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CLITICS AND THE LEFT PERIPHERY IN THE SANSKRIT OF THE RIGVEDA*

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Abstract This article presents a novel syntactic analysis of the Vedic left periphery and the position of clitics within it, taking the Rigveda as a corpus. I analyze Vedic within the cartographic model of the left periphery, arguing for distinct TopP and FocP projections. The model accounts for the position of conjunction clitics, pronoun clitics, adverbial clitics, interrogative pronouns, relative pronouns, local particles and the negator *mā́*. This model has implications for our understanding of Vedic syntax and ancient Indo-European languages more widely.

Keywords *Vedic Sanskrit, Syntax, Clitics, Left Periphery, Wackernagel's Law*

1 Introduction

This article addresses two intertwined issues of word order in the Ṛgveda.[1] The first is the syntax of the **left periphery**: the behavior of lexical and functional elements fronted primarily for pragmatic purposes. The second is the position of **clitics** that also find themselves near the front of the clause, in "second position", as part of a set of phenomena commonly referred to as

*The research in this article is the outcome of several years' work. I first broached the topic in a paper given at the Comparative Philology Seminar in Cambridge in 2020, and an earlier iteration of the analysis presented here appeared in my doctoral thesis (Ram-Prasad 2022). This version has been revised significantly. In addition to four anonymous reviewers, whose valuable comments prompted some vital emendations, I thank all those who have given me feedback at the various stages of this process, including James Clackson, Philomen Probert, Ian Roberts, Rupert Thompson, David Willis and the editors of *JHS*.

[1]The Ṛgveda constitutes a collection of orally transmitted verse texts dating to the latter part of the second millennium BCE. It represents the earliest attested stage of the Sanskrit language and one of the earliest attestations of any Indo-European language. In the title and abstract I have opted for the more common spelling <Rigveda>, but within the body of the text I will refer to it with its precise transliteration. Unless otherwise stated, all examples are taken from the Ṛgveda and the accompanying references refer to that text. The text is accessible digitally at vedaweb.uni-koeln.de. All translations are my own unless otherwise stated.

Wackernagel's Law. Both grammatical processes—pragmatic fronting and clisis—are observed in the part of the Vedic clause traditionally referred to as the **initial string**. The initial string presents a special point of syntactic interest because it instantiates some clearly observable grammatical patterns and exceptionless ordering constraints; this is particularly remarkable given that the Ṛgveda is a work of poetry with very few categorical restrictions on word order.

The article is structured as follows. In §2, I provide some theoretical context to my approach, including an overview of the left periphery and clitics. This includes a brief summary of the theoretical framework I adopt, which is largely based on that of Chomsky (1995) and Rizzi (1997). I then turn to clisis as a set of phonological and syntactic phenomena, with a particular focus on its treatment within Indo-European philology. In §3, I critique previous approaches to the left periphery and clisis in Vedic (i.e., the initial string). Some of these (e.g., Hock 1996, Keydana 2011) have been **prosody-dominant** in their approach, while others (e.g., Hale 1996, Lowe 2014) have been **syntax-dominant**.[2] I argue that a syntax-dominant approach is necessary to account for the specific facts of pronoun clitics in Vedic, but that phonology also plays a key role in accounting for their distribution; however, I argue that previous syntax-dominant approaches to the Vedic left periphery fail to capture the data adequately. In §4, I propose a new model of the Vedic left periphery in the basic form of Rizzi (1997), with a set of interacting syntactic and prosodic constraints that account for the orderings of both clitic and non-clitic elements in the left periphery. I conclude with some implications of these findings.

2 Clitics and the Left Periphery: Preliminaries

As noted in the introduction, this article brings together two distinct but overlapping areas of research: clisis and the syntax of the left periphery. In this section I provide the necessary theoretical context for each of these topics, both of which inform my analysis of Vedic.

2.1 The Left Periphery

It has long been observed that in Vedic, as in many other languages, certain linguistic elements occur at or near the beginning of the clause more than others. A simple example is the position of the interrogative and relative pronouns, which most often occur clause-initially, as in (1) and (2) respectively:[3]

[2] I adopt these terms from Goldstein (2010).

[3] In a break with tradition, sandhi is dissolved in all examples (except where expressly noted) to facilitate glossing. Glosses use the standard abbreviations according to the Leipzig

(1) ***káḥ*** *naḥ* *mahyái* *áditaye* *púnaḥ*
INT.NOM.SG.M US.ACC.PL great.DAT.SG.F Aditi.DAT.SG.F again
dāt
give.AOR.INJ.3SG
'**Who** would give us again to great Aditi?' (1.24.1c)

(2) ***yáḥ*** *te* *agne* *námasā*
REL.NOM.SG.M you.ACC.SG Agni.VOC.SG.M obeisance.INS.SG.N
yajñám *íṭṭe*
sacrifice.ACC.SG.M implore.PRS.3SG
'**Who**(ever) calls you to the sacrifice with an obeisance, o Agni...' (5.12.6a)

The fronting of relative and interrogative pronouns is cross-linguistically common, and often referred to as ***wh*-movement**. As the use of the term 'movement' implies, we understand the *wh*-word (i.e., relative or interrogative pronoun) to be base-generated further down the clause and move to the front. Movement to the front of the clause is not limited to *wh*-words; it is also possible for non-*wh* lexical items to be fronted. This is often the case when the item is understood to be **topicalized**, as in (3), or **focalized**, as in (4).

(3) ***múkham***$_{[Topic]}$ *kím* *asya*
mouth.NOM.SG.N INT.NOM.SG.N his.GEN.SG
'His **mouth**, what was it?' (10.90.11c)

(4) ***sárvam***$_{[Focus]}$ *sá* *pūtám* *aśnāti*
all.ACC.SG.M DEM.NOM.SG.M pure.ACC.SG.M drink.PRS.3SG
svaditám *mātaríśvanā*
sweetened.ACC.SG.M Mātariśvan.INS.SG.F
'He drinks **all** the pure [essence], sweetened as it is by Mātariśvan.' (9.67.31cd)

In addition to the elements enumerated above, Vedic has a set of **local particles** that often appear at the front of the clause, as in (5).[4]

glossing conventions (Comrie, Haspelmath & Bickel 2008), with the additional non-standard abbreviations: AOR = aorist; IMPF = imperfect; INJ = injunctive; INT = interrogative; LP = local particle; PTC = particle.

[4]These elements are also commonly referred to as 'preverbs'. I take the term 'local particle' from a series of publications on the topic by Heinrich Hettrich, Antje Casaretto, and Carolin Schneider (see, e.g., Hettrich, Casaretto & Schneider 2010). While they commonly occur immediately preceding the verbal stem (and grammaticalize as verbal prefixes in later stages

(5) ***prá*** *rudréṇa* *yayínā* *yanti*
forth.LP rudra.INS.SG.M travelling.INS.SG.M go.PRS.3PL
síndhavaḥ
river.NOM.PL.M
'**Forth** go the rivers with journeying Rudra.' (10.92.5a)

Finally, the beginning of the clause also often contains clitics occurring in "second position", as in (6). For the rest of this article I will mark all clitics with a preceding < = >.

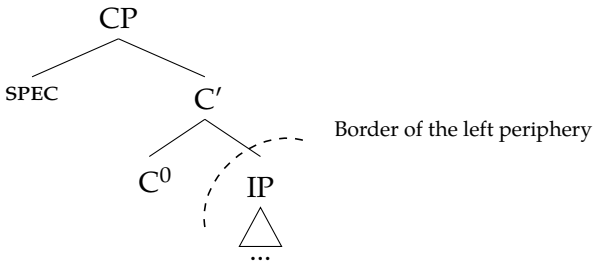
(6) *niṣkám* ***=vā*** ***=ghā*** *kṛṇavate* *srájam*
gold.ACC.SG.N =or =PTC make.PRS.SUBJ.3SG garland.ACC.SG.M
=vā *duhitar* *divaḥ*
or daughter.VOC.SG.F divine.VOC.SG.F
'Indeed he will make a golden necklace or garland, divine daughter.' (8.47.15ab)

The front of the clause therefore seems to attract elements from a variety of grammatical categories. When multiple elements co-occur near the front of the clause, their distribution is subject to a set of ordering constraints; in Vedic, this is in contrast to the relatively flexible order of the rest of the clause. In work that codifies these ordering constraints, the front of the clause is commonly referred to as the **initial string**. I treat the Vedic initial string in detail in §3 below.

Setting aside the specifics of Vedic for the time being, the initial string overlaps to a significant degree with what is referred to in the Minimalist program of syntactic analysis (Chomsky 1995; see, e.g., Radford 2004 or Boeckx 2007 for a textbook introduction), as the **left periphery**. In structural terms, the left periphery includes C^0 and anything that dominates it, as represented in (7).

of the language), local particles exhibit a considerable amount of syntactic autonomy in the Ṛgveda, sometimes acting (apparently) as adverbs or adpositions. For an overview of local particles and their unique syntactic behavior, see *inter alia* Lowe (2014: 26–31) and Reinöhl (2016: 65–84). For the purposes of this article, I will not take a strong stance on their categorical status within Vedic, focusing primarily on their position within the left periphery.

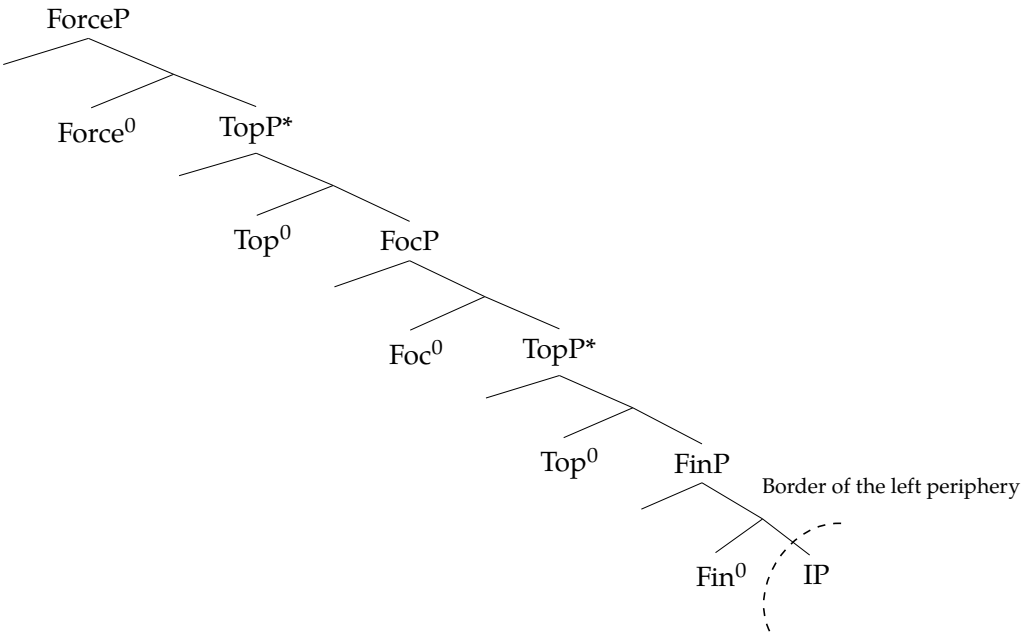
(7)



Since the late 1990s and particularly following the work of Rizzi (1997) and Cinque (1999), the left periphery has been understood as more complex than a single projection (see Lohnstein & Trissler 2004 for an overview). Of particular relevance to this article is the hypothesis that the position traditionally labelled SpecCP hosts several different types of fronted material, including *wh*-pronouns, Topics and Foci. Moreover, Rizzi (1997) demonstrated that elements fronted to SpecCP differ in their syntactic behavior, and are subject to various ordering constraints. To account for these, Rizzi (1997) posited the existence of the **Topic-Focus** complex, an accessory component of the left periphery, activated only when a sentence contains a topicalized or focalized element, or both. It is located between a Force Phrase (ForceP) and Finite Phrase (FinP),[5] and constitutes maximally a single Focus Phrase (FocP), nested between recursive Topic Phrases (TopP). The full structure is given in (8) below (adapted from Rizzi 1997: 297).

[5]Rizzi's model also divides the category C^0 itself into two distinct functional heads: $Force^0$ and Fin^0.

(8)



Before continuing, it is worth noting the interpretive criteria by which Topic and Focus are distinguished within this framework. In simple terms, a Topic is what the clause is 'about', and 'is generally associated with the aspect of 'given' information' (Frascarelli 2000: 2). On the other hand, Focus is often conceived of as information that is 'new'. Both Topics and Foci can be 'contrastive', yielding the possibilities listed in Table 1 below.

	Topic	Focus
No contrast	aboutness topic	new information focus
Contrast	contrastive topic	contrastive focus

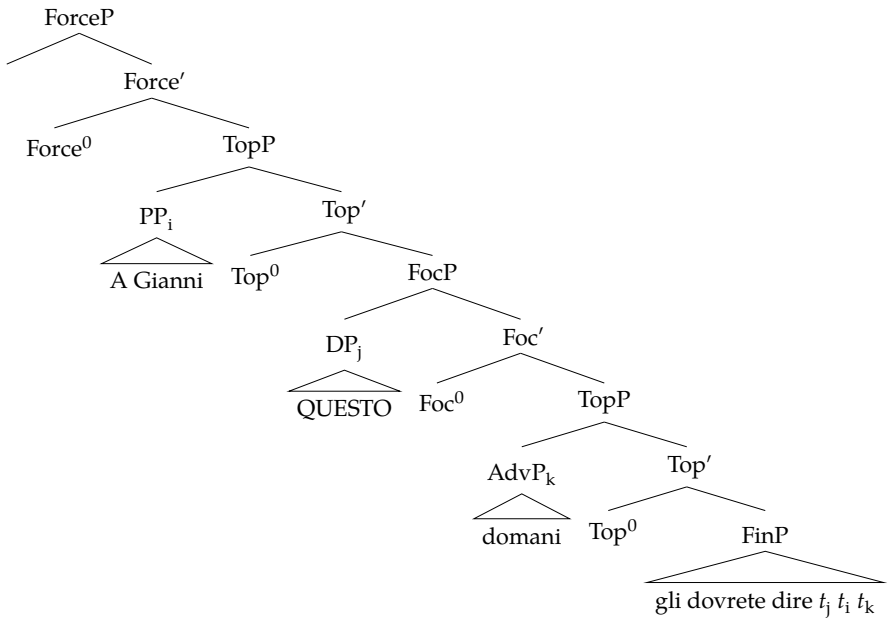
Table 1 Types of Topic and Focus (Neeleman & Vermeulen 2012: 5).

