP. Table 1 summarizes these findings.

The same pattern holds for ditransitive verbs. In response to direct object-oriented *wh*-questions, VS-IO-DO, V-DO-S-IO, and V-DO-IO-S word orders are felicitous, while the other V1 word orders are degraded:

- (26) Koo-Ø-gootfi nee tʃeepkoetʃ Kibeet?
 PST-3SG-give what Chepkoech Kibeet
 ‘What did Chepkoech give Kibeet?’
- (27) a. Koo-Ø-gootfi tʃeepkoetʃ Kibeet kitabuut. VS-IO-DO
 ‘Chepkoech gave Kibeet a book.’
 b. Koo-Ø-gootfi kitabuut tʃeepkoetʃ Kibeet. V-DO-S-IO
 c. Koo-Ø-gootfi kitabuut Kibeet tʃeepkoetʃ. V-DO-IO-S

In response to subject-oriented *wh*-questions, VS-IO-DO and VS-DO-IO word orders are preferred:

- (28) Kii-Ø-gootfi ηoo Kibeet kitabuut?
 PST-3SG-give who Kibeet book
 ‘Who gave Kibeet a book?’
- (29) a. Kii-Ø-gootfi tʃeepkoetʃ Kibeet kitabuut. VS-IO-DO
 ‘Chepkoech gave Kibeet a book.’
 b. Kii-Ø-gootfi tʃeepkoetʃ kitabuut Kibeet. VS-DO-IO
 c. #Koo-Ø-gootfi kitabuut tʃeepkoetʃ Kibeet. #V-DO-S-IO

Finally, in response to indirect-object-oriented *wh*-questions, VS-IO-DO, V-IO-S-DO, and V-IO-DO-S word orders are preferred over all other V1 word orders:

- (30) Kii-Ø-gootfi ηoo tʃeepkoetʃ kitabuut?
 PST-3SG-give who Chepkoech book
 ‘Who did Chepkoech give a book?’
- (31) a. Kii-Ø-gootfi tʃeepkoetʃ Kibeet kitabuut. VS-IO-DO
 ‘Chepkoech gave Kibeet a book.’
 b. Kii-Ø-gootfi Kibeet tʃeepkoetʃ kitabuut. V-IO-S-DO
 c. Koo-Ø-gootfi Kibeet kitabuut tʃeepkoetʃ. V-IO-DO-S

Table 1: Word order in response to subject- and object-oriented questions.

	Type of question	
	Subject-oriented	Object-oriented
VSO-Adjunct	✓	✓
VS-Adjunct-O	✓	#
VOS-Adjunct	#?	✓
VO-Adjunct-S	#?	✓
V-Adjunct-SO	#	#
V-Adjunct-OS	#	#

2.8.2 Dispreference for non-nominal constituents in the IPP

In contrast to the conclusion above (i.e. that the IPP houses the target of a *wh*-question), some non-arguments are strongly *dispreferred* in the IPP, even when the discourse context is appropriately controlled. This generalization is particularly rigid with manner adverb adjunct material; V-Adv-SO and V-Adv-OS word orders were deemed infelicitous even in response to manner *wh*-questions:¹⁰

- (32) Koo-Ø-min-da ano laagook baandek?
 PST-3PL-plant-DA how children maize
 ‘How did the children plant the maize?’
- (33) a. #Koo-Ø-min komie laagook baandek. #V-Adv-SO
 ‘The children planted the maize well.’
 b. #Koo-Ø-min komie baandek laagook. #V-Adv-OS

Manner adverbs are, thus, clearly dispreferred in the IPP, even when bearing new information focus. However, there are some instances where V-Adjunct-SO and V-Adjunct-OS word orders are deemed the best possible answers, such as with temporal adverbs:

- (34) Koo-Ø-e au tuuga peek?
 PST-3PL-drink when cows water
 ‘When did the cows drink water?’
- (35) a. Koo-Ø-e amut tuuga peek. V-Adv-SO
 ‘The cows drank water yesterday.’
 b. Koo-Ø-e amut peek tuuga. V-Adv-OS
 c. Koo-Ø-e tuuga peek amut. VSO-Adv
 d. #Koo-Ø-e tuuga amut peek. #VS-Adv-O
 e. #Koo-Ø-e peek tuuga amut. #VOS-Adv
 f. #Koo-Ø-e peek amut tuuga. #VO-Adv-S

In this instance, the V-Adv-SO and V-Adv-OS word orders in (35) are the preferred responses to a temporal question.

We attribute this difference between manner and temporal adverbs to a categorical distinction; temporal adverbs often have nominal properties and, therefore, presumably bear D-features. For instance, in (36) *amut* ‘yesterday’ serves as the subject of a copular sentence:

- (36) Koo beetuut ne-mie amut.
 PST day REL.SG-good.SG yesterday
 ‘Yesterday was a good day.’

In contrast, no such Kipsigis sentence can be constructed with a manner adverb (cf. English *?Well is the best way to finish). In this way, we conclude that the IPP has an EPP quality, formalized as a D-feature on a functional head which must be checked in a local configuration by an XP bearing a matching D-feature (Alexiadou & Anagnostopoulou 1998). Therefore, constituents bearing new information focus surface most felicitously in the IPP if—and only if—that constituent bears D-features (§4).

¹⁰ Manner *wh*-questions require the addition of a *-da* suffix on the verbal stem, glossed here as DA. On our analysis, it is possible that *-da* is an expletive merged in Spec,TP to satisfy the EPP, but answering this question goes beyond the scope of the current paper.

2.8.3 Revisiting pragmatically neutral word order

It is notable that VSO sentences are acceptable responses to any *wh*-question, regardless of whether it is subject-, object-, or oblique-oriented. This is illustrated in Table 2.¹¹ The overarching acceptability of VSO word order across many discourse contexts strengthens the conclusions drawn from the out-of-the-blue diagnostic in §2.3; VSO is the pragmatically neutral word order and is consistently available in the broadest range of discourse environments.

2.9 Interpretation of the IPP

We have seen that focused material (e.g. *wh*-phrases and new information focus) surfaces naturally in IPP. This section previews §5, which shows that the interpretations compatible with IPP are more complex—and numerous—than simply focus. Here we focus on two core patterns: one directly built from the Q&A congruence patterns from above and the other showing that aboutness topics also occupy the IPP.

2.9.1 New information focus is not restricted to the prominence position

One indication that the IPP in Kipsigis is not a strict focus position comes from the same Q&A diagnostics in §2.8. Although answers to *wh*-questions surface most comfortably in the IPP, speakers can choose to make use of an unexpected word order:

- (37) Koo-Ø-min ηoo baandee komie?
 PST-3SG-plant who maize well
 ‘Who planted the maize well?’
- (38) a. Koo-Ø-min laagook baandee komie. VSO-Adv
 ‘The children planted the maize well.’
 b. #?Koo-Ø-min baandee komie laagook. #?VO-Adv-S

(38b)—though dispreferred in this context without additional considerations—is appropriate if someone is discussing what other groups planted crops, apart from the children. Licit continuations of the expression in (38b) could include: the parents planted the beans, the farmers planted the potatoes, etc. The marked VOS structure can also be followed by a continuation of other people planting maize in different ways (e.g. poorly, quickly, etc.). (38b) is therefore a possible response, but creates two sets of alternatives, such that discourse continuations ideally address both of them. So although constituents with new information focus are preferred in the IPP, they do not necessarily need to surface there.

Table 2: Summary of word order & information structure facts in Kipsigis.

	Subject-oriented	Object-oriented	Oblique-oriented	
			Manner adverb	Temporal adverb
VSO-Adjunct	✓	✓	✓	✓
VS-Adjunct-O	✓	#	✓	#
VOS-Adjunct	#?	✓	#	#
VO-Adjunct-S	#?	✓	#	#
V-Adjunct-SO	#	#	#	✓
V-Adjunct-OS	#	#	#	✓

¹¹ We have not yet tackled several of the patterns documented in Table 2, but discuss them in §4. We do not include ditransitives in this table but the patterns are the same.

2.9.2 Aboutness topics and shifting aboutness topics

As pointed out by Frey (2004), it is possible to force an aboutness topic reading of an XP by direct, explicit mention in an immediate discourse context (e.g. saying, “I am going to tell you something about XP”). When we generate this context in Kipsigis by saying, “Tell me something about Kiproono,” the appropriate response for a sentence in which Kiproono is the subject displays VSO word order:

- (39) Mwɔ-ɔn kiit agɔbɔ Kiproono.
 tell-1SG.OBJ thing about Kiproono
 ‘Tell me something about Kiproono.’
- a. Kii-∅-min Kiproono baandeek.
 PST-3SG-plant Kiproono maize
 ‘Kiproono planted the maize.’
- b. #?Kii-∅-min baandeek Kiproono.

If the prompt instead identifies the object as the aboutness topic, the opposite becomes true; VSO is now dispreferred and the VOS sentence is the better response:

- (40) Mwɔ-ɔn kiit agɔbɔ baandeek.
 tell-1SG.OBJ thing about maize
 ‘Tell me something about the maize.’
- a. #?Kii-∅-min Kiproono baandeek.
 PST-3SG-plant Kiproono maize
 ‘Kiproono planted the maize.’
- b. Kii-∅-min bandek Kiproono.

As in other instances, using an unexpected word order is not impossible, but may be infelicitous without additional discourse context. For example, using the less-preferred word order in (40a) generates a sense that the speaker is abruptly forcing a shift in topic, essentially—somewhat uncooperatively—communicating, “No, we are done talking about the maize, I am now talking about Kiproono.”

We see, therefore, that in addition to housing new information focus, contexts can be generated that create a strong preference for the constituent in IPP to be interpreted as an aboutness topic. We engage this question in more depth in §5; at present, we simply conclude that while focused material does surface naturally in the IPP, “focus” is not a sufficient generalization to characterize this position. Instead, throughout the paper we will refer to it as a prominence position (but again, see §5).

3 Head movement or predicate-fronting?

3.1 Possible accounts of V1 derivation

For a general overview of approaches to verb-initial syntax, we refer readers to Carnie & Guilfoyle (2000), Carnie et al. (2005), Chung (2017), and Clemens & Polinsky (2017). There are two common movement-driven analyses of V1: those that rely on head movement and those that rely on phrasal movement.

