Blackfoot demonstratives, referentiality, and association with the syntactic spine*

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Abstract: In this article, I examine the syntactic function of demonstratives using evidence from morphological agreement and discourse contexts in Blackfoot to argue for the inclusion of a κ:*referential* syntactic function within a Universal Spine Hypothesis framework (Wiltschko 2014). I argue that the primary function of demonstratives in Blackfoot is to provide referentiality to a syntactic argument, and thus that they associate with the referential layer of the syntactic spine.

Keywords: Blackfoot, Demonstratives, Universal Spine Hypothesis, referentiality, nominal-verbal parallelism

1 Introduction

Blackfoot morphologically encodes referentiality, or rather, a lack of referentiality on nouns as can be seen in example (1) below. In (1a), the noun *aakíikoan* 'woman' contains the non-referential morpheme *-i.* This contrasts with a referential noun in (1b) which has received proximate case in place of the non-referential suffix (see Frantz 2009).[1]

(1) a. nitsíín (*oma) aakíikoani
nit-íín (om-wa) aakíi-koan-i
1.SG-see.AI (DEM$_5$-PROX) woman-DIM-NON^REF.SG
'I saw some girl'

b. nitsínoawa oma aakíikoana
nit-íno-aa-wa om-wa aakíi-koan-wa
1.SG-see.TA-DIR-3.SG DEM$_5$-PROX woman-DIM-PROX
'I saw that girl'

* Unless otherwise noted, all Blackfoot data and translations have been generously provided by my four language consultants, *Piitaikiihtsipiimi, Aistanskiaki, Issapoikoan, kii Ainootaa – nitsíniiyi'taki*. Any errors in transcribing or glossing the data are my own. The author also wishes to thank the participants and organizers of WSCLA 21 for their helpful questions and feedback on this ongoing research. This research was supported by the Social Sciences and Humanities Research Council of Canada.

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[1] The abbreviations used in this paper are: 1, 2, 3 = first, second, and third person; SG = singular; AI = animate intransitive; DEM = demonstrative (subscript numerals are explained in Table 1); PROX = proximate case; DIM = diminutive; NON^REF = non-referential; TA = transitive animate; DIR = direct; IMPF = imperfective; INTNS = intensifier; PRO = attached pronoun; DIM = diminutive; s.t. = something; TI = transitive inanimate; POSS = possessive; VOC = vocative case; PRES = present tense; IND = indicative.

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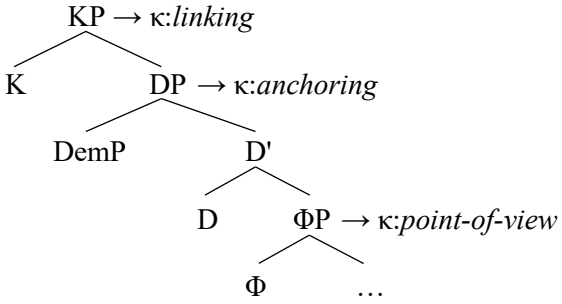
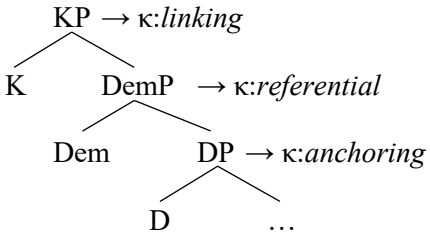
Demonstratives in Blackfoot have previously been analyzed as associating with the κ:*anchoring* level of the syntactic spine (Bliss 2013; Wiltschko 2014) in a Universal Spine Hypothesis (USH) framework (Wiltschko 2014) based on their syntactic function. Bliss (2013) argues that the syntactic function of demonstratives is one which anchors the argument to the utterance, positioning them in Spec, DP:

(2)



In what follows, I use evidence from morphological marking and discourse function to argue that, rather than associating the DemP with Spec, DP, it instead associates with the syntactic spine at the κ:*referential* layer which is argued here to be a functional projection between the κ:*anchoring* and κ:*linking* layers as depicted in (3):

(3)



The addition of a new functional layer to the syntactic spine has important consequences for the analysis of Blackfoot nominal structure. Specifically, with the inclusion of the κ:*referential* function, we are unable to maintain an analysis of Blackfoot nominals which relies on additional word order movement operations in order to achieve the fact that demonstratives obligatorily precede their nominal complements (Bliss 2013; Wiltschko 2014).