Rizzi (1997) places a strong emphasis on the fact that Focus is **quantificational**, in a way that Topic is not: while quantified expressions (*everything*, *nothing* etc.) can be focalized, they cannot be topicalized. Additionally, Focus, unlike Topic, is **unique**: there can only be one Focus per sentence, while Topics can proliferate. This is encoded in Rizzi's model by TopP projections being recursive (marked with an asterisk* in (8) above) while there is only one FocP per clause.

The syntactic heads Top^0 and Foc^0 attract topicalized and focalized elements respectively to their specifier position. Thus Topics move to SpecTopP and Foci move to SpecFocP, as in the following Italian example (Rizzi 1997: 291):[6]

(9) ***a*** *Gianni,* *QUESTO,* *domani,* *gli* *dovrete* *dire*
to Johnny this tomorrow to-him must.FUT.2PL say.INF
'To Johnny, THIS, tomorrow, you should say.'

(10)



When it comes to the Ṛgveda, establishing the precise 'landing sites' for elements fronted to the left periphery presents some methodological difficulties. Rizzi (1997) was able to surmise the distributional facts for TopP and FocP by grammaticality judgments in his native language; clearly the same is not possible for Vedic Sanskrit. First, we cannot generate novel sentences to test their grammaticality; we can only examine the corpus as it survives, and test our hypotheses against the observed patterns. Second, the Topic-Focus complex is manifest not only in patterns of word-order, but also according to the interpretive criteria discussed above; the fronting of constituents to the left periphery is a syntactic process that can serve a pragmatic function. Yet the precise discourse function of a given left-peripheral element in the Ṛgveda

[6] In Rizzi's examples focalized elements are written in CAPS.

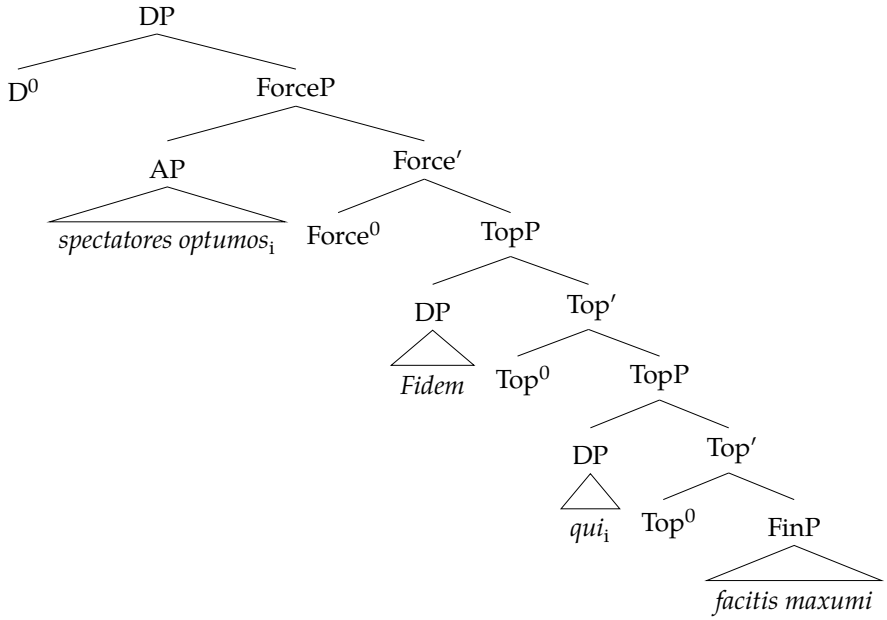
is not always secure. Although in context we can sometimes make a fairly cogent argument as to whether a given element is topicalized or focalized, we can rarely claim *certainty* from context alone, especially in the context of a multi-authored and non-narrative text. That is not to say such judgments are altogether impossible: indeed, significant progress has been made in establishing clear sets of diagnostics for information-structural notions in ancient languages. Taking a variety of contextual and phonological factors into account, such studies have focused especially on interaction of information structure and verb position, in both early Germanic (Hinterhölzl 2009, Hinterhölzl & Petrova 2010, Walkden 2014, Taylor & Pintzuk 2015) and Celtic (Meelen 2016). Further studies may adapt these forms of analysis to the Ṛgveda: this may shine a light in particular on the relative positions of noun phrases and verbs, whose variability forms an intrinsic part of the flexible profile of Vedic word order. For the purposes of this article, however, I focus on left-peripheral functional items whose interpretation is not dependent on either a fully articulated account of the interaction between phonological structure and information structure in Vedic (to the extent that such an account can be gleaned from the data available to us), nor context-driven judgments regarding the pragmatic effect of fronting. As such, my analysis does not place any emphasis on diagnosing the pragmatic function of fronted lexical items, such as nouns or verbs, but focuses on a limited set of functional items, beginning with relative and interrogative pronouns.

For languages with *wh*-movement, these pronouns most commonly occur in clause-initial position, being the sole occupant of the left periphery. In such circumstances, they may well be modelled as occupying SpecCP, in line with the more traditional generative analysis. However, when pragmatic movement leads to other items co-ocurring in the left periphery with fronted relative and interrogative pronouns, the fine structure of the left periphery is brought into play. Most importantly, it becomes evident that relative and interrogative pronouns occupy different positions within the left periphery. For this reason, I will eschew the term *wh*-movement in the remainder of this article, treating relative and interrogative fronting separately. Rizzi (1997: 288–9) argues that relative pronouns target SpecForceP, right at the top of the left periphery, on account of the fact that relative operators do not precede topics in Italian. As we will see in §3, this is not true for Vedic, where relative pronouns are often preceded by other elements that appear to be topicalized or focalized. And Vedic is by no means unique in this respect: the same observation was made by Bianchi (1999: 192) for Bulgarian, Hungarian and Latin. To account for these patterns, Bianchi (1999) argues that the relative pronoun moves to a lower SpecTopP, and the fronted element raises to

a higher SpecTopP position.[7] I reproduce her Latin example below (Bianchi 1999: 192, n.64).

(11) *salvere* *iubeo,* *spectatores* *optumos,*
be-well.INF order.PRS.1SG spectator.ACC.PL.M best.ACC.PL.M
Fidem$_{[Topic]}$ *qui* *facitis* *maxumi*
Faith.ACC.SG.M REL.NOM.PL.M make.PRS.2PL greatest.NOM.PL.M
'I bid you welcome, most excellent audience, who esteem Faith most highly.' (Latin, Plaut. *Cas.* 1-2)

(12)



For Bianchi, it is the relativized head noun that raises to SpecForceP; this is largely due to her adoption of the Head-Raising Analysis of relative clauses

[7] In fact, Bianchi (1999: 192, n.64) argues that in such examples the relativized DP must occupy the specifier of an XP of some other type and not SpecTopP, because doing so would violate Relativized Minimality (Rizzi 1990). The Topic in (11), (*Fidem*), being of the same syntactic 'type' as the topicalized relative pronoun (*qui*), and being nearer to the head noun (*spectatores*), should prevent a dependency relation between the latter two. However, as Rizzi (2004: 245–6) demonstrates, Topics in general seem not to exhibit Relativized Minimality effects. I am confident therefore that we may keep SpecTopP as the 'landing site' for fronted relatives even when another Topic is interposed between the head noun and the relative pronoun.

(Kayne 1994). In Vedic, the head noun very often does not raise, and remains in its base-generated position within the clause; for this reason, I will not concern myself with this aspect of the left periphery. As far as the relative pronoun itself is concerned, SpecTopP seems to be a reasonable landing site; since TopP is recursive, the co-occurence of a fronted relative pronoun with a fronted lexical Topic in the left periphery is no issue for this model. Bianchi argues that SpecTopP is a more plausible landing site than the alternative, SpecFocP, because relative pronouns can co-occur with Foci. She demonstrates this with the following example from English (1999: 191, n.63):

(13) John is the kind of person who [$_{\text{Focus}}$ **under no circumstances**] would I talk to.

If Focus is taken to be unique, this would suggest that relative pronouns cannot occupy SpecFocP, since it is already filled with a focalized negative phrase. On the other hand, SpecFocP seems like a very good candidate for fronted interrogatives. Indeed, this was the position first suggested by Rizzi (1997); in this his analysis concurs with those of Brody (1990) for Hungarian, Agouraki (1990) and Tsimpli (1995) for Modern Greek and Roussou (1998) for Ancient Greek. Such arguments can be made purely on interpretive grounds, such as the fact interrogatives are quantificational (Rizzi 1997: 291–2); there are also distributional arguments such as the fact fronted interrogatives can co-occur with Topics but not Foci (Rizzi 1997: 288–9).[8] Consider the following counterpart to (13) above:

(14) ??Who [$_{\text{Focus}}$ **under no circumstances**] would you talk to?

Approaching the question from the theoretical perspective, we should expect fronted interrogative pronouns in Vedic to raise to SpecFocP, and fronted relative pronouns to raise to SpecTopP. I will show in §3–4 that both hypotheses seem to be supported by the distributional data in the Ṛgveda. More particularly, given the relative orderings of interrogative and relative pronouns and local particles, it seems to be the case that interrogatives move to a specifier position higher than that of relative pronouns; this suggests that the latter move to the **lower** SpecTopP in Rizzi's (1997) model of the left periphery, i.e. the one that occurs below SpecFocP in (8) above. Of course, in the absence of either an additional Topic (in the higher SpecTopP) or a Focus (in SpecFocP), the distinction between the higher and lower TopP projections is collapsed: in

[8] I do not address here the question of a distinct Interrogative Phrase (IntP) as advocated for in Rizzi's later work, e.g., Rizzi (2001); as my analysis will demonstrate, such a position does not appear to be necessary to account for the Vedic data.

these situations—which are most common—the relative pronoun will occur clause-initially, and we can model its position as simply SpecTopP, with no further specification.

2.2 Clitics

In the context of this article, I use the term 'clitic' in the same way as previous authors working specifically on Vedic and elsewhere in an ancient Indo-European context.[9] The theory that underpins it is largely based on that of Zwicky (1977, 1994):

> [C]litic...is an umbrella term, not a genuine category in grammatical theory. Umbrella terms are names for "problems", for phenomena that present "mixed" properties of some kind, not names for theoretical constructs. (Zwicky 1994: xiii)

The definition of clisis in terms of 'phenomena' is especially apt for our purposes since in Vedic, clitics are a grammatically heterogeneous set encompassing conjunctions, adverbial particles and pronouns. The phenomena that characterize clitics generally fall into two categories:

(15)
i. **Phonological characteristics**, e.g.: Prosodic deficiency, lack of pitch accent
ii. **Syntactic characteristics**, e.g.: [for **en**clitics] Cannot appear first within clitic domain; [for **pro**clitics] Cannot appear finally within clitic domain; Second position (P2) effects

Of these I will be most interested in the syntactic characteristics of clitics in Vedic, though their prosodic status is certainly relevant to their distribution. I will not treat the presence or absence of a pitch accent specifically as necessary to call something a clitic; this is in line with previous authors who have worked on the syntax of clitics in an ancient Indo-European context (e.g., Lowe 2014, Goldstein 2016a, Sideltsev 2017).

The occurence of clitics in "second position" (i.e., P2 effects) was observed for Vedic as early as Delbrück (1878). Building on those observations, and adding to them comparanda from other IE languages, Wackernagel (1892) established that certain elements in ancient IE languages had a tendency to cluster in "second position". Although the author uses the word *Gesetz* ("law") in the title of his article on the topic, he never actually states his discovery

[9] For general theoretical concerns about the term 'clitic' as a cross-linguistic category, see Haspelmath (2007, 2015).

in such terms. As such, the law is often quoted as simply "Enclitics move to second position". This does not adequately capture his thesis, which clearly excludes some enclitics, such as Avestan *cīṯ* (1892: 403), and includes some accented (and so traditionally considered non-enclitic) words, e.g. Ancient Greek *mén*, *dé* (1892: 377–8). A more precise formulation is therefore given in (16) below:

(16) **Wackernagel's Law**
The following words occupy P2:

(a) Enclitic pronouns
(b) Enclitic conjunctions and grammatical particles
(c) Orthotonic postpositives
(d) Verbs (insofar as V2 is part of the same phenomenon)

Wackernagel's inclusion of V2 on this list has faced serious criticism (Hock 1982, Kiparsky 1995); I will not treat verb movement as part of the same phenomenon, and exclude it from the discussion. We may also collapse categories (b) & (c), since they are differentiated only by the presence or lack of an inherent pitch accent, which does not factor into my syntactic analysis—both are clitics for our purposes. We are thus left with two relevant categories of second-position, or "Wackernagel" clitics:[10]

(17) **WL1**: clitic pronouns
WL2: clitic conjunctions and grammatical particles

Some clitics that belong to WL2 exhibit P2 effects variously at either the clause-level or the phrase-level according to scope. A typical example is Sanskrit *ca* 'and'. When coordinating clauses, *ca* occupies P2 within the **clause**, as in (18):

(18) *mā́ =te rā́dhāṃsi mā́ =te*
NEG =you.GEN.SG favor.NOM.PL.N NEG =you.GEN.SG.
ūtáyaḥ vaso asmā́n kádā-cana
help.NOM.PL.F good.VOC.SG.M US.ACC.PL ever
*dabhan, víśvā **=ca** =naḥ*
abandon.IMPF.INJ.3PL all.ACC.PL.N =and =US.DAT.PL
upamimīhí mānuṣa vásūni
allocate.IMP.2SG favorable-to-men.VOC.SG.M riches.ACC.PL.N

[10]These labels are used by Keydana (2011), reflecting distinctions made earlier in Hale (1987) and Krisch (1990).

carṣaṇíbhyaḥ *á́*
cultivator.ABL.PL.M towards.LP
'Let neither your favor nor your support ever abandon us, O excellent one; **and** measure out all the riches for us from those who cultivate their land, O lover of mankind.' (1.84.20)

When coordinating noun phrases, however, *ca* occupies P2 within the **phrase**, as in (19):

(19) *tvám* *jigetha* *ná* *dhánā* *rurodhitha*
you.NOM.SG win.PRF.2SG NEG gift.ACC.PL.N withold.PRF.2SG
árbheṣu *ājā́* *maghavan*
small.LOC.PL.M combat.LOC.SG.M munificent.VOC.SG.M
mahátsu ***=ca***
great.LOC.PL.M =and
'You have won; you have not withheld the gifts in battle, O gift-giver, in small ones **and** great ones.' (1.102.10ab)

I will call the latter use **phrasal clitics**. Phrasal clitics do not participate in Wackernagel's law, insofar as they remain within their base-generated phrase within the clause. As such I will not offer any detailed discussion of phrasal clitics.