Under a head movement analysis, V1 word order is derived from a base-generated SVO structure via head movement of the verb to a position above the subject. Head movement has been proposed for Celtic languages like Irish, Afro-Asiatic languages, and Austronesian languages like Tongan and Tagalog (Ouhalla 1994; Richards 1996; Otsuka 2000; 2005b; McCloskey 2005; a.o.). VOS word order can then be explained through postverbal scrambling (Rackowski 2002; Otsuka 2005a; Richards 2013 for Austronesian), postsyntactic prosodic re-ordering of constituents (Sabbagh 2014 and Clemens 2019 for Austronesian;

Clemens 2014; Clemens & Coon 2018 for Mayan; Bennett et al. 2016 for Irish; Richards 2016 for a variety of languages), heavy-NP shift (McCloskey 1983; Clemens & Coon 2018 for Irish and Mayan, respectively), and subject movement to a right-edge topic position (Clemens & Coon 2018 for Mayan; Polinsky 2016 for Austronesian).

Under predicate-fronting analyses, VOS word order results from raising the entire VP to a position above the subject.¹² Predicate-fronting analyses have been adopted for a variety of Austronesian and Mayan languages (Massam 2001; 2005; Pearson 2001; Aldridge 2004; Coon 2010; a.o.). Predicate-fronting derives VOS word order quite directly, since the verb and its object raise together as a constituent. VSO can be derived via remnant movement of the VP after the object evacuates the VP.

3.2 V1 languages with properties similar to Kipsigis

There is little syntactic work on languages from the Kalenjin subgroup of southern Nilo-Saharan. The only accounts of word order patterns in Kalenjin are Jake & Odden's (1979) discussion of raising in Kipsigis and Creider's (1977; 1983) descriptive work on the syntax and information structure of Nandi, a language closely related to Kipsigis. The only generative syntactic analysis that we are aware of comes from Creider (1987), who, in an overview of various southern and eastern Nilotic languages, claims that VSO is generated by movement of the verb to C and that VOS is generated by VP movement, though without a precise proposal about the landing site of that movement.¹³

Nilo-Saharan languages cover a broad geographic and typological space. They include V1 languages spoken in Kenya and Uganda like: Kipsigis, Nandi (Creider & Creider 1989), Turkana (Dimmendaal 1983a; b; Finer 2013), and Ateso (Barasa 2017). They also include SVO languages like Dholuo (Tucker 1994; Okoth-Okombo 1997; Cable 2012) and V2 languages such as Dinka (Van Urk & Richards 2015; Van Urk 2015 and references therein). In the generative syntactic tradition, there is some work on V1 in the Nilotic languages Turkana and Maasai. Turkana is a strongly VSO language, but it displays a VSO/VOS alternation influenced by the prominence of the object. Finer (2013) argues that this prominence is largely morphosyntactic (i.e. determined by the pronominal status, definiteness, etc. of the object), but it does have discourse correlates. Finer concludes that V1 in Turkana results from head movement of the verb to T, while the VSO/VOS alternation is dictated by a series of ranked constraints related to topicality. These constraints interact to determine the linear order of constituents, which generally progresses from "more topical" (e.g. subjects, pronominals) to "less topical" (e.g. objects, descriptive NPs). On Finer's proposal, more topical elements move to a low topic position between TP and ν P.

Maasai—much like Turkana—displays rigid VSO word order, though VOS is also acceptable; speakers usually offer VSO word order first, but they accept VOS as grammatical (Payne 1995). This VSO/VOS alternation is largely driven by information structure, with postverbal constituents generally progressing from "more topical" to "less topical" just as in Turkana (Payne 1995). Under Koopman's (2005) generative analysis of word order in Maasai, nominative DPs raise to at least Spec,TP for case checking and often continue up the syntactic structure to a low topic position in the left periphery. Verbs then raise to a position high in the left periphery above the topic via remnant movement of the verbal predicate.¹⁴

¹² Within predicate-fronting analyses, there is diversity with regards to the highest maximal projection of the moved constituent (e.g. VP vs. ν P), the landing site of the moved constituent, and the motivation for XP movement. We refer to the moved constituent as VP for expository purposes.

¹³ The languages mentioned are Dholuo, Nandi, Maasai, Kalenjin, and Ateso, though Kalenjin—and Kipsigis specifically—are mentioned in only a cursory manner.

¹⁴ Though this predicate-fronting analysis is not unchallenged (Carstens & Shoaff 2014).

There are several non-Nilotic languages that show similar properties to Kipsigis. Tongan is neither genetically nor geographically related to Kipsigis, yet it displays a similar VSO/VOS alternation dictated in large part by information structure (Otsuka 2005b; but cf. Polinsky 2016). Otsuka (2005b) claims that Tongan V1 is generated through head movement of the verb to C and that the VSO/VOS alternation results from information focus-motivated movement to Spec,TP. As we will argue below, the Kipsigis facts are best explained by a similar analysis, involving head movement of the predicate and scrambling of postverbal constituents. In a similar fashion, Richards (1996) proposes that the Tagalog verb raises to π , a position immediately above TP. Richards (1996; 2013) proposes that topicalization is covert movement and shows that there is extensive scrambling in the language. In the course of discussing focus in Tagalog, Kaufman (2005) argues that scrambling is not semantically vacuous, showing that focus contexts distinguish word order possibilities. Therefore, we see many parallels between these languages and Kipsigis, though Austronesian languages differ in important ways (e.g. ergativity and voice systems) that complicate direct comparison.

3.3 V1 in Kipsigis is derived through head movement

The ready acceptability of VOS sentences might suggest a predicate-fronting analysis of V1 in Kipsigis; the sentence-initial position of non-verbal predicates might also tempt us in the same direction. However, there is good evidence from both non-verbal and verbal predication that head movement is involved in deriving the predicate-initial word order of Kipsigis.

3.3.1 Addressing an apparent challenge: Non-verbal predicates

Recall from §2.4 that nonverbal predicates occur clause-initially:

- (41) [Kaaneetiindet ne-mie] Kiproono.
 teacher REL.SG-good.SG Kiproono
 ‘Kiproono is a good teacher.’

Predicate-initial languages lend themselves well to predicate-fronting analyses, which in principle allow for the fronting of any type of predicate via parallel processes. When the VP or PredP is fronted, all of their contents raise and generate a variety of predicate-initial word orders.

However, the fact that non-verbal predicates may appear clause-initially is not necessarily indicative of a predicate-fronting language (Carnie 2000; Bury 2005; McCloskey 2005). In Irish, for example, non-verbal predicates surface at the left edge of the clause even though Irish has been well-defended as a verb-initial language whose word order is derived through head movement (McCloskey 1991; 2005). As McCloskey (2005) points out, even under a potential predicate-fronting analysis of non-verbal predicate structures in Irish, head movement (at least of certain predicate heads) must also occur to generate the observed ellipsis and coordination patterns.

Kipsigis likewise offers evidence that head-movement is involved in deriving predicate-initial word order. Specifically, non-verbal predicates may be separated from their modifiers:

- (42) [Kaaneetiindet] Kiproono [ne-mie].
 teacher Kiproono REL.SG-good.SG
 ‘Kiproono is a good teacher.’

In (42), the predicate *kaaneetiindet* ‘teacher’ separates from its adjective *ne-mie* ‘good.’ Under a predicate-fronting analysis, which relies on phrasal movement, there is no reason for the predicate head to be separated from a modifier, which ought to front in the same

constituent as the predicate. This type of discontinuity is not typically grammatical in the language:

- (43) *Ø-Ø-Nεeti [kaaneetiindet] laagook [nε-mie].
 PRES-3SG-teach teacher children REL.SG-good.SG
 Intended: ‘A good teacher teaches students.’¹⁵

Examples (42) and (43) indicate that separation of a noun from its modifier is possible only when the nominal is a predicate. We interpret this as evidence that even in non-verbal predicate constructions, a head movement operation occurs that is capable of separating the predicate head from its origination XP.

3.3.2 Adverb evidence for a head movement analysis of V1

The evaluative adverb *mε* ‘definitely’ surfaces comfortably immediately following the verb. This accords with Cinque’s (1999) adverb hierarchy; evaluative adverbs typically surface high in the syntactic structure (Ernst 2014). This observation seems to hold true in Kipsigis, as *mε* is unacceptable clause-finally:

- (44) *Koo-Ø-jiiasi laagook saaniit kutfomiinge mε.
 PST-3PL-break children plate deliberately definitely
 Intended: ‘The children definitely broke the plate deliberately.’

Relevant to our immediate purposes, *mε* surfaces comfortably immediately after the verb in both VSO and VOS sentences:

- (45) a. Koo-Ø-jiiasi mε laagook saaniit kutfoogi.
 PST-3PL-break definitely children plate quickly
 ‘The children definitely broke the plate quickly.’
 b. Koo-Ø-jiiasi mε saaniit laagook kutfomiinge.
 PST-3PL-break definitely plate children deliberately
 ‘The children definitely broke the plate deliberately.’

We assume that *mε* is adjoined high in the inflectional domain, canonically to TP. The placement of *mε* between the verb and its object in (45b) carries important implications. Predicate-fronting predicts that in VOS sentences the verb and the object are a constituent. Therefore, if Kipsigis V1 were derived by predicate-fronting, we would expect that a structurally high adverb like *mε* should only occur before or after [VO] in VOS sentences. (45b) therefore suggests that the verb and the object in VOS sentences are not a constituent. In this way, we conclude that head movement is responsible for Kipsigis V1.

4 An analysis of Kipsigis phrase structure

In this section, we propose an analysis of Kipsigis word order largely based on Otsuka’s (2005a) analysis of Tongan, which is itself inspired by Miyagawa’s (2001; 2003) work on Japanese.

4.1 The Tongan parallel

Both Tongan and Kipsigis are verb-initial, exhibiting a basic VSO word order:

- (46) *Tongan* (Otsuka 2005b: 73)
 Na’e ma’u ‘e Sione ‘a e ika.
 PST get ERG Sione ABS the fish
 ‘Sione got the fish.’

¹⁵ The adjective *nemie* ‘good’ must be singular, modifying teacher, as its plural form is *ifemiaatf*.

In order to generate Tongan V1, Otsuka (2005b) posits that verbs raise to C via head movement, followed by subject movement to Spec,TP to check the EPP (i.e. D-) feature on T. Tongan also shows a VSO/VOS alternation that is affected by information structure, exhibiting a discourse-based restriction on what may appear in the postverbal position:

- (47) *Tongan* (Otsuka 2005a: 255)
 Ko hai na'a ne fili 'a Pila?
 PRED who PST 3SG choose ABS Pila
 'Who chose Pila?'
- (48) a. Na'e fili 'e Sione 'a Pila.
 PST choose ERG Sione ABS Pila
 'Sione chose Pila.'
- b. #Na'e fili 'a Pila 'e Sione.
 PST choose ABS Pila ERG Sione
 'Sione chose Pila.'

Inspired by work in Miyagawa (2001; 2003), Otsuka (2005a) proposes that focused elements A-scramble to Spec,TP in a movement operation that checks features for information focus and EPP. Per Otsuka, the information focus feature motivates this scrambling movement, while EPP features are checked as a by-product.