(4) a. áóhkiwa oma imitááwa [V > Dem > N]
a-ohki-wa om-wa imitaa-wa
IMPF-bark.AI-PROX DEM_5-PROX dog-PROX
'that dog is barking'

b. óóma áóhkiwa imitááwa [Dem > V > N]
om-wa a-ohki-wa imitaa-wa
DEM_5-PROX IMPF-bark.AI-PROX dog-PROX
'that dog is barking'

c. omi ponokáómitaayi iksíkkaayiyináyi [Dem > N > V]
om-yi ponokaomitaa-yi ik-ikkaayi-yini-ayi
DEM_5-OBV horse-OBV INTNS-canter.AI-OBV-3.SG.PRO
'that horse is naturally swift' (lit: canters)

d.*ponokáómitaayi omi iksíkkaayiyináyi *[N > Dem > V]
(adapted from Bliss 2013:150, 157)

As can be seen in example (4), Blackfoot allows several possible word orders, but it is always the case that the demonstrative precedes the nominal. In previous analyses, this has been achieved by an obligatory word-order movement that raises the demonstrative from Spec, DP to Spec, KP (Bliss 2013). In what follows, I argue that rather than moving to a position above the nominal, the demonstrative is simply associated with a higher functional projection than the nominal and does not move.

In the remainder of this article, I use evidence such as that in (1) above, and discourse functions to argue that the syntactic function of demonstratives associate with is κ:*referential*. The remainder of this article is organized as follows: In section 2 I outline the basics of the Universal Spine Hypothesis (USH), the framework assumed in the present analysis, and define referentiality as it will be used in the present article. In section 3 I provide evidence that the syntactic function of demonstratives in Blackfoot is referentiality. In section 4 I use evidence from parallelism with the CP layer of the verbal domain and relative height compared to vocatives to argue for the position of the κ:*referential* function as between the layers for κ:*linking* and κ:*anchoring*. Section 5 briefly outlines some of the consequences of the present analysis, and section 6 concludes.

2 The Universal Spine Hypothesis

The Universal Spine Hypothesis (USH) is a heuristic for analysing syntactic structure by the function of the elements one is trying to situate in hierarchical structure, originally developed with Blackfoot as one of the test languages (Wiltschko 2014). At the core of this framework are two basic assumptions:

(5) **Core claims of the USH (adapted Wiltschko 2014:24)**
   a. Language-specific categories (*c*) are constructed from a small set of universal categories (κ) and language-specific UoLs (Units of Language)
   b. The set of universal categories κ is hierarchically organized where each layer of κ is defined by a unique function (κ:*linking*, κ:*anchoring*, κ: *point-of-view*, κ:*classification*)

The first core claim of the USH (5a) is that categories are not a homogeneous cross-linguistic universal. Instead, categories are computed through the combination of a language-specific UoL and a particular syntactic function:

(6) $c = \kappa$ + UoL (Wiltschko 2014:24)

The algorithm in (6) entails the prediction that we expect variation in which categories a given language utilizes i.e., the Direct/Inverse system of the Algonquian languages, or how Halkomelem (a Salish language) encodes person features as inflection rather than tense (see Wiltschko 2014 §4.5 for discussion). An example of the algorithm in (6) is provided in (7), detailing how personal pronouns are computed in Blackfoot:

(7) *c*:1.SG.PRO = κ:*anchoring* + UoL (Wiltschko 2014:216)

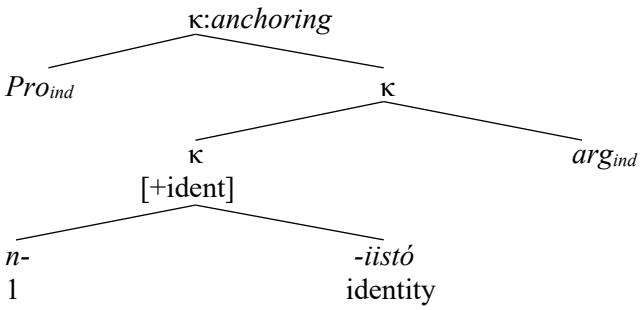
According to the USH, a UoL is composed of a phonological form (π) and a semantic interpretation (Σ), which may also be compositional through feature valuation (f-val) or

morphological valuation (m-val) of a syntactic [ident] feature.[2] This is illustrated in (8) using the same category established for Blackfoot in (7) above:

(8) niistó (Wiltschko 2014:216)
n-iistó
1.SG-self
'myself'
c:1.SG.PRO: ⟨{{π*:n-*,Σ:1} {π*:iistó*,Σ:identity}}, [κ*:anchoring*, m-val:+ident]⟩

In the example in (8), we can see that by combining the first person *n-* with the reflexive identity marker *iistó*, and morphologically valuing the feature of the κ^0 associated with the anchoring function as [+ident], we spellout a first person, singular, reflexive pronoun with the phonological form, *niistó* [ni:stu]. This can be captured hierarchically as in the following tree diagram, adapted for Blackfoot from Wiltschko's (2014:212) syntax of reflexives example from German:

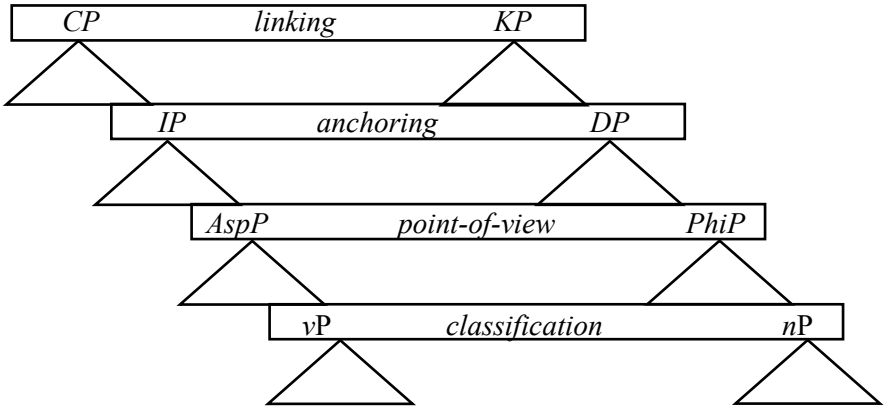
(9)



We decide what portion of the syntactic hierarchy this form belongs to based on the functional head it associates with in either the nominal or verbal domain, which brings us to the second basic assumption of the USH: The syntactic spine universally contains a series of hierarchical functions which are parallel between the nominal and verbal domain. Although syntactic categories, or features which associate with a particular syntactic function, are language-specific, Wiltschko (2014:253) posits a set of common associations with the functions she argues to be part of the spine:

[2] The [±ident] feature is used for the nominal domain, and a [±coin] (coincidence) features is used in the verbal domain in the same way.

(10)



Given the fact that languages are expected to differ from one another in terms of which categories associate with which part of the spine, Wiltschko (2014:93) asserts that the USH is a heuristic which can identify the absolute syntactic position of an element (a UoL) in her *function diagnostic*:

(11) **The function diagnostic** (Wiltschko 2014:93)
The absolute position of a given UoL can be diagnosed by identifying its function, which is independent of its content.

In this article, I argue that the reverse of the function diagnostic is also true for identifying the position of other syntactic functions which may be needed: If the position of a UoL is known, and it is found to associate with a newly posited κ, then the absolute position of that κ can be diagnosed by the position of the UoL relative to its association with other κs within the spine. Using this logic, and the evidence from Blackfoot demonstratives (as well as some cross-linguistic patterning), I argue that the function κ:*referential* exists between the layers for κ:*linking* and κ:*anchoring*. Before proceeding to the evidence for this function from Blackfoot, I will first define syntactic referentiality.

2.1 Referentiality

In what follows, I will assume the definition of referentiality provided Cinque (1990), and adopted by de Cuba & Ürögdi (2009) and de Cuba & MacDonald (2012, 2013):

(12) **Referentiality** (Cinque 1990:16)
The ability to refer to specific members of a set in the mind of the speaker, or pre-established in the discourse.