Allowing for some vagueness as to what Wackernagel meant by "second position" (see, e.g., Goldstein 2016b), his observations have stood the test of time, and the relevant phenomena have been revisited by many authors since. A critical observation that Wackernagel did not make is that WL1 and WL2 have different distributions. As noted in Hale (1987), Hock (1989) and subsequent work, WL2 clitics regularly precede WL1 clitics. This holds true when they occur in a clitic cluster, as in the following example (Keydana 2011: 108).

(20) *kéna* ***=vā***$_{WL2}$ ***=te***$_{WL1}$ *mánasā* *dāśema*
INT.INS.SG.N =or =you.DAT.SG mind.INS.SG.N honor.PRS.OPT.1PL
'Or in what mind should we honor you?' (1.76.1d)

It is also possible for the different types of clitic to be separated; still, WL2 occur linearly before WL1:

(21) *utá* ***=vā***$_{WL2}$ *yáḥ* ***=naḥ***$_{WL1}$ *marcáyat*
and =or REL.NOM.SG.M US.ACC.PL harm.PRS.SUBJ.3SG
ánāgasaḥ *arātīvā́* *mártaḥ* *sānukáḥ*
innocent.ACC.PL evil.NOM.SG.M mortal.NOM.SG.M eager.NOM.SG.M

vṛ́kaḥ
wolf.NOM.SG.M
'Or the evil mortal or eager wolf who would harm us, innocent as we are...' (2.23.7ab)

In such circumstances, WL1 may appear in a position that is not "second" by any measure, whether in terms of prosodic or syntactic constituents.

An additional set of elements that do not fall neatly into either of these two categories are the accented clausal adverbial clitics, including the likes of *hí* ('for', 'because'), *sú* ('well') and *nú* ('now'), which also appear to be subject to P2 effects. From their categorial status, we may perhaps expect them to belong to WL2, along with other grammatical particles; yet their distribution is far more similar to that of WL1. While they most often appear in strict P2, they can occasionally occur later in the clause, just like WL1, as in (22).

(22) *hṛṇīyámānaḥ* *ápa* ***=hí*** *mát* *aíyeḥ*
becoming-angry.NOM.SG.M away =for me.ABL move.AOR.2SG
'For, growing angry, you moved away from me.' (5.2.8a)

Note however that where *hí* and WL1 co-occur, the former precedes the latter:

(23) *vidmā́* ***=hí*** ***=tvā***$_{WL1}$ *vṛ́ṣantamam*
know.PRS.1PL =for =you.ACC.SG most-bullish.ACC.SG.M
vā́jeṣu *havanaśrútam*
battle.LOC.PL.M invocation-hearer.ACC.SG.M
'For we know you as the best of bulls, the one who hears our invocations in battles.' (1.10.10ab)

Wackernagel's Law therefore encompasses a cluster of different syntactic phenomena. Accounting for the precise behavior of each of the elements involved requires a detailed analysis of their syntactic environment.

3 The Vedic Initial String

The Vedic **initial string** refers to a sequence of ordered positions at the beginning of a clause. In §2.1, I drew an equivalence between the initial string and the **left periphery**, though the former has existed as a concept quite independently from the latter for some time. From an pretheoretical standpoint, the initial string can be understood simply as a set of numbered positions: the constituents that occupy these positions, when they co-occur in the initial string, appear in the order specified by their position. In Table 2 below,

I present a basic schema of the initial string, which constitutes a synthesis of previous authors including Hock (1989, 1996), Hale (1987, 1996), Keydana (2011), and Lowe (2014).[11]

Position	0	1	2	3a	3b
Type	Conj.	Topic	WL2	Int. Pro.	Loc. Part
Example	*sá, átha*	any XP	*ca, vā*	*káḥ*	*ánu, ápa, ábhi* etc.

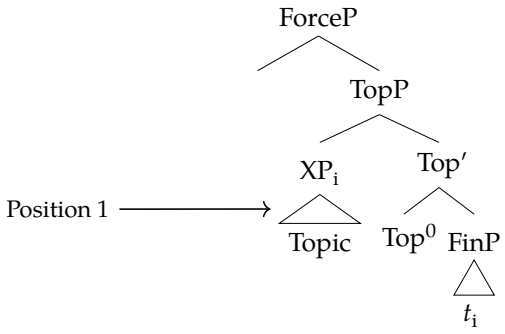
Position	3c	3d	3e	4	5
Type	Rel. Pro.	Dem. Pro.	Adv. Cl.	WL1	Dem. Pro.
Example	*yáḥ*	*sáḥ*	*hí, sú*, etc.	*me, enam* etc.	*sáḥ*

Table 2 The Vedic Initial String

It is worth noting at this stage that every position within the initial string is optional such that it theoretically is possible for there to be no initial string at all in a given clause, though this is quite rare. On the other hand, it is never the case that all slots are filled in the same clause; this is perhaps unsurprising given that the string contains both relative and interrogative pronouns, which do not co-occur in Ṛgveda.[12] Demonstratives are listed in two possible positions, either Position 3d or Position 5: this is because they appear to be variably attested both preceding and following WL1.

From the outset, Position 1 bears a striking resemblance to the topmost SpecTopP posited in Rizzi (1997):

(24)



This is quite uncontroversial: indeed, well before Rizzi (1997), a TopP preceding CP was hypothesized to account for just this ordering by authors such

[11]There is no theoretical basis for my subdividing position 3 into 3a, 3b, 3c, 3d and 3e; I do this simply to make my numbering system align with previous authors' such as Hock (1989), while incorporating observations made subsequently by Lowe (2014) and myself.

[12]There is apparently one example of relative and interrogative pronouns occurring in Vedic Prose (Hock 1989: 105; Davison 2009: 234) but this pattern is not found in the Ṛgveda.

as Hale (1987), Hock (1989) and Kiparsky (1995). The question is whether the fine structure of the left periphery, as presented in Rizzi (1997), has any bearing on the rest of the initial string: relative and interrogative pronouns, local particles, and clitics. I will argue that it does; to make this case, a detailed appraisal of previous analyses of the initial string is necessary. Approaches taken by previous authors fall broadly into two theoretical categories: prosody-dominant approaches (Hock 1989, 1993, 1996, Keydana 2011), and syntax-dominant approaches (Hale 1987, 1996, 2007, 2017, Krisch 1990, Lowe 2011, 2014). Virtually all authors accept that both phonology and syntax are involved to some degree; the question is how. Advocates of prosody-dominant approaches tend to view clisis as an inherently phonological phenomenon, while syntax-dominant approaches tend to assume the null hypothesis that all word-order (including clitics) is primarily accounted for in the syntax. As I stated in the introduction, I find the syntax-dominant approaches to be more convincing; nevertheless, since phonology undoubtedly plays a role in clisis, it is worth exploring the extent to which it can account for the observed patterns by treating prosody- and syntax-dominant approaches in turn.

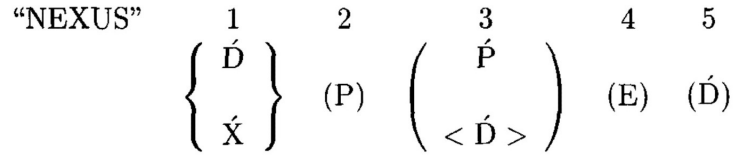
3.1 Prosody-dominant approaches to Vedic clisis

Hock (1982) was perhaps the earliest work that analyzed the Vedic initial string as an ordered sequence of positions, which he summarizes in a 'taxonomic form', later referred to as the **template** of the initial string. The template is revisited and revised in Hock (1989, 1993, 1996); Figure 1 shows the final iteration.

All elements are optional, and all but Position 1 can be doubled.[13] Note that position 0 (NEXUS) and positions 1, 2 & 3 correspond to my own labelling in Table 2. The primary difference is that Hock uses the category Ḍ to incorporate several different types of elements, without treating their order relative to each other. Finally, Hock's position 5 corresponds to my position 5, housing "late" demonstratives, usually in correlative clauses. Hock's template misses some important ordering constraints concerning interrogative and relative pronouns and local particles, to be discussed below. These descriptive issues, however, are straightforwardly rectifiable; of more interest is how Hock uses this template as an explanatory tool.

Hock argues that the template is not merely a generalization of his observations, but a psychological reality that constrains word order in Vedic.

[13] This is what Hock implies with {curly brackets}. He uses the <angled brackets> around Ḍ in Position 3 to indicate that this word order is only acceptable in the Ṛgveda and not in Vedic prose.



Where:	NEXUS	=	Quasi-conjunctional elements such as Ved. Pr. *átho*
	Ṕ	=	accented sentential particle
	P	=	unaccented sentential particle
	Ď	=	accented deictic (including demonstrative *tád*, *etád*, relative *yá-*, interrogative *ká-* etc.); in the Rig-Veda this category includes preposition/adverbs (always accented)
	E	=	unaccented pronominal (both deictic and personal)
	Ẋ	=	other accented elements

Figure 1 Template of the Vedic initial string (Hock 1996: 291).

This is made explicit in Hock (1989: 115), where, working within a quasi-generativist framework, he suggests that everything in the initial string gets there by raising to TOPIC (i.e., SpecTopP), at which point the template acts as a set of 'traffic rules' that results in the different surface patterns. The rationale for these 'traffic rules' seems to be primarily prosodic: Hock notes repeatedly that when every position is filled by a single element, there is an alternation between accented and unaccented elements. Under his original theory then, clitics are fronted via some generic syntactic process, but their surface position is then decided on a phonological basis. Hock's conviction that clisis is *de facto* a phonological process later leads him to abandon the notion that syntactic movement is involved at all, arguing instead that clitics 'float' to their position in the initial string, entirely due to prosody (Hock 1996: 264–5). He cites Radanović-Kocić (1988, 1996) and Aissen (1992) in support of his argument that clisis is wholly phonological, and the syntax is not involved.

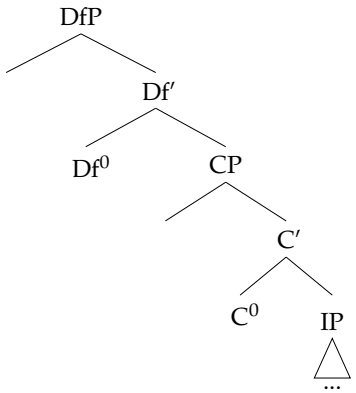
Yet even if we accept the premise that clisis is an inherently phonological process, Hock's template actually goes one step further in seeming to account for the position of both clitics and full lexical items. In fact, Hock even goes so far as to claim with reference to 'accented elements (particles, prepositions/adverbs, and pronominals)' that:

> ...their pragmatic nature makes it likely that they have undergone a fair amount of contextual accent reduction. As a consequence, they can be expect to be prosodically "weaker" than fully accented words and **because of that weakness, to float to a position similar to that of enclitics.**
>
> (Hock 1996: 265, emphasis mine)

If we understand Hock's "floating" to be a form of PF-movement, it would appear that he uses it to account for the position of both accented and unaccented elements in the left periphery. Such a mechanism has been heavily criticized by previous authors for being unjustifiably powerful, and lacking explanatory adequacy (Hale 1996, Keydana 2011, Lowe 2014). In the interest of space, I do not reproduce their arguments here. In short, even if one is willing to accept that clisis is an inherently phonological phenomenon, there is very little support for the notion that pragmatic fronting of full lexical items to the left periphery can be explained as part of the same process. Thus while Hock's template was a vital stage in mapping the Vedic initial string, it lacks explanatory power.

In a bid to rectify the deficiencies of the templatic approach while still treating clisis as inherently phonological, Keydana (2011) admits that full lexical items are placed in the initial string/left periphery by the syntax. He assumes the following structure of the left periphery, where DfP = 'Discourse-function Phrase' (Keydana 2011: 112):

(25)



This model is a partial implementation of Rizzi (1997): Keydana (2011) admits one position higher than SpecCP, to account for both Topics and Foci (SpecDfP). He does not adopt the Force^0-Fin^0 split, instead modelling a unitary C^0 at the bottom of the left periphery. He models *wh*-words (both rel-

ative and interrogative) as occupying SpecCP. In the context of this model, Keydana proposes the following two rules:

(26) For any given intonational phrase:

(i) WL2 (clausal clitics) follow the first phonological word (ω)
(ii) WL1 (pronoun clitics) follow the first phonological phrase (φ)

Rule (i) is fairly uncontroversial: enclitics are understood to be prosodically infelicitous in clause-initial position. When they reach PF, they cannot be spelled out unless they have a suitable accent-bearing host to their left: namely, ω. This is formalized in Halpern's (1992) concept of Prosodic Inversion, discussed in §3.2 below, and is widely accepted in both prosody- and syntax-dominant explanations of Vedic clisis.