Miyagawa (2010) describes Japanese A-scrambling to Spec,TP, driven by an EPP-like effect. The Kumamoto dialect makes use of two different forms of nominative case marking: the suffix *-ga* for constituents outside ν P and the suffix *-no* for constituents within ν P:

- (49) *Japanese* (Miyagawa 2010: 77)
 a. Taroo-ga sakana-ba tabeta-bai.
 Taro-NOM fish-ACC ate-FINAL.PARTICLE
 'Taro ate fish.'
- b. *?Taroo-no sakana-ba tabeta-bai.
- (50) Sakana-ba Taroo-no tabeta-bai.
 fish-ACC Taro-NO ate-FINAL.PARTICLE
 'Taro ate fish.'

Miyagawa notes that in SOV word order the subject must be marked with *-ga*, whereas in OSV word order the subject can be marked with *-no*. This indicates that the subject must be outside of ν P when in clause-initial position and inside of ν P when preceded by the object. He then suggests that the landing site for the clause-initial element is Spec,TP.

Miyagawa (2010) claims that EPP features do not exist independent of other grammatical features. Instead, scrambling to Spec,TP is motivated by the grammatical features of topic and focus—or, more precisely, [–focus] and [+focus]—which originate on C and are inherited by T. The SOV/OSV alternation in Japanese arises through topic ([–focus]) movement of either the subject or object to Spec,TP. However, [–focus] movement does not operate under the traditional Probe-Goal pattern (i.e. raising the most local [–focus] constituent); instead the [–focus] feature on T can target any constituent for movement to Spec,TP where it receives a topical interpretation, in a process Miyagawa terms free movement (Miyagawa 2010: 87). In this way, movement of the object, rather than the more local subject, does not cause a violation of the Minimal Link Condition (Chomsky 1995). In contexts with multiple distinct topic and focus constituents, Miyagawa proposes the existence of an additional functional projection between CP and TP, which he terms α P. When a single sentence includes both a topic and a focus constituent, α P inherits the [+focus] feature from C, while TP inherits [–focus], or vice versa. In this way, separate

topic and focus constituents can both surface at the left-edge of the clause in distinct functional projections.

4.2 Analysis of Kipsigis V1

Recall the patterns of word order felicity presented in §2.8, summarized in Table 3. As concluded previously, the target constituent of a *wh*-question usually surfaces most felicitously in the IPP (with exception of the manner adverb). Aboutness topics also surface in this position. VSO word order is always acceptable. We claim there is a position for discourse-prominent constituents immediately following the verb, as schematized generally in (51):

$$(51) \quad V \text{ [PROM]} S \forall O$$

Following both Otsuka (2005a) and Miyagawa (2010), movement to this position is so-called “scrambling” to Spec,TP. Assuming with Miyagawa that TP may inherit discourse (δ) features from C, we assume that in Kipsigis TP inherits $[u\delta]$ as an instance of a $[u\delta]$ feature originating on C.

Based on the dispreference for manner adverb material in the IPP we conclude that post-verbal scrambling for discourse prominence in Kipsigis also involves the EPP, which we formalize as checking a D-feature.¹⁶ Cross-linguistically, the EPP is assumed to be associated with the T head and we find no evidence here to suggest otherwise (Chomsky 1981; Bobaljik & Jonas 1996; see Svenonius 2002 for a survey of EPP effects cross-linguistically).

We propose that $[u\delta]$ features initiate an Agree relation, finding the discourse-prominent XP (i.e. the $[\delta]$ -bearing constituent) in the c-command domain of T and raising it to Spec,TP. Rather than Agreeing *in situ*, the $[\delta]$ -marked constituent must move to Spec,TP in order to satisfy local Probe-Goal union along the lines of Miyagawa (2010), which claims that goals must raise into proximity with their probes. In most instances, this $[\delta]$ -driven movement satisfies the EPP, since D-features on the raised constituent can check T’s D-feature. In this way, EPP in Kipsigis differs from prominence movement, since it is typically checked as a by-product of independently-motivated movement and does not act as a probe itself.

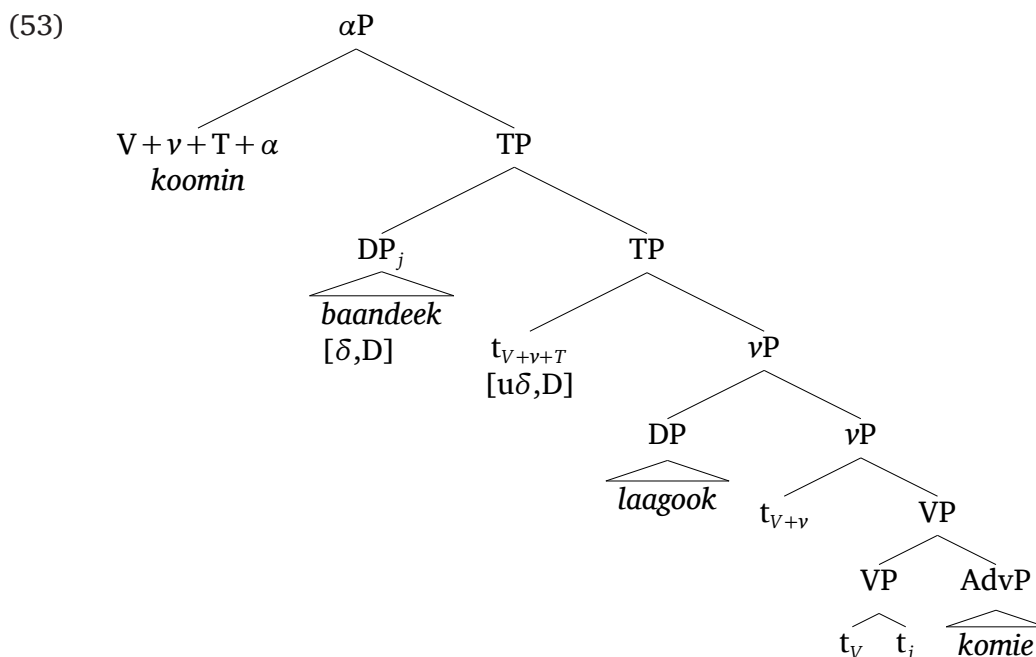
Consider the derivation of a simple VOS-Adv sentence like (52), which has a structure as in (53):

- (52) Koo-Ø-min baandeek laagook komie.
 PST-3PL-plant maize children well
 ‘The children planted the maize well.’

Table 3: Summary of word order & information structure facts in Kipsigis.

	Subject-oriented	Object-oriented	Oblique-oriented	
			Manner adverb	Temporal adverb
VSO-Adjunct	✓	✓	✓	✓
VS-Adjunct-O	✓	#	✓	#
VOS-Adjunct	#?	✓	#	#
VO-Adjunct-S	#?	✓	#	#
V-Adjunct-SO	#	#	#	✓
V-Adjunct-OS	#	#	#	✓

¹⁶ This is a departure from Miyagawa (2010), who assumes that EPP effects are only side effects of a Probe-Goal union requirement (i.e. movement of a goal in an Agree relation into locality with its probe).



In (53) the $[u\delta]$ feature on T probes its c-command domain, identifying the $[\delta]$ (prominence) feature on the DP object *baandeek* ‘maize.’ This object then raises to Spec,TP to satisfy Miyagawa’s (2010) Probe-Goal union. Since the prominent constituent bears D-features, the D-feature on T is checked and TP’s EPP quality is satisfied. The verb raises via head movement to a functional projection above the D-featuring-bearing prominent constituent in order to generate V1.¹⁷ VOS-Adv word order is achieved through these two movements. The following sections address consequences of—and further evidence for—this account, while §5 addresses the prominence analysis and the nature of the $[\delta]$ feature.

4.3 On the position of the verb

The derivation in (53) shows that the verb moves through each successive phrasal projection before ultimately stopping at α .¹⁸ In §2.6, we showed that Kipsigis V1 and postverbal word order flexibility are independent of CP-level phenomena. The persistence of verb-initiality and word order flexibility within various types of embedded structures suggests that the verb’s final position and the syntactic mechanisms controlling scrambling occur below the complementizer domain. But, given our conclusions about discourse-driven scrambling to Spec,TP, the verb must also land in the head of a functional projection above Spec,TP in order to derive V1.

We conclude that V sits in the head of Miyagawa’s (2010) α P.¹⁹ In Kipsigis, the verb head-moves to α —the highest inflectional projection—to generate V1. Our conclusion

¹⁷ A reviewer notes the important question of the precise nature of head movement. Our analysis assumes that the head movement which generates Kipsigis V1 occurs within the narrow syntax, though nothing crucial hinges on this assumption. Due to theoretical issues raised by syntactic head movement, recent re-analysis in Harizanov & Gribanova (2018) suggests that this category includes two empirically distinct classes of phenomena: true head movement, in which fully formed words are moved to another structural position in the narrow syntax, and amalgamation, in which syntactically independent pieces are unified morphologically via postsyntactic operations. We have encountered no clear empirical evidence in Kipsigis to suggest that any particular analysis of head movement is ruled in (or out); syntactic and postsyntactic analyses of head movement both derive the appropriate word order patterns in the language.

¹⁸ We assume that verbal prefixes are housed in a functional projection above α P, in line with Baker’s (1985) Mirror Principle.

¹⁹ This type of functional projection above TP has been widely assumed in a variety of work. See, e.g., Branigan (1992); Chomsky (1995); Harley (1995); Kiss (1995); Uriagereka (1995); Richards (1996); Holmberg & Nikanne (2002); Baker (2003); Rizzi & Shlonsky (2006; 2007); Haegeman (2008).

about the relatively high position of the verb contrasts with several existing analyses of V1 languages, in which the verb surfaces at T or below (see Richards 2000; Massam 2001; Rackowski 2002; Aldridge 2004; Coon 2010; Clemens & Polinsky 2017; Clemens & Coon 2018; a.o.). There are, however, many exceptions; for instance, Richards (1996) puts the Tagalog verb above TP, as does McCloskey (2017) for Irish. We suggest that verb movement is motivated by a [PRED] feature on α —rather than [V] feature—as non-verbal predicates also raise (for similar proposals see Sproat 1985; Guilfoyle et al. 1992; Branigan 1996; McCloskey 1996; Carnie et al. 2000; Pearson 2001; Aldridge 2002; Rizzi 2004; Shlonsky 2004, a.o. Some researchers’ use of FinP mirrors our use of α P, e.g. Roberts 2004; 2005).