In much of the previous work on referentiality in the verbal domain, authors have argued that referentiality is a characteristic of the CP layer (Cinque 1990; Szabolcsi 2006; de Cuba 2007; de Cuba & Ürögdi 2009; de Cuba & MacDonald 2012, 2013). Cinque (1990) noted that referential *wh*-phrases were able to escape weak islands, while non-referential ones could not:

(13) a. *How many books are you wondering <whether to write __ next year>?
b. How many books <u>on the list</u> are you wondering <whether to write __ next year>?
(Szabolcsi 2006:496)

Further investigation of what prevents factive verbs from taking embedded polarity answers in Spanish caused de Cuba & MacDonald (2013) (*cf.* de Cuba & Ürögdi 2009) to provide definitions for two left periphery structures, the referential CP, and the non-referential *c*P, only the latter of which, they argue, can take an embedded polarity answer:

(14) a. **Referential CP:** Denotes an accepted (or pre-established) proposition in the existing discourse which has no illocutionary force.
b. **Non-referential *c*P:** Denotes a speech act, which introduces a proposition (or an open question) which is not yet accepted (or pre-established) in the existing discourse

Although the previous work on referentiality in the CP layer of the verbal domain has not been conducted using the USH, it is easy to conceive of an analysis whereby a bare CP (in de Cuba & MacDonald's system) would f-value the head of a κ:*referential* layer as [+coin], providing referentiality to the clause. Conversely, when a *c*P is projected above the CP — stripping it of its referentiality according to de Cuba & MacDonald— the the c^0 would f-value the coincidence feature on the head of the κ:*referential* layer as [–coin] and strip referentiality from that clause.

Given that referentiality associates with one of the highest layers in the verbal domain, the CP, and by assuming the parallel functional spines between the nominal and verbal domains, it is a reasonable hypothesis to state that if demonstratives also associate with a κ:*referential* layer in the nominal domain, they are the nominal parallel of CP, and associate with the same high position.

3 Demonstratives and referentiality

As shown in example (1), repeated as (15) below, Blackfoot morphologically marks non-referential DPs with a final *-i* suffix which is in complementary distribution to arguments containing demonstratives. In fact, it is ungrammatical to have a demonstrative and the non-referential suffix surface in the same argument (as seen in 15a). Further to this point, non-referential DPs cannot be the subjects of a clause (Frantz 2009), and if they are used as the syntactic object, they are invisible to agreement processes with the verb. The sentence in (15a) is an example of what Frantz (2009) calls a paratransitive construction, also frequently called an AI+O construction for the fact that the verb stem, despite taking an object, is intransitive (AI). This is because the syntactic object is non-referential, and therefore invisible to verb agreement processes. As soon as the object is made referential (as in 15b), by the addition of a demonstrative, the DP is able to receive case and becomes visible to the verbal agreement process triggering insertion of a transitive (TA) verb stem:

(15) a. nitsíín (*oma) aakííkoani
nit-íín (om-wa) aakíí-koan-i
1.SG-see.AI (DEM$_5$-PROX) woman-DIM-NON^REF.SG
'I saw some girl'

b. nitsínoawa oma aakííkoana
nit-íno-aa-wa om$_5$-wa aakíí-koan-wa
1.SG-see.TA-DIR-3.SG DEM-PROX woman-DIM-PROX
'I saw that girl'

Bliss (2013) argues that bare nouns in Blackfoot are defective structures, maximally projecting an *n*P for bare singulars or a ΦP in the case of bare plurals. Part of the rationale for Bliss' analysis of these forms as lacking structure follows from her analysis that case is merged in a high functional head, the KP/LinkP, and that bare nominals specifically lack case. This analysis follows from the claim that it is the DP layer which turns a predicate into an argument (Longobardi 2001). However, I suggest that the facts of bare nominals in Blackfoot can be accounted for equally well by assuming a κ:*referential* layer of the universal spine with which demonstratives associate. Under this analysis, the head of the κ:*referential* layer must be valued as [±ident]. Valuing κ:*referential* as [+ident] spells out a demonstrative with the appropriate deictic features (specified for proximity to speaker and addressee), and allows agreement between the verb and the object. Valuing κ:*referential* as [–ident] is done when no demonstrative is associated with the head, and prevents agreement between the verb and the object, causing the object to be morphologically marked as non-referential. To make this argument, I follow recent work on bare nominals in other languages which argues that functional structure is uniform across languages and that required functional structure is always projected (Borer 2003; Kane 2015). Under these analyses, bare nouns still project a DP layer allowing a semantic range assigner to be provided either by a null D^0 or through existential closure (Kane 2015:193; *cf.* Chierchia 1998. See also, Windsor & Lewis this volume for a semantic account of Blackfoot demonstratives and DP structure).