The question, however, is: how do we establish the domain of φ in Vedic? As Keydana himself notes (2011: 123), and Lowe (2014: 12) re-iterates, we have no comprehensive proof of what constitutes a φ in this language. Keydana therefore opts to follow Nespor & Vogel (2007), who define φ in syntactic terms as follows:

(27) *Phonological Phrase Formation*
φ domain
The domain of *φ* consists of a *C*[litic Group][14] which contains a **lexical** head (X) and all *C*s on its nonrecursive side up to the *C* that contains another head outside of the maximal projection of X.
(Nespor & Vogel 2007: 168, emphasis mine)

Nespor & Vogel are rather explicit in stating that '[t]he intended interpretation of [this definition] is that in which only V, N, and A are considered lexical heads' (2007: 168). Keydana pays some heed to this consideration in suggesting that Df^0 cannot be the starting point for φ-construal, because it is 'not only a functional head, but moreover one which is never filled with lexical material' (Keydana 2011: 123). Yet he seems to find no issue with C^0 being the starting point for φ-construal, despite it also being a functional head, and often phonologically null. Nevertheless, these issues aside, Keydana argues that the first φ of the Vedic sentence is construed as the entire left periphery, up to and including C^0. On this basis then, since WL1 clitics are placed after C^0 but before the rest of the clause, they must follow the first φ.

Thus, even though Keydana asserts that clisis is an inherently phonological phenomenon, he must resort to a purely syntactic definition of the phono-

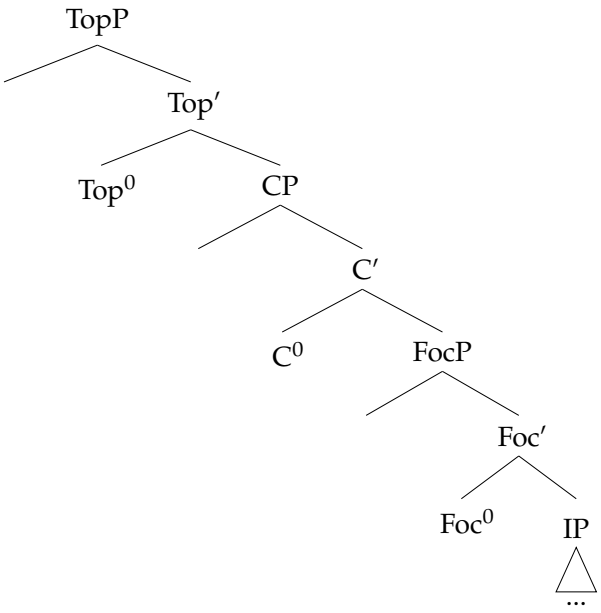
[14] I.e., ω + clitics.

logical phrase in Vedic. If one accepts his premise that 'the null hypothesis [is] that clitic placement is a PF phenomenon' (Keydana 2011: 122), one can plausibly argue that the syntax diagnoses the phonology, and the latter is the basis for clisis. But if one does not accept this premise, Keydana's prosody-dominant model simply makes the same predictions as a syntax-dominant one in which WL1 raise to C^0—this happens to be precisely the model advocated by Hale (1996) and Lowe (2014), to whom I turn presently.

3.2 Syntax-dominant approaches to Vedic clisis

Hale (1987, 1996, 2007, 2017) develops an account of the Vedic initial string within, broadly speaking, a Chomskyan syntactic framework. The most detailed account is given in Hale (1996), which is written in dialogue with Hock (1996). Hale largely accepts the descriptive adequacy of Hock's template, but seeks to provide a structural account for Hock's observations in generativist terms. He posits the following structure for the Vedic initial string (1996: 177):

(28)



SpecTopP corresponds to Hock's (and my) position 1. Hock's position 3, (my positions 3a–e), is accounted for by SpecCP.[15] Hale's FocP, placed be-

[15]More precisely, Hale (1996: 173) suggests that 'inflected WH-elements' occupy SpecCP, while 'uninflected WH-elements...are usually taken to be in C^0 itself'. The author does not expand on what he thinks constitutes an 'uninflected WH-element' in Sanskrit. He seems

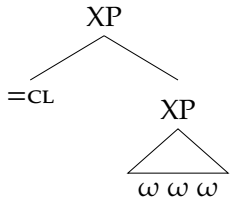
low SpecCP is only 'provisional', and is not mentioned in his later writings; it is supposed to account for position 5, housing "late" demonstratives. Hale argues that all the non-clitic elements of the left periphery arrive there by syntactic movement. Hale's left periphery is remarkably similar to Rizzi's (1997) in structure: although he posits a unitary C^0, like Rizzi he allows for a proliferation of left-peripheral heads motivated by discourse factors. Where Hale's approach departs from the prosody-dominant ones is how he accounts for the positioning of clitics.

Hale argues convincingly that Vedic clitic placement is best explained as an interaction of syntactic and phonological constraints. The latter is inspired by the concept of **Prosodic Inversion** (PI), developed by Halpern (1992, 1995). PI is a phonological process that Halpern (1995) defines in the following terms:

> [T]he position of a clitic in the surface string of a sentence may diverge from what would be expected based on its syntactic position. Specifically, a clitic may "trade places" with a prosodic unit which is adjacent to it... Usually this unit is the prosodic word. (Halpern 1995: 17)

In short: where an enclitic leaves the narrow syntax and enters PF in a prosodically infelicitous position (viz. clause-initially), PI "inverts" the ordering of the clitic and the prosodic word (ω) immediately to its right, such that the enclitic has an appropriate prosodic host. This means that the narrow syntax can allow a clitic to be generated in—or moved to—clause-initial position; PI will then "fix" the outcome at PF, yielding the attested word order. This is schematized below:

(29) i. Narrow syntax:



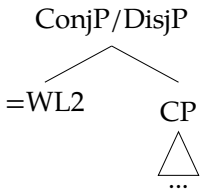
ii. Prosodic Inversion: =CL ω=CL ω ω.

iii. Phonetic Output: ω=CL ω ω

to suggest (1996: 172) that adverbial/conjunctional *yád* occupies C^0, but does not explain his choice. In line with other authors (e.g., Lowe 2014), my analysis will not reflect this distinction.

Equipped with the machinery of PI, Hale can then account for WL2 clitics straightforwardly. He argues that they are base-generated to the left of the main clause, as heads of their own Conjunction Phrase (ConjP) or Disjunction Phrase (DisjP).[16] Thus when they occur in the left periphery, their projection dominates the entire clause:

(30)



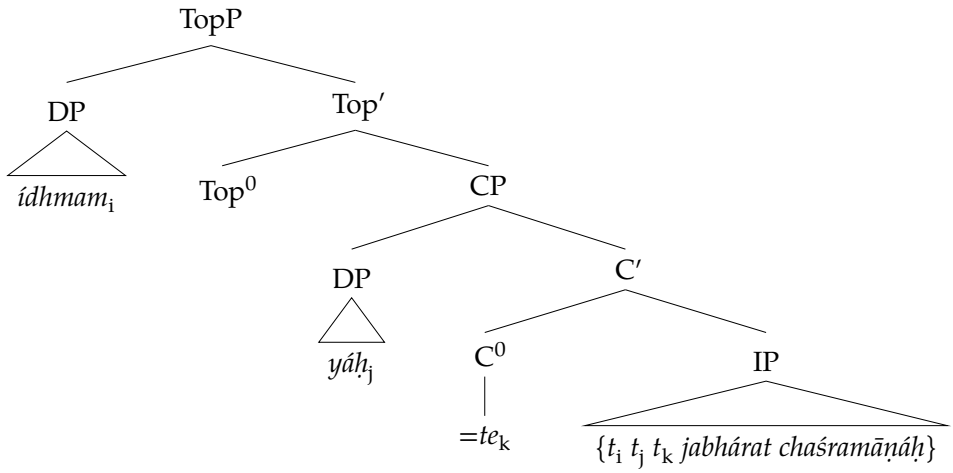
They are then moved by PI into P2, i.e. following the first ω. Hale uses the combination of external base-generation + PI to yield Hock's (and my) position 2. Descriptively, his claim is the same as that later made by Keydana (2011): WL2 follow the first ω of a phrase (see (26) above). While the theoretical mechanisms may differ, there is a point of agreement here.

Hale's account for WL1 is where the syntax-dominant approach diverges most sharply from the prosody-dominant one. In line with other syntactic approaches to clisis, and reminiscent of Delbrück (1878), Hale assumes that WL1 are base-generated in the same position as their non-clitic counterparts, i.e. somewhere within the VP-complex. For them to appear in the left periphery at all then, they must first **raise to C^0**. This movement takes place in the narrow syntax, with no prosodic involvement, and supposedly accounts for position 4. This is how Hale accounts for examples such as the following (1996: 168):

(31) *ídhmam* *yáḥ* *=te* *jabhárat*
kindling.ACC.SG.M REL.NOM.SG.M =you.DAT.SG bear.PRF.3SG
chaśramāṇáḥ
exerting.NOM.SG.M
'Who, exerting himself, bore the kindling to you...' (4.12.2a)

[16]This projection would also account for Position 0; the difference is simply that occupants of Position 0 are non-clitic, and so are not subject to PI.

(32)



In this way, Hale argues that where WL1 appear following an element in either SpecTopP or SpecCP (or both), the phonology is not involved at all; the movement is entirely in the narrow syntax. However, if the left periphery is empty, PI will kick in (exactly as with WL2) and move WL1 such that they appear after the first ω. Such an example is provided by Keydana (2011: 124):

(33) *gandharváḥ* *=asya* *raśanā́m* *agṛbhṇāt*
gandharva.NOM.SG.M =DEM.GEN.SG bridle.ACC.SG.F sieze.IMPF.3SG
'The Gandharva siezed his bridle.' (1.163.3c)

Under Hale's model, *gandharváḥ* would likely occupy the canonical subject position, SpecIP. When *asya* is raised to C^{0}, it leaves the narrow syntax in (unacceptable) first position; PI then pushes it behind the first ω, *gandharváḥ*.[17]

To summarize, Hale posits two mechanisms to account for clitic placement:

(34) i. Prosodic Inversion: Both WL1 (if necessary) and WL2 (always)

[17] An anonymous reviewer raises Keydana's (2011) contention that PI would lead to the wrong sequencing of WL2 and WL1 within a clitic cluster if the latter move to C^{0} in the syntax, since 'syntactic movement and the formation of prosodic constituents precede prosodic movement' (Keydana 2011: 119); thus in an example such as (20), we might expect WL2 *vā* to move behind the whole prosodic unit comprised of *kéna=te*, producing ^{x}*kéna=te*$_{WL1}$*=vā*$_{WL2}$. Yet if we follow Keydana (2011) himself in adopting Nespor & Vogel's (2007) concept of a Clitic Group, *C*, as a distinct level on the prosodic hierarchy from the Prosodic Word, this problem may be avoided. We simply hold that WL2 minimally require a Prosodic Word as a host (*kéna*), rather than a Clitic Group (*kéna=te*); the illicit sequence ^{x}*kéna=te=vā* is thus excluded because *vā* would have to move unnecessarily far to the right at PF.

ii. Movement to C^0: WL1 only

Hale uses his twofold explanation to account for a pattern which Hock's original template somewhat glossed over: the fact that position 1 can either be a single prosodic word or a single syntactic constituent. Since PI does not see the syntax, it can only "push" the enclitic behind the first ω, regardless of constituent structure, as in (35).

(35) ***devéna*** *=naḥ* ***mánasā*** *deva*
divine.INS.SG.N =US.DAT.PL mind.INS.SG.N divine.VOC.SG.M
soma *rāyáḥ* *bhāgám* *sahasāvan*
Soma.VOC.SG.M wealth.GEN.SG.M share.ACC.SG.M mighty.VOC.SG.M
abhí *yudhya*
upon.LP fight.IMP.2SG
'**With your divine mind**, O divine Soma, O mighty one, fight for a share of the wealth for us.' (1.91.23a)

For this example, Hale's hypothesis would lead us to posit that the constituent *devéna mánasā* does not occupy a left-peripheral position. As such, *naḥ*, having raised to C^0, is then moved by PI to follow the first ω, and **not** the first syntactic constituent. This contrasts with an example such as the following(Hale 1996: 193):

(36) ***amṛtatvám*** ***rákṣamāṇāsaḥ*** *=enam*
immortality.ACC.SG.N protecting.NOM.PL.M =him.ACC
devā́ḥ *agním* *dhārayan*
god.NOM.PL.M agni.ACC.SG.M preserve.IMPF.3PL
draviṇodā́m
giver-of-goods.ACC.SG.M
'**Protecting their immortality**, the gods preserved him as Agni, giver of goods.' (1.96.6cd)

Hale hypothesizes that in clauses such as (36), and others where WL1 follow a syntactic constituent consisting of more than one ω, it is because the whole constituent has been topicalized.[18] Since SpecTopP precedes C^0, *enam* is not

[18]It is worth noting at this juncture that Vedic allows the fronting of partial constituents; see for instance (4) above, where the quantifier *sárvam* ('all') is separated from the adjective *pūtám* ('pure'). Splitting constituents in this way is common in Vedic, as it is in other ancient IE languages. It is possible, therefore, that in (35), only the adjective *devéna* is fronted to the left periphery, while the noun it agrees with (*mánasā*) remains within the main part of the clause. This adds little to our analysis and is unlikely to be justifiable from an interpretive

moved at PF: it simply surfaces precisely where we would expect C^0. I reiterate here that WL2 clitics, since they are base-generated outside the leftmost edge of the clause, and are only moved to P2 by PI, will always pattern with (35): they follow the first ω even if it splits up a fronted constituent.[19]

Hale's model thus captures a significant portion of the data—but not quite all of it. The central flaw is a failure to distinguish between the position of relative and interrogative pronouns, collapsing them under the category of *wh*-words undergoing *wh*-movement. As I noted in §2.1 above, under the Rizzian model of the left periphery, we understand fronted relative and interrogative pronouns to occupy distinct specifier positions. It should come as little surprise, therefore, that interrogative and relative pronouns show different distributions in Vedic. This is demonstrated by Lowe (2014), who notes that while local particles regularly precede relative pronouns in the Vedic left periphery, local particles never precede interrogative pronouns. Hale (1996) treats local particles as adverbs adjoined to CP: this predicts that they follow whatever is in SpecTopP, but precede whatever is in SpecCP. This makes the correct prediction if we assume **relative** pronouns occupy SpecCP: Hale (1996: 185) lists several examples that back up his point. As demonstrated by Lowe (2014), however, no such examples can be found with **interrogative** pronouns.