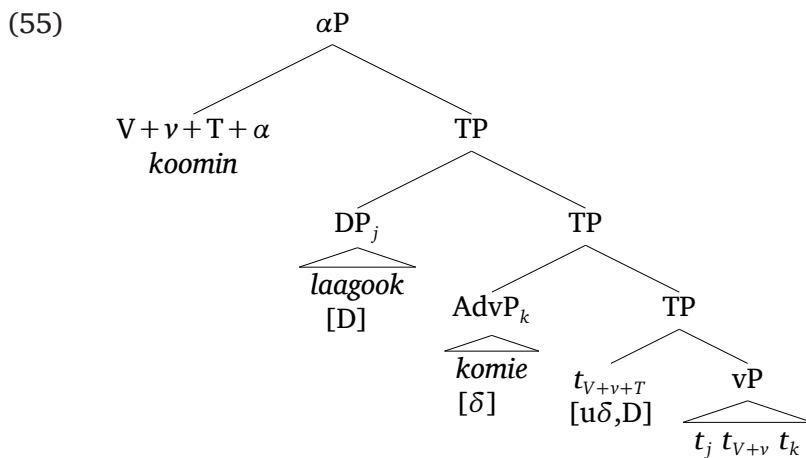
4.4 Satisfying PROM and EPP separately

But what happens when the discourse-prominent element is *not* capable of checking EPP, as was the case with answers to manner *wh*-questions? We saw in (32) and (33) that the manner adverb does not surface naturally in the IPP, despite bearing new information focus. Instead, the most appropriate answer to the manner question in (32) involves VS-Adv-O word order, where *komie* ‘well’ occurs in the second position after the verb and the subject is immediately postverbal:

- (54) a. Koo- \emptyset -min laagook komie baandeek.
 PST-3PL-plant children well maize
 ‘The children planted the maize well.’
- b. #Koo- \emptyset -min baandeek komie laagook.

The strong preference for VS-Adv-O word order in answers to manner questions is particularly notable, since it contrasts with the general dispreference towards VS-Adv-O word order (with manner adverbs) in all other contexts that we encountered.

In deriving (54a), the [*u* δ] feature on T probes its c-command domain and finds the relevant [δ] feature on the manner adverb, which bears [δ ,FOC] features as a response to a manner *wh*-question (see §5 for more details). Following the expected procedure, the manner adverb *komie* ‘well’ raises to Spec,TP. However, it cannot satisfy the EPP as it does not bear D-features. We assume, therefore, that the D-feature on T is checked via Last Resort movement whereby the most local nominal (i.e. the DP subject) raises to Spec,TP as well, satisfying the EPP in a higher specifier position:²⁰



²⁰ This aligns with Chomsky’s (1995: Chapter 4) argument that a head can have as many specifiers as it has features licensing them.

Crucially, on this approach, the EPP is only ever satisfied independently as a Last Resort when discourse-driven movement targets a constituent without D-features. While scrambling for discourse purposes is relatively non-local (as is often the case for discourse-driven movements; see Saito 1985; 1994; King 1993; Müller & Sternefeld 1993; Erteschik-Shir 2007 for a review of existing theories of discourse scrambling), EPP satisfaction is strictly local, resulting in the observed VS-Adv-O word order.

4.5 Are PROM and EPP a fused probe?

This analysis necessitates that the $[u\delta]$ and $[D]$ features on T *not* be a fused probe in the sense of Coon & Bale (2014). On their account, multiple distinct features on a head probe as a unit and must (if possible) find a single goal that checks both features. Specifically, Coon & Bale propose that the probes for person and number agreement in Mi'gmaq are fused, searching for the appropriate person and number features simultaneously. Although this fused probe allows searches for person and number to be separate, the conditions of a successful match between probe and goal are fused together (i.e. failure in one search results in failure for the entire probe). Per Coon & Bale's analysis, each potential goal is assigned a conjoined match of rank based on its ability to satisfy the components of the fused probe (see Coon & Bale 2014: 99 for detailed discussion of rank assignment). Most importantly, though, the *one* highest ranking constituent is ultimately targeted for agreement.

In Kipsigis, however, this is clearly not the case, since the discourse-prominent XP is not always immediately postverbal. Since prominence and EPP features are not always satisfied by the same phrase, these features need not act as a unit (though in most instances they appear to do so, since most discourse-prominent XPs that raise to Spec,TP are capable of satisfying T's EPP quality). In this way, the Kipsigis facts diverge from those presented for Mi'gmaq.²¹

The Kipsigis facts are not unique, however. In his analysis of movement in the Nilotic language Dinka Bor, van Urk (2015) relies on a fused probe (or a composite probe, in his terms) consisting of ϕ -features and an unspecified A'-feature. He adopts a modified version of Coon & Bale's conjoined match of rank calculus, in which "an active probe P enters into an Agree relation with the closest syntactic object that matches the most features" (van Urk 2015: 173). Crucially, though, van Urk's implementation of fused probes diverges from Coon & Bale's in one key way; if there is no single constituent that matches both fused features, two distinct partial match constituents can raise instead.

Why Dinka Bor's composite probe would behave differently than the fused probe in Mi'gmaq is not entirely clear to us (it may have to do with the nature of the particular features in each fused/composite probe). Regardless, our analysis is essentially equivalent to van Urk's split-able composite probe. Across Mi'gmaq, Dinka Bor, and Kipsigis, we see instances of Probe-Goal relationships in which a single Agree or movement operation often satisfies two distinct requirements on the probe. When this does not happen, however, Dinka Bor and Kipsigis allow those two distinct requirements to be satisfied by two phrases, whereas Mi'gmaq settles for the best-matching single phrase.

4.6 On pragmatically neutral word order

van Urk (2015) assumes that A'-features are optional as a definitional criterion and we assume something similar; there are sentences in Kipsigis with no $[u\delta]$ feature to be inherited by T. In these instances, it is only the EPP feature on T that triggers raising to

²¹ In a similar vein, the potential for $[u\delta]$ and $[D]$ to be satisfied independently indicates that the EPP is not a sub-feature of another probe, contra Carstens' (2005) approach to EPP as a sub-feature of ϕ -features in Bantu languages.

Spec,TP. We have seen that when the EPP acts independently of prominence movement, it attracts the most local DP constituent (i.e. the subject). $[u\delta]$ -less sentences in Kipsigis will, therefore, display VS word order. This accounts for the acceptability of the pragmatically-neutral word order (VSO-Adv) in all discourse contexts in Kipsigis; it is the resultant word order in a derivation without a $[u\delta]$ feature on T.

5 On a precise formulation of ‘prominence’

In §2.8 most of the data used to identify the IPP was based on focus (*wh*-words and new information focus), yet in §2.9 we showed that the IPP cannot be solely identified as a focus position. Consequently, we have been discussing scrambling to Spec,TP as a prominence movement motivated by a $[u\delta]$ feature on T. As pointed out by multiple reviewers, though, encoding information structure-driven movement in this way is potentially troublesome. While prominence (or salience) is clearly a cognitive property, it is less clearly a direct property of language itself and its presence in a syntactic analysis requires justification.

In this section, we consider whether a more familiar concept of information structure is analytically viable for the Kipsigis IPP, discussing potential generalizations based on a range of common semantic and pragmatic concepts (contrast, givenness, topic, focus). For instance, object shift is often linked to specific or definite interpretation of the shifted object (Vikner 2017). Yet as shown in §2.5, distinctions in definiteness and specificity do not affect the VSO/VOS alternation in Kipsigis, suggesting that specificity is an insufficient concept as a generalization about which phrases occur in the IPP. In the remainder of this section, we consider contrast (§5.1), givenness (§5.2), topic (§5.3), and focus (§5.4) as potential IPP characterizations, ultimately concluding that only prominence/salience captures the range of interpretations of XPs in the IPP.

5.1 Contrast is insufficient to characterize the IPP

Neeleman et al. (2009) argue that there is a three-way typology of information structure concepts encoded syntactically: topic, focus, and contrast. Contrast applies to topic and focus, yielding a four-way distinction between contrastive topic and aboutness topic vs. contrastive focus and new information focus.

Looking first at contrast, when a speaker’s response is intended to contrast with information conveyed in a previous utterance (i.e. contrastive focus scenarios), the contrastive constituent surfaces most naturally immediately postverbally, but need not surface in that position:

(56) Koo-Ø-am mtʃeɛlek Kiproono?
 PST-3SG-eat rice Kiproono
 ‘Did Kiproono eat the rice?’

(57) a. ʔiʔi/aatʃitʃa, koo-Ø-am tʃeepkoetʃ mtʃeɛlek.
 no PST-3SG-eat Chepkoech rice
 ‘No, Chepkoech ate the rice.’
 b. #ʔiʔi/aatʃitʃa, koo-Ø-am mtʃeɛlek tʃeepkoetʃ.

The response in (57a) is preferred without additional context, but the use of VOS in (57b) is natural if, for example, the speaker is trying to separate the rice from a variety of other foods: while Chepkoech ate the rice, other people ate other foods like beans or roasted maize. The potential acceptability of (57b)—in which the contrastively focused constituent surfaces clause-finally—shows that such constituents do not obligatorily occur in the IPP.

Along similar lines, many phrases which clearly do *not* create contrast are also preferred in IPP; this includes new information focus (§2.8.1), *wh*-words (§2.7), and aboutness topic (§2.9.2). This suggests that while certain contrastive phrases are preferred in the IPP, the notion of contrast itself is not an accurate generalization of the interpretation of IPP constituents.

5.2 Givenness is insufficient to characterize the IPP

If contrast is not the appropriate generalization, the typology from Neeleman et al. (2009) suggests it may instead be topic or focus. Yet definitions of topic and focus are notoriously difficult to pin down. It is commonly assumed that topics are discourse familiar/given, while foci are discourse unfamiliar/novel. However, many have argued that relative familiarity in discourse must be separated conceptually from both topic (Reinhart 1981) and focus (Krifka 2007). As seen in §2.8 and §2.9, discourse-new constituents (e.g. answers to *wh*-questions) are preferred in IPP, but at the same time, previously-mentioned aboutness topics are *also* preferred in IPP. In contrast, §6.1 shows that discourse-familiar topics instead tend to appear at the right edge of the clause (and aboutness topics are prohibited in that position). These patterns show that the interpretation of IPP constituents is orthogonal to discourse familiarity/givenness, as both types of material can surface there.

5.3 Aboutness topic is insufficient to characterize the IPP

Perhaps, then, aboutness is a better generalization of IPP interpretation. Reinhart (1981) conceives of pragmatic aboutness as a means of organizing propositions in the common ground; instead of being stored in an unordered fashion, propositions in the common ground are ordered based on sentence topics (i.e. discourse referents that each proposition is about).

We saw in §2.9 that aboutness topics are preferred in the IPP and that supplanting a continuing aboutness topic with a different phrase yields clear intuitions of a topic shift, such that the unexpected phrase in the IPP is now the aboutness topic. This indicates an aboutness quality of the IPP. A similar effect is evident in the ditransitive example in (58):

- (58) Abɔ a-mwɔ-un (kiit) agɔbɔ laagook.
 Fut 1SG-tell-2SG.OBJ thing about children
 ‘I am going to tell you (something) about the children.’
- a. Koo-Ø-gootʃi laagook Kiproono zawadi amut.
 PST-3SG-give children Kiproono gift yesterday
 ‘Kiproono gave the children a gift yesterday.’
- b. Koo-Ø-gootʃi Kiproono laagook zawadi amut.
- c. #Koo-Ø-gootʃi Kiproono zawadi amut laagook.
- d. #Koo-Ø-gootʃi zawadi Kiproono laagook amut.

Here the prompt establishes the indirect object *laagook* ‘children’ as the aboutness topic. As expected, the pragmatically neutral word order VS-IO-DO (58b) is acceptable, but the preferred word order in (58a) places the indirect object in the IPP. Other responses are less acceptable, with two particularly incompatible responses exemplified here; *laagook* ‘children’ cannot appear clause-finally in this context (58c) and promoting some other phrase to the IPP is infelicitous (e.g. the direct object *zawadi* ‘gift’ in (58d)).

There are, however, multiple reasons to think that aboutness topic is not the correct generalization for the IPP. Frey (2004: 158) notes that quantificational phrases should be unable to serve as aboutness topics because they are unable to “point to a referent in the context set

as would be needed for the aboutness relation” and shows that such phrases cannot serve as German middlefield aboutness topics. We see no such restriction on the Kipsigis IPP:

- (59) Koo-Ø-gootfi laagook tʃe mo-sire taman Kiproono zawadi amut.
 PST-3SG-gave children REL.PL Neg-exceed ten Kiproono gifts yesterday
 ‘Kiproono gave no more than ten children gifts yesterday.’

Likewise, non-referential phrases like *wh*-phrases should be inappropriate as aboutness topics, but recall from §2.7 that such phrases are preferred in IPP. Related, the pervasive assumption is that topic and focus are incompatible. If this assumption holds, the notion of aboutness topic must be insufficient to characterize a general interpretation of the IPP, given the preference for *wh*-phrases and new information focus in this position (§2.8). Altogether, despite the preference for aboutness topics in the IPP, the notion of aboutness topic does not capture all the IPP patterns in Kipsigis.

5.4 Focus is insufficient to characterize the IPP

Given the data presented so far, focus might seem like a viable IPP characterization; *wh*-phrases (§2.7), constituents with new information focus (§2.8), and contrastively focused phrases (§5.1) prefer IPP. Yet we have already encountered challenges to this generalization (e.g. aboutness topics in IPP) and this section introduces additional difficulties.

5.4.1 Focus with ‘only’

Cross-linguistically, DP constituents modified by ‘only’ receive a focused interpretation and can, therefore, be used to identify a focus position (van der Wal 2016). In Kipsigis, such DPs can appear in any position after the verb:

- (60) a. Koo-Ø-min baandek itʃeegen laakwæt.
 PST-3SG-plant maize only child
 ‘The child planted only maize.’
 b. Koo-Ø-min laakwæt baandek itʃeegen.

If the IPP were a strictly focus position, one would expect that the focused object would necessarily surface directly after the verb. However, this prediction is not borne out. In fact, consultants deem the VOS and VSO word orders in the above examples equally acceptable, suggesting that semantic focus may in fact not influence word order at all.²²

5.4.2 The state of the Common Ground affects word order

Notions like importance and salience—which pertain more directly to common ground management than to semantic focus—play a significant role in determining the content of the IPP in Kipsigis. Even in sentences with clearly focused constituents (e.g. *wh*-phrases, new information focus phrases), a different constituent can surface in the IPP if it is deemed more important or unexpected. Although *wh*-phrases prefer the IPP, they can surface in other positions if the IPP phrase is more important to the exchange.²³

- (61) a. Koo-Ø-min nee laagook komie?
 PST-3SG-plant what children well
 ‘What did the children plant well?’
 b. Koo-Ø-min laagook nee komie?

²² See Krifka (2007) for a discussion of semantic focus (common ground content) vs. pragmatic focus (common ground management).

²³ See §5.4.3 for a parallel pattern with multiple-*wh*-constructions.

The question in (61a) requires no special context to be felicitous. However, if it is surprising that the children planted something well—perhaps they are notorious for never planting crops—the question in (61b) is more appropriate, since it is significant that the children (*of all people!*) planted something. This exactly parallels the data presented in §2.9.1; although constituents bearing new information focus are preferred in the IPP in the absence of additional considerations, discourse contexts can readily be generated that place a different constituent in the IPP.

This same observation is particularly clear in another out of the blue scenario, in which someone asks, “What happened on campus today?” without knowing anything about your day:

- (62) a. Koo-Ø-geer Obama Kiproono.
 PST-3SG-see Obama Kiproono
 ‘Kiproono saw Obama.’
 b. #Koo-Ø-geer Kiproono Obama.

In this context—when it is not known that Obama was on campus—the response in (62b) is unnatural. Consultants report that the most significant or most important information needs to be in the IPP and encountering the former president is surely significant. Yet if the conversational participants know that Obama is in town, the acceptability judgments change; the fact that Kiproono himself managed to see Obama is now more significant and the VSO response in (62b) is preferred, while (62a) is unnatural. That is, the appropriateness of VSO vs. VOS can vary completely based on non-linguistic common ground between speakers, be it explicitly established or assumed. The most unexpected/informative constituent surfaces in the IPP, whereas given/familiar information appears to the right (§6.1).

5.4.3 Multiple-*wh*-questions

In multiple-*wh*-questions, either *wh*-phrase can surface immediately postverbally, but the question word order influences the felicity of the responses. The question in (63) is subject- and oblique-oriented, so in response both the subject and the oblique arguments presumably bear new information focus:

- (63) Koo-Ø-a ŋoo ano?
 PST-3SG-go who where
 ‘Who went where?’
 (64) a. Koo-Ø-a laakwæet sugul.
 PST-3SG-go child school
 ‘The child went to school.’
 b. #Koo-Ø-a sugul laakwæet.

If the IPP were a dedicated focus position, we would likely expect either constituent should be equally acceptable in that position. Instead, only VS-Adjunct word order is acceptable (parallel to the question word order).

Compare the pattern in (63)–(64) with that below:

- (65) Koo-Ø-a ano ŋoo?
 PST-3SG-go where who
 ‘Who went where?’

- (66) a. #Koo-Ø-a laakwæet sugul.
 PST-3SG-go child school
 ‘The child went to school.’
 b. Koo-Ø-a sugul laakwæet.

When the question word order changes, the felicity judgments in (64) are reversed. Once again challenging a focus analysis, only the response word order that parallels the question word order is felicitous.

Notably, either *wh*-phrase may raise to the IPP. Consultants suggest that a speaker chooses to place the most significant constituent in the IPP, but, crucially, which *wh*-phrase is in the IPP is reflected in which new information focus-bearing constituent surfaces in the IPP in the response (i.e. whichever constituent answers the IPP *wh*-phrase in the question occurs in the IPP in the response). This is a clear contrast with single *wh*-questions, in which the constituent bearing new information focus was preferred in the IPP regardless of the phrasing of the question. It appears that a *wh*-phrase in the IPP possesses some additional discourse meaning beyond merely focus, influencing which focused constituent in the responses raises to the IPP. We lay this out in what follows.

5.4.4 Even broad definitions of focus do not capture the Kipsigis facts

Kiss (1998) argues for a distinction between identificational focus—a concept closer to contrastive focus—and information focus, which indicates that the information is non-presupposed. For the sake of argument, the IPP could be characterized as Kiss’s information focus if this notion could also include aboutness topic. Such an approach requires that such aboutness topics not be discourse-given. Lambrecht & Michaelis (1998) argue that sentence topics can be ratified or unratified, where an unratified topic is previously unmentioned or, at least, unexpected. We could claim, then, that IPP topics are limited to unratified topics, while ratified topics occur elsewhere. Perhaps, then, a combination of Kiss’s information focus and Lambrecht & Michaelis’s unratified topic characterize the IPP; basically, the IPP contains non-presupposed information that the sentence is about.

Yet there are theoretical and empirical reasons to disprefer this approach. First, it requires some radical assumptions (e.g. that (aboutness) topic and focus can intersect).²⁴ Second, in order for a topic to be unratified in the sense of Lambrecht & Michaelis (1998), it must be previously unmentioned or unexpected. In eliciting for aboutness topic, we used the prompt, “Tell me about X,” which does not fit the criteria of an unratified topic. Third, such an analysis requires *wh*-phrases—which prefer IPP (§2.7)—to be able to satisfy an aboutness condition. All definitions of aboutness require that the aboutness phrase be referential, which is not the case for *wh*-phrases.

It appears, then, that even a highly inclusive definition of focus (i.e. information focus plus unratified topic) cannot accommodate all the relevant patterns regarding the Kipsigis IPP. Altogether, we cannot find any broadly-accepted and definitively-linguistic information structure concept that characterizes the discourse roles of IPP constituents. Rather, we conclude that the most prominent/salient constituent appears in the IPP. We discuss how to characterize this prominence in the next section, first examining empirical parallels to Kipsigis and then discussing analytic implications.

²⁴ Some researchers assume that topic and focus can intersect (e.g. Krifka 2007), but most researchers assume as axiomatic that topic and focus are complementary.

5.5 Empirical parallels to the Kipsigis prominence facts

5.5.1 Newsworthiness and similar concepts

The relationship between syntactic structure and information structure has long been of interest in the field, most notably for linguists of the Prague School, who noted that the normal pragmatic ordering of constituents appears to follow topic-comment patterning (Mithun 1984: 282). Topic refers generally to what a sentence is about, while the comment is the main predication that is asserted, questioned, etc. relative to the topic (Gundel 1988: 210). Creider & Creider (1983) note that Nandi—a V1 language closely related to Kipsigis—exhibits a VSO/VOS alternation influenced by the relative positioning of topic and comment. However, contrary to the established topic-comment ordering, Creider & Creider propose that topic in Nandi is clause-final.

In a thorough examination of three free word order languages—Cayuga, Ngandi, and Coos²⁵—Mithun (1984) proposes the Newsworthiness Principle, which she claims governs word order in pragmatically-organized languages (Mithun 1984: 304):

- (67) **The Newsworthiness Principle**
The most newsworthy information comes first.