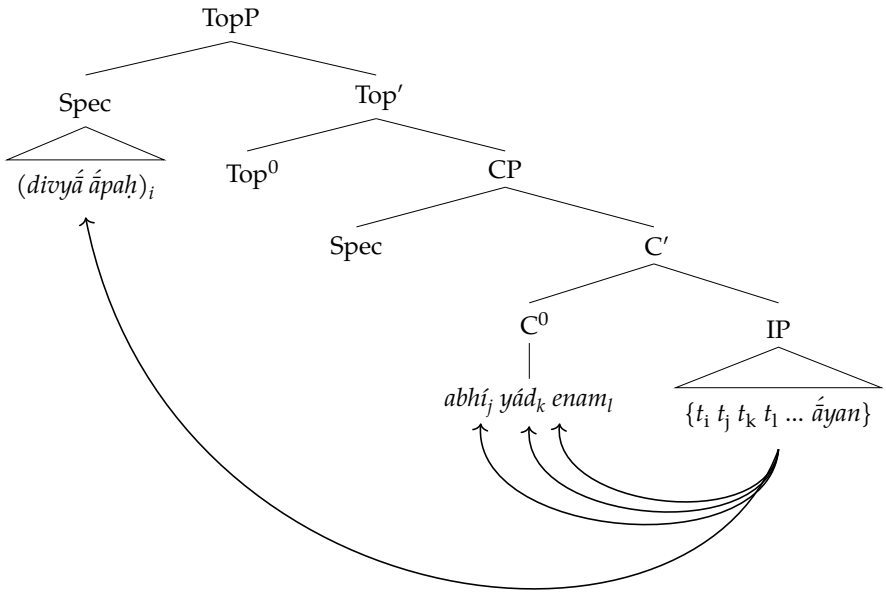
Lowe (2014) presents a rather ingenious solution that accounts for these patterns. He maintains that interrogative pronouns move to SpecCP, but that relative pronouns are optionally enclitic: in which case they raise to C^0, forming a clitic cluster with WL1 (which also raise to C^0 as per Hale 1996). To generate the order [XP *LP yá-*], Lowe also hypothesizes that local particles are optionally proclitic; they too raise to C^0, but must occur at the beginning of the clitic cluster. The following is an illustrative example, reproduced from Lowe (2014: 34):

(37) *divyā́ḥ* *ā́paḥ* *abhí* *yád* *=enam*
divine.NOM.PL.F waters.NOM.PL.F toward.LP REL him.ACC
ā́yan
come.IMPF.3PL
'When the divine waters came upon him...' (7.103.3a)

point of view, so I do not pursue it further; nevertheless, it cannot be categorically excluded as a syntactic analysis.

[19] One exception to this is 'subordinating' *ca*, which Hale (2017) hypothesizes to be generated in C^0.

(38)



Lowe (2014) argues that in the majority of cases, the relative pronoun *yá-* is not enclitic: its most common position is absolutely clause-initial, in which case it must be a full lexical word. In such instances, Lowe hypothesizes that *yá-* does not occupy the clitic cluster in C^0 but rather SpecCP. It is only in instances where another constituent precedes it, as in (37) above, that *yá-* can be understood as enclitic.

In support of this hypothesis, Lowe marshals phonological evidence from the demonstrative pronoun *sá-*/*tá-*(/*syá-*) which he also argues is optionally enclitic. In the same way as *yá-*, *sá-*/*tá-* most usually occurs in absolute initial position, and so cannot be consistently enclitic. Nevertheless, Lowe argues that, eschewing accentuation as a phonological diagnostic of clisis, we can use sandhi phenomena instead when *sá-*/*tá-* occurs non-initially. He argues that in examples such as the following, where initial *s-* or *t-* is retroflexed by a preceding word according to the rules of word-internal sandhi, it is because the demonstrative is actually enclitic on the preceding word.[20]

(39) *pári* ***ṣyá*** *suvānó* *akṣa*
around.LP DEM.NOM.SG.M pressing.NOM.SG.M flow.PRF.3SG
índur *ávye* *mádacyutaḥ*
drop.NOM.SG.M sheep.LOC.SG.M moving-ecstatically.NOM.SG.M

[20]Examples from Lowe (2014: 21–2). Sandhi is not dissolved in (39–40).

'That drop, having been pressed, flows through the sheep's wool, moved in ecstasy.' (9.98.3ab)

(40)

agníṣ	***ṭā́***	*víśvā*	*bhúvanāni*
agni.NOM.SG.M	DEM.ACC.PL.N	all.ACC.PL.N	world.ACC.PL.N
veda			
know.PRF.3SG			

'Agni knows all those worlds.' (3.55.10c)

Since the phoneme *y-* is never affected by sandhi, there can be no direct evidence from the relative pronoun *yá-* akin to that of *sá-*/*tá-*. Lowe reaches his conclusion that *yá-* is optionally enclitic by the following logical steps:

(41)
i. Demonstrative *sá-*/*tá-*, when it occurs in non-initial left-peripheral position, is enclitic (witness sandhi phenomena)
ii. **Therefore:** non-initial, left-peripheral demonstrative *sá-*/*tá-* occupies C^0 (the position for WL1 clitics)
iii. Demonstrative *sá-*/*tá-* and relative *yá-*, when occuring non-initially in the left periphery, share the same distribution (they are both preceded by local particles, unlike interrogatives)
iv. **Therefore**: since demonstrative *sá-*/*tá-* and relative *yá-* share the same distribution, and the former is part of the clitic cluster C^0, **non-initial left-peripheral relative *yá-* is enclitic**

On the face of it, then, Lowe's (2014) proposal of 'optional' clisis of local particles, relative pronouns and demonstrative pronouns solves the distributional discrepancy between interrogative pronouns and relative pronouns in their position relative to local particles. Nevertheless, it presents its own set of difficulties, which I address here, starting with some theoretical questions and moving on to some empirical ones.

First, there is the question of the supposed optionality of clisis in this model. To start with the relative pronoun: I am not aware of any language that has a fully-inflecting relative pronoun that is optionally enclitic. Within Indo-European, we have the well-known example of the Celtic languages (with the notable exception of Celtiberian), which exhibit a relativizer that is obligatorily enclitic, and does not inflect. Indeed, the two authors cited by Lowe (2014: 24, n.9) who have also raised the possibility of optional enclisis of the relative pronoun in Sanskrit, Watkins (1963: 29–30) and Hettrich (1988: 758–93), do so for comparative purposes; while Lowe's aim is 'not specifically to make claims about Proto-Indo-European' (2014: 26), it is clear that his hypothesis would find favor among those who would wish to reconstruct an

enclitic relative pronoun **yo-* for Proto-Indo-European.[21] My aim in this article is likewise not to make claims about Proto-Indo-European; however, it is worth alighting on the diachronic implications of a putative enclitic variant of *yá-* in Vedic. In one scenario, this is inherited from an enclitic relative marker in Proto-Indo-European, which somehow degrammaticalizes into a full lexical item in every branch in which it is attested;[22] in another scenario, a non-clitic relative pronoun in Proto-Indo-European starts to grammaticalize as an enclitic in Vedic, but for some reason this change is later abandoned. Neither of these scenarios is beyond the realms of possibility; both, however, would require robust motivation. From a synchronic perspective too, if we are to posit the existence of two syntactic variants of a functional item—an enclitic relative pronoun and a non-clitic one—this requires more motivation than a simpler model which posits only one, non-clitic variant.

The optional proclisis of local particles is uncontroversial. However, in stark contrast to relative pronouns, local particles do end up fully grammaticalized as verbal prefixes in Sanskrit, losing their independent lexical forms altogether (Lowe 2014: 86). What is more challenging to explain is how this kind of optional proclisis could be incorporated into Wackernagel's Law (viz. movement to C^0); indeed, the fact that they grammaticalize specifically in those instances where they are **not** fronted to the left periphery, but remain in a lower position immediately preceding the verbal stem, is hard to reconcile with a model in which the locus of optional proclisis is the left periphery. Additionally, to add local particles to the set of items that target C^0—whether or not this includes relative and demonstrative pronouns—raises some pertinent questions about the syntactic motivation for this movement. If it is the case that only enclitic pronouns target C^0, this movement can be motivated by some aspect of their feature structure that causes them to move.[23] It is hard to imagine that such a feature could also be shared by local particles, which are categorically non-nominal. Theoretically speaking, proclitic local particles could target C^0 for reasons that are entirely separate to those driving the movement of enclitic pronouns; but once again, this would require motivation.

From a theoretical perspective, we should seek to eliminate these complications as far as we can. It is simpler to posit a single syntactic variant for each of type of pronoun, and another for left-peripheral local particles. It is

[21] This is explicitly the opinion held by Hettrich (1988).

[22] It is worth stressing here that we have direct evidence for a non-clitic relative pronoun in Celtiberian (Beltrán & Jordán 2019), in texts which had not been published at the time of Watkins (1963).

[23] One such explanation involves a condition on clitic pronouns being definite and specific in their reference (Uriagereka 1995, Sportiche 1996).

also sensible to aim to reduce the number of options available to account for the fronting of any given lexical item; in other words, they should end up in the left periphery either by pragmatic fronting to a specifier position or clitic movement to C^0, but not both.

As with any appeal to theoretical economy, we cannot simplify beyond the complexities of the data. The strongest empirical argument in favor of any form of optional enclisis, then, rests on the phonological evidence concerning the retroflexion of the demonstrative *sá-/tá-*. However, I am not entirely convinced that we can use sandhi as a diagnostic for syntactic clisis. As Lowe himself notes (2014: 23), the lexical verb *stu* ('praise') also undergoes retroflexion in the same way as *sá-/tá-*, implying it forms a phonological word with what precedes it. However, Lowe does not seem to suggest the verb in such examples raises to C^0 here, which would in effect be a reprise of Wackernagel's hypothesis that V2 was part of the same set of phenomena as clitic movement. Indeed, in the case of *stu* there is at least one example where it is retroflexed clause-finally, well away from the left periphery:

(42) *té* *=me* *āhur* ... *náro*
DEM.NOM.PL.M =me.ACC.SG tell.PRF.3PL ... man.NOM.PL.M
máryā *arepása* *imā́n*
youth.NOM.PL.M unblemished.NOM.PL.M DEM.ACC.PL.M
páśyann *íti* ***ṣṭuhi***
seeing.NOM.SG.M QUOT praise.IMP.2SG
'They said to me... the men, the unblemished youths, "When you see them, **praise** them!"' (5.53.3ab)

This casts some shade on the claim that *sá-/tá-* is **syntactically** enclitic (i.e., it has moved to C^0) in the examples Lowe provides. As an anonymous reviewer notes, since *ṣṭuhi* here is unaccented it is likely to be **phonologically** enclitic; but since de-accentuation of this sort is precisely what is unattested for demonstrative pronouns, it seems hard to reconcile the two under a coherent notion of syntactic clisis. Moreover, as I will argue in §4 below, Lowe's (2014) model, despite its complexities, may not be restrictive enough. Specifically, the position of the putative clitic cluster in C^0 makes some apparently unattested predictions concerning the co-occurence of local particles, interrogatives and the negator *mā́* in the left periphery.

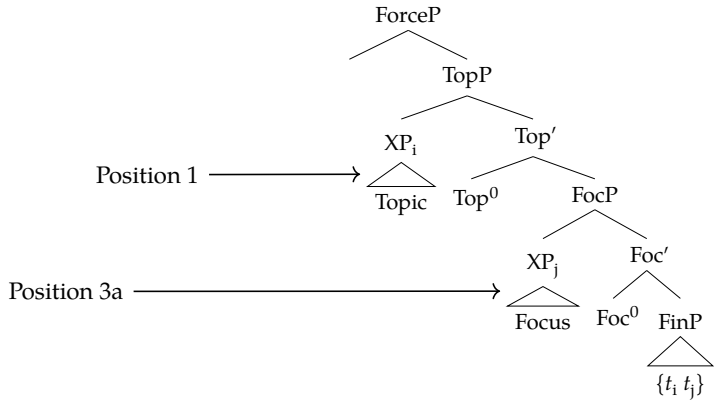
In sum, Lowe (2014) synthesizes the strongest aspects of Hale's model, and seeks to improve upon its shortcomings. However, his hypothesis concerning optional enclisis still faces several difficulties, which may well be remedied by adopting a finer syntactic model of the left periphery. In the next section, I propose a new syntax-dominant model of the Vedic left pe-

riphery that accounts for all the relevant syntactic data.

4 Disentangling the Vedic Left Periphery: A new syntax-dominant approach

I begin by reproducing the template of the Vedic left periphery from (24), with one addition: a FocP, whose specifier attracts, *inter alia*, interrogative pronouns.

(43)



As I noted at the outset of §3, the location of Topics in SpecTopP is uncontroversial, and in line with what practically all previous authors have suggested. The location of Foci within SpecFocP is slightly more contentious, insofar as it requires us first to disambiguate between fronted Topics and Foci. For the purposes of this article, I have not attempted to establish whether we can diagnose distinct specifier positions for lexical nouns or adjectives according to whether they are topicalized or focalized. However, I have joined the dots between the focalization of interrogative pronouns and their unique position within the left periphery, following fronted topics but preceding any local particles and WL1 (pronoun) clitics. I elaborate on these points below.

4.1 On the position SpecFocP

I suggested in §2.1 that relative pronouns are fronted to SpecTopP; this is not a particularly novel suggestion from the point of view of the syntactic literature, but it has not to my knowledge been suggested for Vedic. More particularly, I have argued that relative pronouns occupy the **lower** SpecTopP: that is, they occur below FocP. This is how I capture the distributional difference between interrogative and relative pronouns; the former move to a specifier that is

higher than the latter. Both can still be preceded by Position 1 Topics in the highest SpecTopP, but only relative pronouns can be preceded by Foci. This difference is not, of course, purely one of ordering constraints: interrogatives should not co-occur with any other focalized elements in the left periphery, because Focus is unique (§2.1). This observation has some relevant consequences for our understanding of an element that I have not treated in detail so far: local particles.