According to Mithun, newsworthiness is determined by the interaction between definiteness, newness, and relative importance of the constituents. In all three languages, indefinite nominals tend to precede definite nominals, and new information tends to precede old information. When all constituents are equally new or equally given, their relative importance determines the level of newsworthiness and thus the observed word order. Constituents can be newsworthy because they introduce pertinent, new information, present new topics, or indicate a contrast (Mithun 1984: 325). In line with her predictions, the target information of a question surfaces most naturally clause-initially in the languages that she examines.²⁶ This type of descriptive generalization aligns quite well with the Kipsigis facts reported here; in the words of one of our consultants, “the information that you volunteer first [after the verb] is the information that you think the person wants to know first.”

5.5.2 Korean *-nun* imposes salience

This subsection and the next consider two case studies from distinct empirical phenomena, which relate to discourse prominence but are not reducible to other information structure concepts; this lays the foundation for our discussion of Kipsigis prominence-based scrambling. Kim (2015) proposes that the long-standing debate about the nature of the *-nun* suffix in Korean can be solved by proposing that it imposes salience on its host phrase and that its more specific functions can be derived from the salience analysis.

Many researchers have proposed that *-nun* is a topic marker, as it frequently occurs on topical elements:

- (68) *Korean* (Lee 2007: 152 via Kim: 2015: 89)
a. Kumsokhwalca-nun hankwukin-i palmyeng hay-ss-ta.
metal.type-NUN Korean-NOM invention do-PST-DEC
'As for metallic type, Koreans invented it.'

²⁵ Cayuga is a northern Iroquoian language of the Iroquois proper subfamily. Ngandi is an Australian aboriginal language from northern Australia with no known L1 speakers. Coos is one of the Coosan languages from the southern coast of Oregon with no known L1 speakers.

²⁶ Givón (1988) and Gundel (1988) rely on the notions of urgency and importance to develop principles governing pragmatically-controlled word order, while Mereu (2009) proposes more constrained and precise versions of these principles. For the sake of space, we limit our discussion here.

- b. Inswu-nun soselchayk-ul sa-ss-e-yo.
 Inswu-NUN novel.book-ACC buy-PST-DEC-HON
 ‘Inswu bought a novel.’ (answering “What did Inswu buy?”)

Yet others have proposed that *-nun* functions as a marker of contrast; as Kim (2015) summarizes, proposals have attempted to derive one of these functions (i.e. topic vs. contrast) from the other, but there is no clear solution. Even more troublesome, Kim points out that there are examples that do not seem related to either of these functions, such as *-nun* appearing on a constituent bearing new information focus:

- (69) *Korean* (Kim 2015: 89)
 A: What about John? Where has he been?
 B: (Kyay) Seoul-ey-nun ka-pwa-ss-e.
 he Seoul-DAT-NUN go-see-PST-DEC
 ‘(He) has been to Seoul.’

Kim argues that no individual information structure concept (e.g. topic, focus, contrast) can explain the distribution of *-nun* and instead argues that *-nun* imposes salience. Through a corpus study, Kim notes that *-nun* functions to mark: a topic/frame (either accepting a newly-proposed topic or marking a continuing topic), a contrastive topic/frame, contrast alone, or simple emphasis as defined in (70).

- (70) **Simple emphasis** is a non-information-structural²⁷ effect of attracting attention, which is caused by the difference between the actual (and unexpected) salience of an item and its expected salience (Kim 2015: 97).

Kim offers multiple examples in which this type of emphasis is the only role of *-nun*. In (71), an actor describes a play based on a soap opera, while on a radio show:

- (71) *Korean* (Kim 2015: 102)
 Ikey yakkan-un sasil yenkuk-ulo choyen-i-ki ttaymwun-ey
 this-NOM a.little-NUN in.fact play-as premiere-COP-AVZ because-DAT
 changcakkuk-kathu-n nukkim-I iss-nuntey ...
 original.play-seem-ANZ feeling-NOM exist-but
 ‘Since this work is on the stage for the first time as a play, it feels a little like (this) is an original play, but ...’

“In this context, the guest actress, by using *-(n)un*, does not indicate contrast between [...] ‘a little’ and ‘much’ [...] what she does is to simply emphasize the meaning of ‘a little,’” along the lines of English stress in this context (Kim 2015: 102).

Following previous work (e.g. Kim 1983; Choi 1996; Lee 2004; Park 2007), Kim proposes that *-nun* fundamentally imposes salience, as defined in (72). Salience is both gradient and dynamic (i.e. “a temporary property [that] keeps changing as a discourse proceeds;” Kim 2015: 93):

- (72) **Discourse salience** is cognitive prominence of the meaning of any part of an utterance made by discourse participants, the degree of which is determined by the amount of attention allotted to it.

²⁷ By this, Kim means “non-topical, non-contrastive, non-focal,” which is consistent with the three-way distinction in information structure primitives between topic, focus, and contrast from Neeleman et al. (2009).

A salience-based analysis straightforwardly accounts for simple emphasis with *-nun*. But this analysis also explains why *-nun* is used more often to shift or propose a new topic/frame and only rarely marks a continuing topic/frame; introducing a new topic/frame requires making a referent “the center of attention in the discourse,” which can be accomplished by imposing salience via *-nun* (Kim 2015: 104). A continuing topic requires no such special attention, as its status is already established.

5.5.3 Danish clause-initial position

A second relevant case study concerns the long-standing question of clause-initial position in V2 languages. The traditional analysis of V2 is schematized below (Mikkelsen 2015: 595):

$$(73) \quad [_{CP} XP V_{fin} [_{TP} \dots]]$$

As summarized by Mikkelsen (2015), clause-initial position is multifunctional, meaning that XP in (73) may be one of several types of topics, a *wh*-phrase, or a focused phrase. Mikkelsen (2015) focuses on the VP-anaphor *det*:

- (74) *Danish* (Mikkelsen 2015: 13)
 Esbjerg [satser på træner-side-n]_i, mens Aalborg ikke gør *det*_i.
 Esbjerg emphasizes on coach-side-DEF while Aalborg not does DET
 ‘Esbjerg emphasizes coaching, while Aalborg doesn’t.’

Det may appear *in situ* in canonical VP position or moved to clause-initial position.²⁸ As Table 4 shows, a corpus study reveals that VP-anaphoric clauses show a different distribution of XPs in clause-initial position than more standard V2 clauses (Mikkelsen 2015: 604).

Breaking down the “Other” category, Mikkelsen shows that while VP-anaphoric *det* is not required clause-initially, initial-*det* makes up 53% of VPA clauses, a significant portion of VP-anaphoric clauses (see Table 2 from Mikkelsen 2015: 605 for more detail). Mikkelsen arrives at two empirical generalizations (Mikkelsen 2015: 606, 609):

- (75) **VP-anaphor *in situ***
 When the expression of illocutionary force makes demands on initial position, VP-anaphoric *det* does not front.

Table 4: Distribution of initial elements in Danish V2 clauses in general compared to V2 clauses with VP anaphora.

Initial	General	VPA clauses
Subject	61%	23%
Adverbial	22%	16%
Object	9%	1%
Other	7%	60%

²⁸ There is another available position for *det* in the normal position of shifted objects, which is irrelevant for our concerns here.

(76) **VP-anaphor fronting**

In a V2 clause with a VP anaphor, an information-structurally undistinguished subject cannot occupy the initial position, where information-structurally undistinguished subjects are either expletives or discourse-old subjects of an equally discourse-old predicate.

Mikkelsen shows that the VP-anaphor *det* offers important insights into the structure of Danish clauses, and with respect to our current concerns, Mikkelsen's concept of *information structure differentiation* is central to understanding Kipsigis prominence movement. But first we illustrate the patterns captured by the generalizations above.

Many clauses in Danish require either a particular constituent in initial position (e.g. *wh*-phrases) or initial position to be surface-empty (e.g. polar interrogatives, imperatives, conditionals). In such situations, the VP-anaphor *det* must remain *in situ*, as per (75). Yet there are also instances when *det* fronts obligatorily: in clauses with expletive subjects, in answers to polar questions, in generalizations, and in repetitions. These constructions all contain “information-structurally undistinguished subjects,” which cannot or do not bear an information structure designation (e.g. topic, focus) to distinguish them from the rest of the sentence. In answers to polar questions—when the subject and predicate are equally discourse-familiar—the VP-anaphor *det* must front:

(77) *Danish* (Mikkelsen 2015: 614)

Tjener! Bestilte jeg ikke en gin og tonic?
waiter ordered I not a gin and tonic
'Waiter, didn't I order a gin and tonic?'

- (78) a. Jo, det gjorde De.
yes DET did you
'Yes, you did.'
- b. #Jo, De gjorde det.
yes you did DET

Mikkelsen also argues that “Danish subject-initial V2 clauses are not structurally uniform” (Mikkelsen 2015: 634); information-structurally differentiated clauses are CPs, while undifferentiated ones are TPs. The concept of *information structure differentiation* becomes crucial here. Mikkelsen claims that V2 clauses containing the fronted VP-anaphor *det* are necessarily CPs, as, in these cases, *det* is an anaphoric topic with a corresponding [ATOP] feature. Movement of *det* to clause-initial position is triggered by a [uATOP] feature on the differentiated C head, following canonical Minimalist assumptions. Crucially, though, not all C heads in Danish have this same [uATOP] specification, but they do all bear some discourse-related selectional feature: for example, uWH, uTOPIC, uFOCUS, etc.). In this way, Mikkelsen fundamentally analyzes Danish Spec,CP as a *discourse-differentiated* position (our term); “[in] Danish, Spec,CP must be occupied by an information-structurally distinguished element, but is not dedicated to a particular function” (Mikkelsen 2015: 634). In sentences with *det*, if another phrase is required in Spec,CP for a different discourse-related reason, *det* may remain *in situ*, but in cases where no other constituent is discourse-differentiated, *det* must raise to Spec,CP. This is a strong empirical parallel with our Kipsigis prominence-based scrambling, where discourse-differentiated phrases—which we have described as prominent—occur in the IPP, even though no single information structure notion

can capture all of the patterns. We discuss the applicability of Mikkelsen's specific analysis to Kipsigis in §5.7.

5.6 Parallels between prominence and semantic highlighting

Notions like prominence, salience, and discourse-differentiation are an important part of a recent tradition of semantic work known as inquisitive semantics (Ciardelli et al. 2013). In traditional semantic frameworks, declaratives denote a set of possible worlds, while interrogatives denote a set of sets of possible worlds. In inquisitive semantics, both types of sentences denote a set of sets of possible worlds, known as possibilities (Coppock & Brochhagen 2013: 361).

In this approach, polar questions like “Is the door open?” and “Is the door closed?” have identical denotations, namely a set of two possibilities (i.e. the possibility that the door is open and the possibility that the door is closed). But as Roelofsen & Van Gool (2010) point out, there is an obvious empirical difference between these two questions in how they can be answered by a polarity particle:

- (79) Is the door open?
 a. Yes. \Rightarrow the door is open
 b. No. \Rightarrow the door is closed
- (80) Is the door closed?
 a. Yes. \Rightarrow the door is closed
 b. No. \Rightarrow the door is open

Despite (79) and (80) having the same semantic denotation, polarity particles have opposite meanings in response to the different questions. This pattern is explained by the notion of *highlighting*, or making a possibility particularly salient. The questions in (79) and (80) highlight different possibilities via their explicit mention of one or the other, which then determines the inferences created by the response polarity particles. Highlighting has been used to explain a range of semantic and pragmatic phenomena (Roelofsen & Van Gool 2010; AnderBois 2013; Coppock & Brochhagen 2013; Roelofsen & Farkas 2015; Roelofsen 2016).

Roelofsen (2016) also points out that various pragmatic effects may arise on account of highlighting (e.g. the conclusion that the highlighted element is of particular relevance to the exchange). It is important to note that while highlighting itself has largely been taken to apply to possibilities (i.e. sets of possible worlds), Roelofsen & Van Gool (2010: 390) also give a semantics for highlighting individual entities. We see therefore that there is not only empirical precedent from Danish and Korean for prominence/salience as a grammatical phenomenon, but there is also a range of research on highlighting as a semantic phenomenon. We argue, then, that prominence (or salience, discourse-differentiation, or highlighting) is not merely a cognitive phenomenon but is a linguistic one as well, and we can expect to see it grammaticalized in a syntactic analysis.

5.7 Speculative proposal: The features of prominence

Returning to Kipsigis, recall that we propose that postverbal word order flexibility results from a scrambling operation to Spec,TP driven by discourse considerations. We have described this discourse effect as prominence, which captures speaker intuitions that the scrambled constituent is more important or especially relevant to the exchange. In the preceding subsections, we showed that this pattern crosscuts familiar information structure notions like specificity, contrast, givenness, and topic/focus (on various definitions).

As such, we continue to use the term prominence to describe the empirical circumstance in which a particular constituent receives a salient/highlighted/discourse-differentiated interpretation. Speakers' tendency to attribute aboutness interpretations to the IPP constituent can be attributed to relevancy inferences generated by highlighting a particular constituent (as suggested by Roelofsen 2016).

Yet how exactly should a notion like prominence be implemented in a syntactic analysis? Rather than assuming a *de novo* [PROMINENCE] feature, we assume that it is grammaticalized syntactically via an underspecified [δ] (discourse) feature that can be satisfied by phrases of any information structure designation or—even more generally—by any phrase that is sufficiently discourse-differentiated (in the sense developed in the discussion of Mikkelsen 2015). We assume a rudimentary feature hierarchy of discourse-features in syntax, in which all information structure features (e.g. topic, focus, etc.) are also designated as [δ] (i.e. differentiated from the rest of a sentence with respect to a discourse property). But if a constituent or head contains a lone [δ] feature without a more specific information structure designation, it is simply discourse-differentiated; that is, it is semantically highlighted without further syntactic or semantic specification. The T head in Kipsigis, therefore, bears a [$u\delta$] feature that can be satisfied by any discourse-differentiated phrase, regardless of its particular designation.

We assume that discourse-driven movement to Spec,TP in Kipsigis follows the type of free movement described in Miyagawa (2010). Recall that Miyagawa claims that in Japanese the [–focus] probe inherited by T can trigger free movement of either the subject or the object regardless of locality, as it simply requires Spec,TP to be filled. Whichever constituent surfaces in this position receives a topical interpretation. Although Miyagawa restricts free movement to [–focus] elements, we extend his reasoning to all discourse-differentiated elements in Kipsigis; that is, any constituent with a [δ] feature—be it a lone [δ] or an information structure specified [δ]—can raise to Spec,TP to satisfy Probe-Goal union regardless of locality. We saw many instances above in which a phrase expected to be in the IPP is supplanted by another phrase deemed more important. We claim that this prominence interpretation of the IPP—the “more important” supplanting effect—arises via pragmatic implicature. This occurs when there are multiple discourse-differentiated elements in a single sentence and though the grammar allows the speaker to move a more specific discourse-differentiated constituent (e.g. [δ ,foc]) to the IPP, they instead place a less specific discourse-differentiated constituent (i.e. [δ]) there. Choosing the underspecified feature set (vs. the more specific feature set) creates the implicature of comparatively larger importance of the constituent raised to the IPP.

Therefore, *wh*-phrases, responses to *wh*-questions, and contrastively focused constituents typically surface in the IPP because they bear specified [δ ,FOC] features and raise to Spec,TP to satisfy Probe-Goal union with the [$u\delta$] feature on T. Yet when speakers choose to make use of unexpected or marked word orders in these contexts, movement of a distinct [δ]-marked constituent creates an implicature and generates a prominent interpretation of comparative importance for that phrase. Similar reasoning applies to the multiple-*wh* facts. This account also explains the lack of focus movement of *itʃɛɛgen* ‘only’ constituents to the IPP. Semantic focus—signaled by ‘only’—is distinct from discourse differentiation; only discourse-differentiated constituents surface in the IPP, so movement of semantically focused ‘only’ constituents is not predicted. Aboutness topics, on the other hand, generally surface in Spec,TP, as they are specified as [δ ,TOP]. Both focus and topic constituents are discourse-differentiated and, in this way, form a natural class.

Our analysis draws heavily on the notion of discourse differentiation from Mikkelsen (2015), though it differs from her account in some important ways. Recall that Mikkelsen claims that Danish grammar makes a consistent distinction between clause-initial XPs that

are information structure differentiated and those that are not. Mikkelsen assumes that all C heads in Danish bear some kind of discourse-related feature that triggers movement of an XP with the corresponding discourse function to Spec,CP.²⁹ Standard information structure features on C and standard feature-checking operations drive Mikkelsen's analysis. We could, in principle, implement this kind of analysis in Kipsigis; instead of T bearing a universal [u δ] feature, Kipsigis T would have many instantiations in the lexicon, each with distinct discourse features. Yet this faces empirical and theoretical challenges. If, for instance, Kipsigis T is sometimes lexically specified as [uFOC], how can we account for the supplanting effect where some other (non-focused) XP can raise to that position if the XP is considered more important? This approach also seems to miss an important generalization; the fact that IPP constituents comprise a natural class of discourse-differentiated XPs is simply a coincidence under this approach, since there is nothing explicitly preventing T from having countless other lexical specifications.³⁰ Given this, we adopt Mikkelsen's idea of discourse differentiation, but we formalize it as an underspecified [δ] feature that can account for a single discourse-prominence movement to Spec,TP despite that movement accommodating many different sorts of information structure distinctions.

In this section, we have offered a speculative proposal of how to formalize prominence movement to Spec,TP. For the sake of space, we necessarily leave several questions unanswered. We have not yet spelled out or defended an entire discourse feature hierarchy, nor have we explored a specific semantics of prominence/highlighting in Kipsigis. Yet the analysis here—based upon solid empirical and theoretical precedent—is a step in understanding the discourse role of the IPP in Kipsigis and the syntactic mechanisms underlying movement to this position.

6 Outstanding issues and conclusions

6.1 Rightward extraposition of topical subjects

Currently, our analysis relies on a single scrambling process—namely, [δ]-motivated movement to Spec,TP—which usually satisfies the EPP quality on T. As it stands, our analysis allows for the generation of the vast majority of word order patterns that we have observed in Kipsigis. However, the derivation of word orders like V-Adjunct-OS necessitates an additional process; scrambling of the adjunct to the IPP alone cannot give rise to V-Adjunct-OS word order.

In discussing the derivation of VOS word order in Tongan, Polinsky (2016) argues for base-generation of topical subjects in a high right-side specifier position. There is ample evidence that the content of right-side subjects in Tongan is backgrounded or presupposed; for instance, subject pronouns often surface clause-finally when their antecedents have already been introduced in discourse, focused elements are impossible in clause-final position, and if a *wh*-phrase occurs clause-finally, then it must be interpreted as an echo-question with the *wh*-phrase taking the widest scope. Polinsky (2016) argues that right-side subjects are base-generated in that position based on patterns of accentuation and binding.

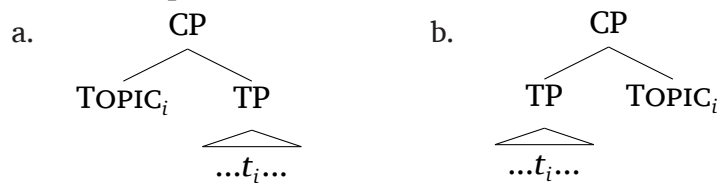
Clemens & Coon (2018) argue that VOS word order in Mayan languages may arise from multiple distinct operations including heavy-NP shift, prosodically-motivated re-ordering of constituents, and right- and left-peripheral topic positions. These different paths to VOS word order are each independently motivated and may coexist in a single language.

²⁹ In most instances; see Mikkelsen (2015: 622) for a discussion of V1 clauses like polar questions and conditionals.

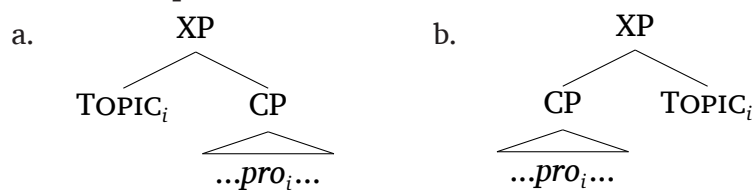
³⁰ This is a familiar problem from phonology. A significant motivating factor for Optimality Theory is that it provides a direct analysis of so-called conspiracies, in which distinct operations in rule-based analyses conspire to achieve the same final result.

Clemens & Coon (2018: 269) show that topics may raise to a clause-peripheral position (internal topics), or be base-generated in that position (external topics):

(81) **Internal Topics**



(82) **External Topics**



We can borrow the term “rightward extraposition” from Polinsky (2016) as an umbrella term encompassing both displacement and base-generation of a constituent on the right edge of the clause.

Returning now to the derivation of V-Adjunct-OS word order in Kipsigis, we note the findings of Creider & Creider (1983) for Nandi, a Kalenjin language closely related to Kipsigis. They demonstrate that there is a tendency in Nandi for discourse-familiar arguments to appear at the right edge of the clause. This comment-topic pragmatic ordering generally aligns with the Kipsigis facts described in this paper; while discourse-prominent constituents tend to surface immediately postverbally, discourse-familiar constituents tend to surface clause-finally. Although these two observations might seem like two sides of the same coin, this is complicated by the fact that aboutness topics are interpreted as prominent and are preferred in the IPP. We suggest that only discourse-familiar topics occur in this right-edge position.