Lowe (2014) observed that local particles never precede interrogative pronouns in Vedic. I would argue that the pattern is even stronger than that: **local particles and interrogative pronouns do not co-occur at all in the left periphery**. Lowe (2014: 16, n. 15) concedes that there are no absolutely unambiguous examples of interrogative pronouns preceding local particles within the left periphery in Vedic. He lists four examples where the local particle could be analyzed as occupying a left-peripheral position following the interrogative pronoun; but in every instance, an alternative analysis is possible. In three of them (44–46), the local particle directly precedes a verb, with which it may be considered univerbated. In the fourth example (47), it could be a postposition governing the interrogative pronoun:

(44) ***kásmin*** [*á́* *yatathaḥ*] *jáne*
INT.LOC.N toward.LP join.PRS.2DU people.LOC.SG.N
'To **which** people do you join yourselves?' (5.74.2c)

(45) ***kám*** [*áchā* *yuñjāthe*] *rátham*
INT.ACC.SG.M toward.LP yoke.PRS.2DU rátham
'**Who** do you yoke your chariots towards?' (5.74.3b)

(46) *rátham* ***káḥ*** [*niḥ* *avartayat*]
chariot.ACC.SG.M INT.NOM.SG.M out.LP turn.IMPF.3SG
'**Who** rolled out the chariot?' (10.135.5b)

(47) [***kám*** *á́*] *jánam* *carati*
INT.ACC.SG.M toward.LP people.ACC.SG.M go.PRS.3SG
'Towards **which** people does he go?' (6.21.4b)

If we treat the local particle and verbal stem in (44–46) as univerbated (I will refer to this as a 'compound verb'), the question is raised as to where this compound verb itself is situated. It must be conceded that there is no immediate account for this: the three examples are heterogeneous in this regard. The appearance of the compound verb in (46) in clause-final position is common enough, and likely to be its base-generated position; on the other hand, in

(45), it precedes the direct object, *rátham* ('chariot'), which may suggest some movement; likewise in (44), where it precedes the locative complement *jáne* ('people'). On the basis of these two examples, we may be tempted to take the compound verb as itself moving to a left-peripheral position, lower than SpecFocP (the location of *ká-*) but somehow higher than its base-generated position within the VP. Equally, the brevity of these clauses does not exclude the possibility that the compound verb, if moved at all, has remained within IP, and its adjacency to left-peripheral *ká-* is a coincidence. Whatever the nature of this movement, it does not appear to be obligatory, given counter-examples such as (48) where the compound verb in an interrogative clause clearly remains in clause-final position:

(48) ***káḥ*** *dámpatī* *sámanasā* [*ví*
INT.NOM.SG.M master.ACC.DU.M unanimous.ACC.DU.M apart.LP
yūyot]
separate.AOR.INJ.3SG
'**Who** would separate a husband and wife of the same mind?'
(10.95.12c)

The upshot is that, given the propensity of local particles to prefix to the verbal stem, (44–46) provide no unambiguous evidence for the co-occurence of *ká-* and a local particle in the left periphery. This leaves us to account for the position of the local particle *ā́* in (47). Taken as a postposition, it would form a constituent PP with *kám*, with the whole phrase moved to SpecFocP. This is a slightly contentious proposal, depending as it does on the categorial analysis of *ā́* as a P^0. Nevertheless, given the well-known possibility for local particles to behave like adpositions—particularly common in the case of *ā́* (Reinöhl 2016: 72–8)—once again it cannot be excluded as an analysis.

Lowe cautiously suggests that these four *possible* examples of local particles co-occurring with an interrogative pronoun in the left periphery are promising, given the relative rarity of interrogatives. Yet if we model local particles as occupying SpecFocP, the lack of co-occurrence is predicted: since FocP is non-recursive (Focus is unique), there can only be one focalized element in a clause.

Further support for this analysis may be offered if we add another functional element to our repertoire of Foci: the negator *mā́*. *mā́* is used in negative commands, commonly taking the injunctive form of the verb, as in the following:

(49) ***mā́*** *=naḥ* *vadhīs* *indra*
NEG =US.ACC.PL destroy.AOR.INJ.2SG indra.VOC.SG.M

'**Do not** destroy us, O Indra!' (1.104.6a)

mā́ most commonly occurs clause-initially, as in (49), though there are some instances in which it is preceded by another constituent, as in the following:

(50) *imám* *agne* *camasám* ***mā́*** *ví*
DEM.ACC.SG.M agni.VOC.SG.M cup.ACC.SG.M NEG apart.LP
jihvaras
lead-astray.AOR.INJ.2SG
'This cup, O Agni, **do not** cause it to fall.' (10.16.8a)

(51) *kulāyáyat* *viśváyat* ***mā́*** *=naḥ* *ā́*
nest-builder.NOM.SG.N swelling.NOM.SG.N NEG US.ACC.PL toward.LP
gan
go.AOR.INJ.3PL
'The nest-builder, the swelling one, let them **not** come to us.' (7.50.1b)

Given this behavior, it is somewhat surprising that *mā́* is rarely, if ever, treated as part of the initial string. At face value, it could occupy one of positions 3a–e in Table 2 above. And from a syntactic perspective, the behavior of *mā́* could reasonably be explained as a result of negative preposing, i.e., the fronting of the negative phrase to a specifier position in the left periphery.[24] Fronted negative phrases are often analyzed as focalized;[25] even within an ancient Indo-European context, there may be a parallel here with 'emphatic' negative phrases in Ancient Greek, which are fronted in a process that Goldstein (2016a: 196) argues 'appears to...remove any contextual restrictions on their interpretation.' Although this article is not primarily concerned with the pragmatic interpretation of fronted elements in Vedic, it seems reasonable enough to suggest that negative commands often lack contextual restrictions in much the same way. On this basis, therefore, taken together with the fact that *mā́* routinely occurs in the left periphery, and that left-peripheral negative phrases are often focalized, I would argue that *mā́* is a prime candidate to occupy SpecFocP.

Now, on purely interpretive grounds we would hardly expect *mā́* to co-occur with an interrogative pronoun, since the two come with incompatible illocutionary forces (commands vs. questions). The same does not apply to

[24] An anonymous reviewer notes that it is also possible for a left-peripheral negator to be base-generated in SpecFocP as a form of CP-negation; this is certainly plausible for clause-early *mā́*.

[25] See (13) above; see further Haegeman (2000) on focalized negation within the fine structure of the left periphery.

local particles, which freely occur in prohibitives with *mā́*. It is striking, then, that there do not appear to be any examples in the Ṛgveda in which a local particle precedes the negator *mā́*; on the other hand, there are plenty of examples in which *mā́* precedes a local particle. In this way, *mā́* appears to pattern with interrogative pronouns distributionally. And as with interrogative pronouns, I believe that when clause-initial *mā́* is adjacent to a local particle, the former occupies SpecFocP while the latter is not fronted to the left periphery at all. Indeed, the evidence is even stronger for *mā́* than it is for interrogative particles: in every instance in which *mā́* directly precedes a local particle in the Ṛgveda, the local particle directly precedes the verbal stem, as in the following:[26]

(52) ***mā́*** *prá* *gāma* *patháḥ* *vayám*
NEG forth.LP go.AOR.INJ.1PL path.ABL.SG.M WE.NOM.PL
'Let us **not** stray from the path!' (10.57.1a)

I would argue that this is compelling evidence for the fact that both *mā́* and fronted local particles occupy SpecFocP; when they co-occur in the clause, only one of them can occupy that position (and it appears exceptionlessly to be *mā́*).[27] If we follow the analysis suggested for examples (44–46) above, in which the local particle and verbal stem are univerbated here, it remains to be explained where this compound verb is located, especially since this ordering is significantly more common for prohibitives than it is for interrogatives (34 vs. 3 occurrences). One possibility is that these examples exhibit some form of V^0-to-C^0 movement: specifically, given the appearance of the compound verb after focalized *mā́*, V^0-to-Fin^0. This kind of movement is commonly evoked to account for verb-initial imperatives (see, e.g., Han 2001), but such an analysis would face some challenges in Vedic. Crucially, there are many counter-examples in which the verb in a *mā́* clause is not fronted, as

[26]There are 34 instances of this in total. I list them by local particle involved. *áti*: 1.183.4, 2.11.21, 2.15.10, 2.16.98, 2.17.9, 2.18.9, 2.19.9, 2.20.9. *ánu*: 10.19.1. *ápa*: 4.35.1, 6.61.14. *ápi*: 3.33.8. *ábhi*: 10.16.1. *áva*: 5.53.8. *ní*: 10.18.10, 10.128.4. *nís*: 6.35.5. *párā*: 1.104.8, 3.53.3, 7.46.4, 8.71.7, 10.128.8. *pári*: 1.183.4. *prá*: 10.57.1, 10.95.15. *ví*: 5.31.2, 5.36.4, 5.75.8, 5.78.1, 6.44.1, 8.79.8, 10.16.9, 10.54.5, 10.95.43.

[27]As noted by an anonymous reviewer, this model predicts that the same distribution should hold for negative proposing of the more common negator *ná*, found in other moods; these predictions are borne out. The picture is complicated slightly by the use of *ná* to introduce comparisons (translatable as 'like'), but when acting as a negator, left-peripheral *ná* is never preceded by local particles. And like *mā́*, when left-peripheral *ná* directly precedes a local particle, the local particle also directly precedes the verbal stem. Additionally, although clause-initial *ná* can precede relative pronouns, it never precedes interrogative pronouns; all this suggests that *ná* may also be focalized and occupy SpecFocP.

in (18) above. Nor can these word orders be linked to the presence or absence of a local particle, since verb-final *mā́* clauses are also attested with compound verbs, as in (53):

(53) *mā́* *=naḥ* *priyā́* *bhójanāni* ***prá***
NEG =us beloved.ACC.PL.N enjoyed-thing.ACC.PL.N forth.LP
moṣīḥ
steal.AOR.INJ.2SG
'Do not **steal away** the things we love and enjoy!' (1.104.8b)

Examples like this suggest that Vedic patterns with 'Wackernagel languages' such as Ancient Greek and Serbo-Croatian in the framework of Rivero & Terzi (1995). Under their analysis, C^0 in these languages cannot bear a strong imperative feature and so cannot attract V^0. If this is true for Vedic, it would support an alternative analysis in which the verb remains within IP, and so is only incidentally adjacent to the left periphery. As with (44–46) above, the general brevity in these examples and the variability in verb position leaves several possibilities open, and further study should seek to disambiguate them. However, the total absence of the putative order *ˣmā́ LP ... V* is clear, and I take it as strong evidence in favor of an analysis in which *mā́* and fronted local particles target the same left-peripheral position.

If we accept the hypothesis that local particles occupy SpecFocP, we get another ordering constraint for free: local particles can precede relative pronouns, which move to the **lower** SpecTopP. This is not such a departure from Hale's hypothesis that they occupy SpecCP, i.e. somewhere lower than the topmost TopP. The central difference is that the lower TopP is also below FocP, yielding the orderings with local particles above. That the relative pronoun should move to the lower SpecTopP is also supported by the arguments from Bianchi (1999, 2000), discussed in §2.1.

An anonymous reviewer raises the possibility that, given their general adverbial nature, local particles may not occupy SpecFocP, but an altogether different projection. In cartographic work subsequent to Rizzi (1997), such as Rizzi (2004) and Rizzi & Bocci (2017), certain additions are made to the basic model from Rizzi (1997) in (8) above. These include an Int(errogative)P and a Mod(ifier)P. They are positioned as follows (Rizzi & Bocci 2017: 8):

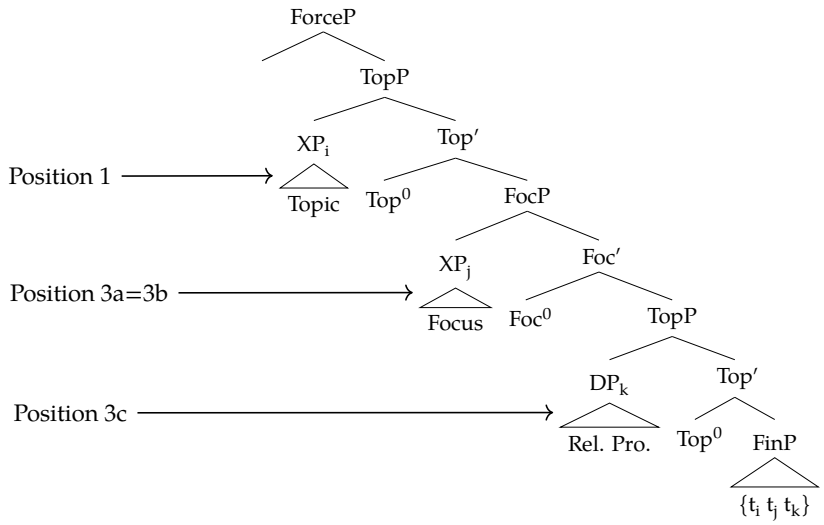
(54) [Force [Top* [Int [Top* [Foc [Top* [Mod [Top* [Fin [IP...]]]]]]]]]]

Adverbs are hypothesized to move to SpecModP in this model. In principle, this could work as a landing site for local particles in Vedic; if relative pronouns continue to target the lowest SpecTopP, local particles will still precede

them. If *mā́* is in SpecFocP, on the other hand, local particles are predicted to follow it, exactly as witnessed in (52). However, two patterns already discussed would remain to be accounted for. First, this model makes no predictions as to the lack of co-occurence between fronted local particles and interrogatives as discussed above. Second, we would have to account for the fact that in *mā́* clauses where a local particle supposedly occupies SpecModP, the verb must immediately follow it. In other words, if we promote local particles in *mā́* clauses to a left-peripheral position, the verb would also have to move to left-peripheral position; once again, this may lead us to suggest some form of V^0-to-Fin^0 movement, for which I have suggested Vedic lacks clear-cut evidence. For this reason, I believe SpecModP does not to play a role here, and SpecFocP remains the strongest candidate for fronted local particles. This of course, implies that fronted local particles are focalized—a question I return to in §5 below.