There are select examples in our texts where a clearly discourse-familiar topic appears clause-finally and—just as crucially—no contradictions to this generalization.³¹ In (83) the subject *cheplanget* ‘leopard’ is the familiar topic and appears sentence-finally in the VOS sentence.³²

- (83) Kingogagoiyan Tabutany, komut cheplanget ak koba banda ne lo
 when.had.agreed Tabutany taken.by leopard and went journey that far
 mising. Kingoit ole kimenye, koreek koroisit [cheplanget].
 very when.arrived where he.lived took.off hat leopard
 ‘After Tabutany had agreed, she was taken by the leopard and they went on a
 very long journey. When they arrived where he lived, the leopard took off his
 hat.’

³¹ As noted by Mithun (1984) and Clemens & Coon (2018), many languages with flexible word order (including Kipsigis) possess null arguments. Consequently, narrative texts rarely have transitive sentences with multiple overt arguments, so instances of the relevant data points are quite rare. In addition to (83), we saw the same pattern in (10) above.

³² Here, once again, we simplify our glosses into word-by-word translations and adopt our consultants’ writing conventions.

It also seems that these right-side topics are necessarily discourse-given topics and cannot be salient, sentence-level aboutness topics. This is illustrated by one of the aboutness topic prompts from above in (84a), where the aboutness topic was placed at the right edge.³³ A consultant explicitly offered that (84b) is problematic because “children should not be an afterthought:”

- (84) a. Abɔ a-mwɔ-un (kiit) agɔbɔ laagook.
 FUT 1SG-tell-2SG.OBJ thing about children
 ‘I am going to tell you (something) about the children.’
- b. #Koo-Ø-gootfi Kiproono zawadi amut laagook.
 PST-3SG-give Kiproono gift yesterday children
 ‘Kiproono gave the children a gift yesterday.’

This fits with the conclusion that there is a right-side topic position, but that it is explicitly for discourse-familiar topics and not for aboutness topics (which are instead attracted to the IPP). This assumes a bifurcation among so-called topics where discourse-given topics are backgrounded, while aboutness forms a natural class with focus, contrast, and simple emphasis as highlighted constituents (in the sense discussed in §5.6).

Returning to the leopard example in (83), a consultant—who was not present when the story was originally told—considered a rephrasing of the relevant sentence that instead adopted canonical VSO word order:

- (85) Kingoit ole kimenye, koreek [cheplanget] koroisit.
 when.arrived where he.lived took.off leopard hat
 ‘When they arrived where he lived, the leopard took off his hat.’

This third party consultant actually preferred this word order to the original, but for an interesting reason; the VOS word order in (83) was judged to convey the relevant information too straightforwardly (i.e. was almost too neutral in the narrative context). The VSO word order in (85), on the other hand, was judged a more powerful, dramatic storytelling choice, largely because it suspended the listener to the last minute; the speaker is hiding the relevant information, creating an unexpected word order. Assuming that these interpretations derive from implicatures created by *not* choosing the expected order, we see not only that prominent material is expected in the IPP, but also that backgrounded, familiar information is expected at the right edge and that putting the discourse-familiar topic in non-clause-final position is surprising.

Given these observations, it is possible to account for V-Adjunct-OS word order in Kipsigis by positing that discourse-familiar subjects can appear as right-edge topics. The specific structures and derivations underlying these right-side topics are secondary to our present concerns, but the existing analyses from Polinsky (2016) and Clemens & Coon (2018) provide a framework for probing this question in the future.

The resulting analysis in effect overdetermines the facts; that is, in a given VOS sentence, it is not transparent whether this structure is derived through object scrambling to Spec,TP or through rightward extraposition of the subject. However, this overdetermination is neither unprecedented in the V1 literature, nor necessarily a shortcoming of our analysis. Clemens & Coon (2018) explicitly propose three different paths to VOS word order in Mayan, all of which can coexist in a single language. In addition, appealing to common sense notions, the willingness of speakers to accept any possible postverbal word

³³ A consultant’s exact words were: “I don’t think you can do any worse than that [sentence].”

order as grammatical—and even pragmatically viable given an imagined scenario—may fit well with a grammatical situation in which there are multiple means to any particular word order.

6.2 A- vs. A'-scrambling to the IPP

This section offers preliminary evidence that scrambling to the immediately postverbal prominence position in Kipsigis displays mixed A-/A'-effects, similar to other languages with parallel scrambling operations. Movement to the postverbal position in Kipsigis has A'-effects with respect to quantifier-variable binding, as the moved element reconstructs to its base position. A quantified DP subject can bind a pronominal variable in the DP object regardless of the surface word order:

- (86) a. Koo-Ø-sus [ɲookta age tɔgɔl]_k ɕiita-niin_{k/i}.
 PST-3SG-bite dog every person-POSS
 'Every dog_k bit its_{k/i} person.'
- b. Koo-Ø-sus ɕiita-niin_{k/i} [ɲookta age tɔgɔl]_k.
 PST-3SG-bite person-POSS dog every
 'Every dog_k bit its_{k/i} person.'

The object pronominal variable in (86b) cannot be bound by the quantifier in its surface position, yet a bound reading is nonetheless natural in this context. This suggests that movement to the prominence position has not created a new binding position, a reconstruction effect characteristic of A'-movement. Likewise, when the subject contains the variable and the object the quantifier, scrambling the object over the subject does not change the binding relationships:

- (87) a. Koo-Ø-mwet ɕiita-niin_{*k/i} [ɲookta age tɔgɔl]_k.
 PST-3SG-wash person-POSS dog every
 'Its_{*k/i} owner washed every dog_k.'
- b. Koo-Ø-mwet [ɲookta age tɔgɔl]_k ɕiita-niin_{*k/i}.
 PST-3SG-wash dog every person-POSS
 'Its_{*k/i} owner washed every dog_k.'

Movement of the object over the subject in the VOS sentence in (87b) does not remedy the unacceptable binding configuration; the bound reading remains unavailable. This once again suggests that base positions of arguments are respected for interpretation, a characteristic of A'-movement.

However, this same scrambling process is able to generate a Principle C violation, suggesting that movement creates new binding possibilities, which is typical of A-movement. Principle C of Chomsky's Binding Theory states that R-expressions can never be bound (Chomsky 1981). In (88a), Principle C is not violated, since the R-expression *Kiproono* 'Kiproono' is not c-commanded by the coreferential pronoun *mɛɛndɛt* 'him.' However, movement of the object pronoun to the IPP in (88b) renders the coreferential reading ungrammatical:

- (88) a. Koo-Ø-geer [tʃoorweet-aap Kiproono]_k mɛɛndɛt_{k/i}.
 PST-3SG-see friend-POSS Kiproono him
 'Kiproono's_k friend saw him_{k/i}.'
- b. Koo-Ø-geer mɛɛndɛt_{*k/i} [tʃoorweet-aap Kiproono]_k.
 PST-3SG-see him friend-POSS Kiproono
 'Kiproono's_k friend saw him_{*k/i}.'

In (88b) the object pronoun scrambles to a higher syntactic position (argued to be Spec,TP) and, from this new position, c-commands the R-expression, rendering it unacceptably bound. Scrambling the object over the subject, therefore, results in a change in binding relations.³⁴ In this way, there is preliminary evidence that movement to the IPP in Kipsigis displays mixed A/A'-effects.

Kipsigis is not alone in showing mixed mixed A-/A'-properties. Miyagawa (2010) shows that scrambling to Spec,TP in Japanese displays properties of both A- and A'-movement. Holmberg & Nikanne (2002: 23) show that a similar topicalization operation in Finnish has similarly mixed effects. Van Urk (2015) observes that movement in Dinka Bor is long-distance like A'-movement, but behaves like A-movement with respect to binding. The Kipsigis properties are particularly complicated, since the prominence-based scrambling to Spec,TP does not behave uniformly across all binding diagnostics, though the Kipsigis patterns are not alone in this respect. Richards (2013) observes that it is not uncommon for languages to have a movement operation that only affects certain kinds of binding relationships; German scrambling has been proposed to have no effect on Principle A despite repairing weak crossover, while Scandinavian object shift has been argued to create a new binding position for Principle C despite not doing so for Principle A (see Holmberg & Platzack 1995 and Grewendorf & Sabel 1999). Although we do not offer a complete analysis of these mixed A-/A'-effects in Kipsigis here, we simply contribute the Kipsigis scrambling facts to the growing literature on mixed A-/A'-movements, recognizing that there is more work to be done both to clarify these properties empirically and to develop an analytic framework that can capture such mixed effects.

6.3 Conclusions

This paper provides the first empirical description and analysis of the basic word order properties of Kipsigis, showing both the prevalence of predicate-initial word order and the role of information structure in determining postverbal word order. To account for the observed patterns, we proposed a head movement account of Kipsigis V1, in which the verb raises to a functional projection above Spec,TP but below CP, termed αP by Miyagawa (2010). On this analysis, discourse-prominent material moves to Spec,TP to satisfy a $[u\delta]$ feature on T (following Otsuka 2005a; Miyagawa 2010). Because this postverbal prominence position was shown to have an EPP quality—preferring D-feature-bearing constituents—we proposed that $[\delta]$ -driven movement typically checks T's D-feature as a by-product; yet when the $[\delta]$ -marked constituent is unable to satisfy the EPP quality on T, the most local DP constituent (i.e. the subject) moves to a second TP specifier as a Last Resort. In extended discussion of the interpretation of prominence in Kipsigis, we showed that no widely-accepted information structure concept captures the generalization well (e.g. topic, focus, contrast, givenness, etc.); prominent constituents can be focused phrases, topics, *wh*-words, and even otherwise unmarked constituents that the speaker deems most important. This motivates our adoption of an underspecified $[\delta]$ feature driving movement to the IPP, capturing a natural class within sentential information structure of *discourse-differentiated* phrases that subsumes topic, focus, and contrast.

Abbreviations

1 = first person, 2 = second person, 3 = third person, ACC = accusative, ANZ = adnominalizer, AVZ = adverbializer, COP = copula, DA = 'da' particle, DAT = dative, DEC = declarative mood, DEF = definite, DET = 'det' particle, FUT = future, HON = honorific,

³⁴ As a reviewer points out, it is possible that the coreferential reading in (88b) is ruled out for reasons unrelated to Principle C (e.g. dispreference for cataphora or focus being used to escape coreference).

KO = ‘ko’ particle, NEG = negation, NOM = nominative, NUN = ‘nun’ particle, OBJ = direct object, PL = plural, POSS = possessive, PRES = present, PROG = progressive, PST = past, REFL = reflexive, REL = relativizer, SG = singular

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Competing Interests

The authors have no competing interests to declare.

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