With the addition of interrogative and relative pronouns, local particles and *mā́*, the basic shape of the Vedic left periphery is therefore as follows:

(55)



The addition of SpecFocP to this model, and specifically the location of interrogative pronouns and local particles within it, represents a major revision both theoretically and empirically to the models proposed by either Hale (1996) or Lowe (2014). It has the advantage over the former that it does not incorrectly predict fronted local particles should precede interrogative pronouns; it also incorporates the relevant theoretical notion that relative and interrogative pronouns should not be treated singularly as *wh*-words undergoing *wh*-movement in Vedic, but distinct functional items that target distinct

left-peripheral positions. It has the advantage over Lowe's (2014) proposal that it eliminates optionality in the feature specifications of the relevant functional items as far as possible; they either target specifier positions within the left periphery or a head position (i.e., C^0), but not both. Moreover, neither Hale's model nor Lowe's model accounts for the apparent ungrammaticality of the fronting of the local particle in *mā́* clauses (**mā́ LP ... V*).

I would argue therefore that the distributional facts of the Vedic left periphery necessitate adopting a split-CP model of the left periphery with at least three distinct specifier positions: a higher TopP, a FocP, and a lower TopP. With this distinction established, we may now revisit the distribution of clitics.

4.2 Towards a consensus on Wackernagel's Law

As the title of this section suggests, the position of clitics within Vedic has emerged as a point of agreement across a variety of different accounts of the initial string (see §3 above). Most relevantly, the model proposed by Hale (1996) is on the whole accepted by Lowe (2014), the only major point of difference being that the latter expands the set of lexical items that may be implicated in clisis. Despite my departures from both in accounting for pragmatic fronting to the left periphery, I likewise see no need to revise the basic mechanisms that account for clisis in Vedic; all that is necessary is to contextualize them within the split-CP model I have advanced so far.

There is little to say about Position 2 (WL2, conjunction) clitics, which rigidly follow the first prosodic word of the clause. I concur with previous authors in assuming they are base-generated to the left of the main clause, and are moved rightward behind the first ω by some prosodic mechanism. For the purposes of this article, I take no strong position as to whether we think of this as PI à la Halpern, or something else, such as optimality constraints (see, e.g., Lowe 2011); nonetheless I will continue to use PI as a shorthand for whatever PF process is responsible for the surface order.

Of more interest are the Position 4 (WL1, pronoun) clitics. Following Hale (1996) and Lowe (2014), I believe these target a functional left-peripheral head. On the rare occasions when the left periphery is entirely inactive, we may indeed model the left periphery with a unitary CP. In such cases, we may hypothesize that WL1 raise to C^0, and are then pushed back behind the first prosodic word in PF. A minor, though not entirely trivial distinction is to be made when the Topic-Focus complex is active. Here there is no unitary C^0 to speak of but a whole host of functional left-peripheral heads: $Force^0$, Top^0, Foc^0 and Fin^0. Given how low in the structure WL1 seem to appear, I believe they target $\mathbf{Fin^0}$. In descriptive terms, this is only a minor amend-

ment to the Hale/Lowe model because it is primarily a theoretical distinction arising from my adoption of a cartographic analysis of the left periphery; its main prediction is simply that WL1 will always occur last within the left periphery. This explains why in interrogative clauses WL1 follow interrogative pronouns, and in relative clauses, they follow relative pronouns, regardless of whether the higher SpecTopP is filled.

In sum: WL2 are base-generated clause-externally and moved at PF; WL1 target Fin^0, moved at PF only if the left periphery is empty. That these basic mechanisms have been maintained across a variety of approaches to the Vedic left periphery is a testament to their validity. Pronoun clitics may be taken reliably to act as a yardstick for the demarcation of the left periphery, which informs the rest of the model.

4.3 Clausal adverbial clitics: hí, nú and sú

Clausal adverbial clitics have been largely absent from the examples I have discussed so far. As I mentioned in §2.2, these have a distribution which is almost identical to WL1; the main difference is that when they co-occur with WL1, they precede them as in (23), repeated as (56) for convenience.

(56) *vidmā́* ***=hí*** ***=tvā***$_{WL1}$ *vṛ́ṣantamam*
know.PRS.1PL =for =you.ACC.SG most-bullish.ACC.SG.M
vā́jeṣu *havanaśrútam*
battle.LOC.PL.M invocation-hearer.ACC.SG.M
'For we know you as the best of bulls, the one who hears our invocations in battles.' (1.10.10ab)

One way of dealing with their distribution is to treat them together with WL1 as somehow targeting Fin^0. When they co-occur with WL1, we could use some form of prosodic mechanism to account for the internal ordering of the clitic cluster, perhaps taking into account the fact that they are accented while WL1 are not. However, as I suggested before concerning Lowe's (2014) argument that local particles also (optionally) follow the same syntactic distribution as WL1, I am skeptical that we can unite the syntactic motivations for the movement of pronoun clitics with other items that are of an entirely different syntactic category. Accordingly, it is worth considering what the syntactic function of these adverbial particles is when modeling their position within the left periphery.

In the case of *sú* ('well') and *nú* ('now'), we have elements that are most meaningfully described as adverbial. Like their translational equivalents, they

may be semantically bleached, more like discourse particles than lexical adverbs, and with no noticeable subordinating function; in principle then, they could be generated somewhere within IP, and moved to the left periphery in one way or another. *hí*, on the other hand, is more complex: it clearly does have a subordinating function, witnessed not just in its interpretation but also in the fact that verbs in *hí* clauses are regularly accented even when non-initial:[28]

(57) *agníḥ* ***=hí*** *devā́n* *amṛ́taḥ*
Agni.NOM.SG.M =for god.ACC.PL.M immortal.NOM.SG.M
duvasyáti
reward.PRS.3SG
'For immortal Agni rewards the gods.' (3.3.1c)

This may be taken to suggest that it does not belong within IP, but is base-generated within the CP layer itself.

This argument is advanced for *hí* by Hale (2017).[29] Hale (2017) argues that left-peripheral *hí* 'occupies, at the end of the syntactic computation...C'. His phrasing implies it may be moved there, but given its subordinating function, I think it is reasonable to treat it as a base-generated complementizer. Hale's (2017) argument is then that *hí* must be properly hosted 'within its domain', which he apparently takes to be within the CP, i.e. excluding any topicalized elements. What that effectively means is that *hí* will surface to the right of the first prosodic word within IP. Hale (2017: 305–6) illustrates this with the following example (translation his):

(58) *índraḥ* *vidvā́n* *ánu* ***=hí*** *=tvā*
Indra.NOM.SG.M knowing.NOM.SG.M along.LP =for =you.ACC.SG
cacákṣa
observe.PRF.3SG
'Because the knowing Indra has kept you in his sights...' (5.2.8c)

He takes the underlying structure of the clause to be the following, reproduced from Hale (2017: 306):[30]

[28] Example from Hale (1987: 89). Main clause verbs are regularly unaccented in Vedic except when they occur in initial position; they are regularly accented in subordinate clauses (see in detail Klein 1992).

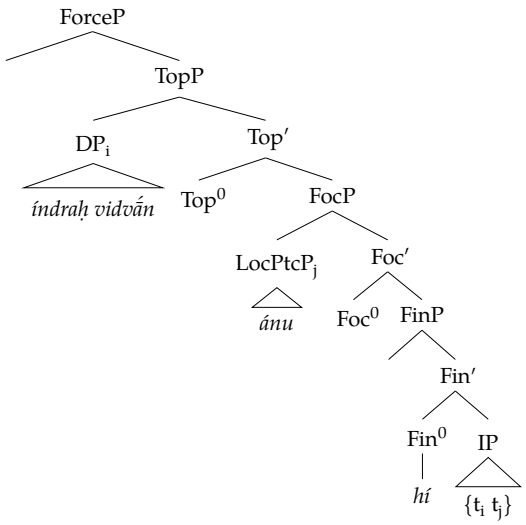
[29] The author does not treat the rest of the initial string in much detail in Hale (2017), and certain aspects of the earlier model, especially concerning the position of local particles, seem to be abandoned.

[30] For reasons that are not discussed in Hale (2017), the author assumes that enclitic *tvā* has not moved to C^0 as part of Wackernagel's Law but has remained *in situ* in this example.

(59) [$_{\text{Top}}$ índraḥ vidvā́n] [$_{\text{CP}}$ hí [ánu tvā cacákṣa]]

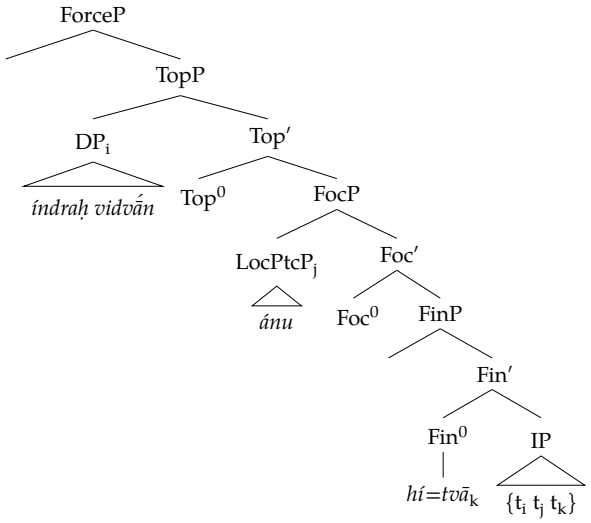
He then argues that *hí* does not have a suitable prosodic host within its domain, and so moves behind *ánu* at PF, yielding the attested ordering. It is unclear to me what Hale (2017) thinks the syntactic status of the local particle *ánu* is here, but his analysis implies it is not in the left periphery, *contra* Hale (1996). However, following the model I have pursued so far, in which the local particle occupies SpecFocP, no prosodic movement is required: *hí* can be base-generated in Fin^0, and it will occur precisely after the local particle here:

(60)



Prosody is also unnecessary in dealing with the position of *tvā*, which moves to Fin^0 in the usual way:

(61)



Indeed, modeling subordinating *hí* as base-generated in Fin^0 predicts, correctly and entirely within the narrow syntax, that it will precede WL1 clitics, since they adjoin to Fin^0 but do not overtake it. Thus a model in which *hí* is base-generated in Fin^0 accounts for both its syntactic function (viz. subordination) and its position in the left periphery, lower than everything else but still preceding WL1.

Of course, some sort of prosodic deficiency is still necessary to account for the non-occurence of *hí* in initial position. We may hypothesize that in a clause with an empty left periphery, *hí* is base-generated in Fin^0/C^0 and then pushed behind the first prosodic word; as with WL1 clitics, therefore, PI acts as a 'last resort' mechanism to prevent the occurence of *hí* in clause-initial position. As stated in §2.1, since I do not take the lack of a pitch accent to be a necessary criterion for prosodic deficiency, the fact that *hí* is accented does not prevent its undergoing PI.

What of *sú* and *nú*? Their syntactic distribution within the left periphery is identical to that of *hí*, following everything else except WL1. In addition to this, no member of the trio *sú*, *nú* and *hí* ever co-occurs with another; this may also be taken as evidence that they occupy the same position. It is true that they appear to lack a complementizer-like function akin to that of *hí*; on the other hand, their association with main clauses in contrast to the association of *hí* with subordinate clauses may reflect their syntactic status. Since Vedic seems to exhibit a split-CP of the same basic shape in both main clauses and subordinate clauses (given the patterns of the initial string discussed in §3 above), it may be possible to treat *sú* and *nú* in a meaningful sense as syntactic counterparts to *hí*: likewise Fin^0-elements, but occurring in main clauses

rather than subordinate clauses.

In the absence of any evidence to the contrary, therefore, I will model each of the clausal adverbial particles as base-generated in Fin^0. The case is most compelling for *hí*, but it I believe is certainly plausible for *sú* and *nú*.

4.4 Fronted Demonstratives

I turn now to fronted demonstratives. It is worth beginning with the disclaimer that, as with relative and interrogative pronouns, the most common position for fronted demonstratives is absolutely clause-initial. This would suggest at face value that they belong somewhere in the left periphery; this could well be SpecFocP or SpecTopP. Looking at demonstratives in correlative clauses specifically, Hock (1989) includes this position as part of the 'mirroring' effect between the position of the relative pronoun in the relative clause and the correlative demonstrative in the main clause, with them both occurring in Position 3 in the template. Lowe (2014) too argues that relative pronouns and fronted demonstratives occupy analogous positions within the left periphery of their respective clauses: SpecCP if they are clause-initial, or C^0 if they are enclitic (see §3.2).

Yet both Hock (1996) and Hale (1996) posit an additional position for fronted demonstratives that is right at the end of the initial string, in Position 5. These are sometimes referred to as 'late demonstratives', since they follow WL1 pronouns. One such example is the following (Hale 1996: 184, translation his):

(62) *prá* *=vaḥ* ***sá*** *dhītáye*
forth.LP =you.GEN.PL DEM.NOM.SG.M thinking.DAT.SG.N
naśat
reach.IMPF.INJ.3SG
'**This** reaches forth (=comes) to your thinking.' (1.41.5c)

Hock (1989: 115), on the other hand, notes that the order in (62) is regular in Vedic **prose**, but claims that 'the earlier, Rig-Vedic language differs by more commonly placing such pronouns in position 3', i.e., preceding WL1. This is attested in examples such as the following:

(63) *á́* ***tát*** *=te* *dasra*
toward.LP DEM.ACC.SG.N =you.GEN.SG wondrous.VOC.SG.M
mantumaḥ *pū́ṣan* *ávas* *vṛṇīmahe*
wise.VOC.SG.M puṣan.VOC.SG.M help.ACC.SG.N choose.PRS.1PL

yéna *pitŕ̄n* *ácodayaḥ*
REL.INS.SG.M father.ACC.PL.M quicken.IMPF.2SG
'We choose for ourselves **that** support of yours, O wondrous and wise Puṣan, by which you quickened our fathers' (1.42.5)

If the ordering in (63) with demonstratives in Position 3 (i.e., before WL1), is the norm for the Ṛgveda, we may be able to do away with Position 5 altogether (a separate explanation is needed for the patterns of Vedic Prose). Hale (1996), however, disagrees with Hock (1989), arguing that:

> [Since] examples of *tá-* and *etá-* in that position [i.e., following WL1 clitics] are frequent, it seems likely that **the distributional contrast observed in Vedic Prose** (*tá-*/*etá-* in first or fifth position...) **should be assumed to underlie the Rigvedic facts as well**. (Hale 1996: 181, emphasis mine)

Following this line of argument, Hale (1996) goes on to suggest that 'late demonstratives' occurring in Position 5 are situated in a FocP below CP (see (28) above). Clitics then raise above this position and adjoin to C^0; this makes a fairly strong prediction that non-initial fronted demonstratives should regularly follow WL1.[31] Empirically, however, this appears to be false for the Ṛgveda: as noted by Lowe (2014: 18), this order is only 'occasional'. I find nine tokens in total in which a fronted demonstrative is directly preceded by WL1 pronoun, including (62),[32] against innumerable examples in which they precede them. The number of instances of Position 5 *sá*/*tá-* drops to just five if we exclude examples in which the demonstrative directly precedes a noun with which it agrees, suggesting the two from a constituent that is not part of the initial string,[33] and one instance of verbatim repetition.[34] In light of these observations, Lowe (2014) demotes Position 5 out of the initial string, treating fronted demonstratives as strictly targeting the same position as relative pronouns (Position 3): recall that when either of these are non-initial, Lowe (2014) treats them as clitics targeting C^0. In cases such as (63), then, the rules for the internal ordering of the clitic cluster are required to sort out the relative ordering of non-initial demonstratives and WL1 clitics.

I am likewise happy to abandon Position 5, since it does not appear to be a *bona fide* part of the initial string, at least for the Ṛgveda; instead, I suggest

[31] I have previously (Ram-Prasad 2022) advanced a model in which WL1 clitics target a functional head higher than Fin^0, which likewise made this prediction.

[32] The others are at 1.11.6; 1.11;7; 1.36.16; 6.39.1; 7.57.4; 7.89.5; 8.21.8; 8.21.10.

[33] As suggested by Lowe (2014: 18, n.21) and an anonymous reviewer.

[34] The clause *vidúḥ =te tásya* 'They know these (acts) of yours' occurs at both 1.11.6 and 1.11.7.

that the unmarked order is one in which demonstratives appear in Position 3d, i.e. preceding WL1 clitics. However, for reasons discussed in §3.2 above, I do not think optional enclisis is an optimal solution to the problem; it seems unappealing to have two entirely different mechanisms to sort out the ordering of demonstrative pronouns and WL1 clitics, one for initial demonstratives (fronted to a specifier position, with WL1 in C^0) and one for non-initial demonstratives (internal ordering of the clitic cluster).

I would argue that, as with relative pronouns, whether they are non-initial or not, they are always full lexical words fronted to a specifier position in the left periphery. When they are clause-initial, as they usually are, they could in theory be in SpecTopP or SpecFocP, with correspondingly different interpretations. Given that they pattern with relative pronouns when it comes to co-occurence with local particles, however, it is clear that they cannot always be in SpecFocP. And given that they follow fronted local particles, it is tempting to argue that they really do occupy the same position as relative pronouns, viz. the lower SpecTopP. However, I would argue that we have two reasons to think this is a position that is still lower than the lowest SpecTopP: SpecFinP.

The first piece of evidence is the fact that when relative pronouns and demonstrative pronouns co-occur, with the latter being fronted from within the relative clause itself (as opposed to an external head that plays a syntactic role in the main clause), the demonstrative follows the relative, as in the following:

(64) *yáḥ* *tát* *ná* *véda* *kím*
REL.NOM.SG.M DEM.ACC.SG.N NEG know.PRF.3SG INT.ACC.SG.N
ṛcā́ *kariṣyati*
sacred-verse.INS.SG.F do.FUT.3SG
'The one who does not know this, what will he do with his sacred verse?' (1.164.39c)

If relative and demonstrative pronouns both occupy SpecTopP—which is theoretically plausible since TopP is recursive—we should expect to see at least some instances of the inverse ordering, of the form ˣ*tát yáḥ ná véda*, where a demonstrative is fronted from within the relative clause and precedes the relative pronoun. I find no such examples in the corpus, which to me suggests we have reason to believe fronted demonstratives are lower in the left periphery than fronted relative pronouns.

Tackling the question from a different perspective, we may refer back to the instances in which a non-initial demonstrative undergoes word-internal sandhi effects in the form of retroflexion (see (39–40) above). I argued against this being due to their status as enclitics; their location in SpecFinP, however,

may provide an alternative explanation. This would hold if we argue that *sá-/tá-* may function as a **weak pronoun** in the sense of Cardinaletti & Starke (1999). These authors propose a tripartite system of pronoun classification summarized as follows:

Type	Morph. reduction	Occupy SpecFP	Can be coordinated	Specified for range	Phon. reduct.	Bears accent	X^0
Strong	1	+	+	+	-	+	-
Weak	2	+	-	-	+	+	-
Clitic	3	-	-	-	+	-	+

Table 3 The Tripartite Pronoun System (adapted from Cardinaletti & Starke 1999: 176).

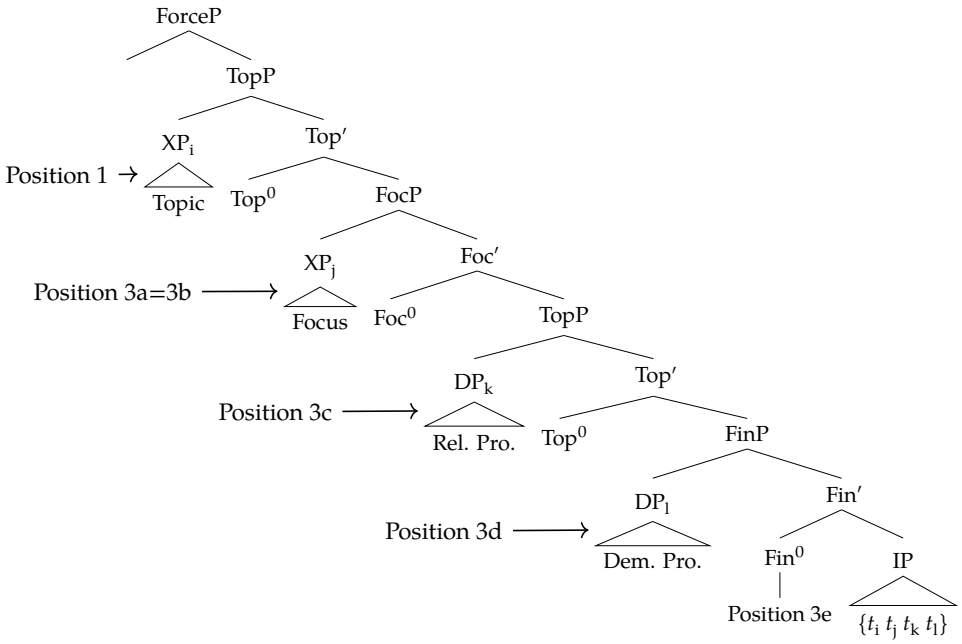
Not every feature of Cardinaletti & Starke's (1999) generalizations can be applied to the situation in Vedic. For example, in terms of morphology, the authors suggest that where there are distinct forms of strong and weak pronouns, the latter will systematically be more morphologically reduced than the former; clitic pronouns will be more reduced again (hence the ranking 1-2-3). In Vedic, however, as in many other languages, there does not appear to be a morphological distinction between strong and weak pronouns. Accordingly, I will focus on the last three features listed in the table: phonological reduction, accent, and X^0 status. For these features, the tripartite system captures the distinction almost perfectly for Vedic. Clitic pronouns (WL1) are phonologically reduced, unaccented, and adjoin to an X^0. These features differentiate them categorically from the strong forms, e.g. *asmā́n* vs. *=naḥ* ('us.ACC'). On the other hand, demonstrative *sá-/tá-* appears on several accounts to pattern with weak pronouns. A striking example of this is that according to Cardinaletti & Starke (1999: 173), weak pronouns may be subject to phonological reduction as a result of prosodic restructuring (i.e., sandhi phenomena), but still bear a lexical accent, unlike clitic pronouns. This provides an alternative explanation for the retroflexion of non-initial *sá-/tá-* to that given by Lowe (2014) which does not rely on any kind of optional enclisis. Finally, from a syntactic perspective, while clitic pronouns form a clitic chain by attaching to a functional head (Fin^0 in the case of WL1), weak pronouns occupy specifier positions; as noted by Roberts (2021), a cross-linguistically common position for weak pronouns is indeed SpecFinP.

In sum: clause-initial demonstratives may in principle be fronted to any appropriate specifier position in the left periphery, according to the relevant pragmatic context. In instances where they are non-initial but still precede WL1 clitics, it is likely that they occupy SpecFinP. In this case, they can be reasonably understood as weak pronouns, representing a medium between

full and enclitic pronouns. Finally, if Position 5 is to be accounted for in this model, it must be within IP; this falls beyond the scope of this article and I do not pursue it further.

Incorporating this observation into the model established for other elements of the left periphery, I may now provide the full structure:

(65)



$$\text{Wackernagel's Law} = \begin{cases} \text{Position 2} & \text{After first prosodic word (PI)} \\ \text{Position 4} & \text{Target Fin}^0 \end{cases}$$

In the final section, I summarize my findings and discuss some repercussions for our understanding of the left periphery in Vedic and ancient Indo-Europen languages more generally.

5 Conclusions and Outlook

In this article, I have offered a syntactic analysis of the left periphery (i.e., the initial string) of Vedic Sanskrit. My proposal accounts for the position of both clitic and non-clitics elements in the left periphery. My hypotheses can be summarized as follows:

(a) Vedic Sanskrit had distinct TopP and FocP projections in the left periphery.

(b) Interrogative pronouns, fronted local particles and the negator *mā́* occupy SpecFocP, and so do not co-occur in the left periphery.

(c) Relative pronouns move to the lower SpecTopP, such that they may be preceded by focalized elements such as local particles.

(d) Fronted demonstrative pronouns may occupy SpecTopP or SpecFocP according to their pragmatic function; they may also occupy SpecFinP and act as weak pronouns.

(e) Conjunction clitics (WL2) are base-generated to the left of the main clause and are moved behind the first prosodic word at PF.

(f) Pronoun clitics (WL1) are base-generated within VP and raise to a left-peripheral functional head; this may be modelled as C^0 when the Topic-Focus complex is inactive, or Fin^0 when it is active.

(g) Adverbial clausal clitics (*hí, sú, nú*) are base-generated in Fin^0, and undergo prosodic inversion if necessary to avoid clause-initial position.

The latter three points together act as a syntacto-prosodic account of Wackernagel's Law in Vedic. They are, generally speaking, in line with other syntax-dominant approaches to the law in this language, integrated into a cartographic model of the left periphery. Other aspects of the model require more attention.

The existence of a FocP as distinct from TopP has not been pursued in detail in any previous model of the Vedic left periphery. I have illustrated its existence with two functional items that are highly likely to be focalized: the interrogative pronoun *ká-* and the negator *mā́*. Further studies may seek to identify other functional elements that regularly occupy SpecFocP.

More contentious than interrogatives and negators is the location of local particles within SpecFocP. The distributional evidence that local particles occupy SpecFocP may inform our interpretation of the phenomenon commonly referred to as *tmesis*. There is a substantial literature on the nature of local particles that lies beyond the scope of this article (see n.4 above). In short, while local particles often act as verbal prefixes and are fully grammaticalized as such in the later stage of the language, in Vedic they exhibit a greater degree of syntactic autonomy. As we have seen, when they are separated from the verbal stem, they have a tendency to appear in the initial string. The differing pragmatic functions of these various orderings is not immediately clear; the syntactic evidence, however, would suggest that fronted local particles are **focalized**. I have emphasized that this article focuses on accounting for

ordering constraints concerning functional items in the left periphery, more than on ascertaining their pragmatic interpretation; as noted in §2.1 above, however, there is certainly scope for pursuing interpretive questions further in light of the methodological advances in the information-structural analysis of ancient languages. As for local particles in Vedic, a possibility suggested by an anonymous reviewer is that the focalization of a local particle could serve to focalize the verb it is associated with; I think this is certainly plausible, and may be tied to the more general capacity for Vedic to front partial constituents, perhaps with the fronted part serving in some way to emphasize the whole constituent. The same anonymous reviewer notes the difficulty this hypothesis faces in light of the fact that the fronting of local particles often does not come with any easily traceable pragmatic effect. Such questions are a pressing subject for further research, with the caveat that the genre of the text may be a confounding factor: as a collection of verse texts, we may reasonably expect the poets to have taken advantage of marked (but grammatical) word orders without a strong commitment to a particular discourse function. This is unhelpful insofar as it obfuscates the pragmatic criteria that underlie movement to the left periphery, but it enhances the value of inviolable ordering and adjacency constraints, such as those I have discussed concerning fronted local particles, when we see them.

In this article, I aim to have provided a syntactic model that accounts for more of the data concerning the Vedic initial string than any previous model in isolation. My account is a syntax-dominant one not simply for ideological reasons, but because previous syntax-dominant accounts—particularly those of Hale (1996) and Lowe (2014)—have come closest to capturing the intricacies of the data accurately. While prosody can account quite straightforwardly for the position of conjunction clitics (WL2), this does not seem to be the case for pronoun clitics (WL1) or clausal adverbial clitics. It could be that there was some special prosodic feature associated with Fin^0 or the boundary of the left periphery more generally motivates the movement WL1 clitics to that position. Without any cogent phonological evidence, however, I believe the null hypothesis is that if their placement can be explained almost entirely through syntactic movement—the very few exceptions to this being those in which a WL1 pronoun splits a constituent—this kind of clisis is primarily a syntactic phenomenon.

This is an article on Vedic Sanskrit, and for reasons of space I have avoided as far as possible drawing any direct comparisons with other ancient Indo-European languages, limiting myself to the implications of any putative enclitic behavior of *yá-*, which I have argued against. Of course, more could be said: the syntax of local particles, relative and interrogative pronouns, con-

junctions and clitics are all points of comparative interest. Indeed, the left periphery more generally is a point of comparative interest, and Vedic is by no means unique in exhibiting some unexpectedly strict patterns of word order here. The model I have advanced in this article can be readily compared to those of other ancient Indo-European languages, and perhaps provide one piece of the puzzle that constitutes the syntax of the left periphery in the proto-language.

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