Data such as those in (15) show that demonstratives provide referentiality to an argument, allowing the argument to refer to specific members of a set in the mind of a speaker in accordance with the definition of referentiality provided in (12). The second part of that definition has to do with discourse linking (D-linking). If the syntactic function of demonstratives in Blackfoot is referentiality, we should also be able to see alternations under different referentiality readings provided by the discourse. This prediction is also borne out. The data below in (16) illustrate the same sentence under different referentiality readings: discourse-new, D-linked with an invisible referent, and D-linkined with a proximal referent.

(16) a. nitohpómmaa náápioyii
nit-ohpómma-wa náápioyis-i
1.SG-buy.s.t.AI-PROX house-NON^REF.SG
'I made a house purchase'

[Context: The speaker is calling a friend to inform them of a new purchase, the friend had no previous knowledge of the house in question.]

b. nitohpómmatoohpa omi náápioyisi
nit-ohpómmatoohp-wa om-yi náápioyis-yi
1.SG-buy.s.t.TI-PROX DEM_5-OBV house-OBV
'I bought that house'

[Context: The speaker and a friend are sitting down for coffee, and the speaker reminds the friend that s/he bought the house they had been speaking about previously, but the house in question is in a different town.]

c. nitohpómmatoohpa anno náápioyisi
nit-ohpómmatoohpa-wa anno-yi náápioyis-yi
1.SG-buy.s.t.TI-PROX DEM$_3$-OBV house-OBV
'I bought this house'

[Context: The speaker, located at the new house, calls the friend, who is in another town, to continue discussing the newly purchased house now that s/he is moving in.]

The sentence in (16a) follows the form previously established: When a nominal is non-referential, it is morphologically marked as such and it is not introduced by a demonstrative. This is the situation when an object is discourse-new and has not been pre-established. Once the object has been pre-established, the referent is introduced by a demonstrative because the κ:*referential* head has been valued as [+ident] as in (16b). The demonstrative root selected in (16b) is the most distal, or invisible, demonstrative due to the fact that the referent is not proximal to either the speaker or the addressee. The sentence in (16c) is almost the same as that in (16b), but the location of the speaker has changed, and accordingly, so has the demonstrative root selected to introduce the referent. In (16c), the speaker is physically proximate to the referent, but the addressee is not. According to the system of demonstratives provided by Frantz (see Table 1 below), we might expect the demonstrative used in this situation to be *amo* which is defined as proximity to the speaker but not to the addressee (2017:69). Instead, *anno*, defined as proximity to the speaker and proximity or familiarity to the addressee (*ibid*), is selected. Again, because the real-world referent of *anno náápioyisi* 'this house' has been pre-established in the discourse, the speaker may assume that the addressee is familiar with the referent, and selects the appropriate demonstrative stem for the situation. The interpretations for the various demonstrative stems according to Frantz (2017:69) are represented in Table 1.

Table 1: Blackfoot demonstrative interpretations

Label	Blackfoot form[3]	Interpretation
DEM$_1$	*am*	Proximity and familiarity to the speaker
DEM$_2$	*amo*	Proximity to the speaker but not to the addressee
DEM$_3$	*anno*	Proximity to the speaker and proximity or familiarity to the addressee
DEM$_4$	*ann*	Proximity or familiarity to the addressee, but no proximity to the speaker
DEM$_5$	*om*	Proximity to neither the speaker nor the addressee

Given the interpretations of the various demonstrative roots provided by Frantz, and if we assume that familiarity is synonymous with referential/pre-established, we can understand why the speaker in example (16c) uses *anno* rather than *amo* when the addressee is not physically proximal to the referent in question – because the referent has been pre-established and is therefore familiar to the addressee.

[3] See Bliss (2013) for an alternate analysis of Blackfoot demonstrative forms where it is argued that there are three demonstrative roots which may take *-o* as a restrictive suffix. My consultants judge the possibility of *omo*, DEM$_5$-restricted, as impossible and I take this as evidence of the lack of compositionality of an *-o* suffix. This may, however, merely be a dialectal difference as Bliss (p.c.) informs me that she has elicited this form. The correct analysis of *-o* is inconsequential to the present article as it is the root that is changing in each of the examples.

I take the fact that demonstratives show alternations under different referentiality readings (whether an object is discourse new or D-linked, as well as the fact that referentiality is interchangeable with physical proximity in the Blackfoot demonstrative system) as strong evidence that demonstratives in Blackfoot associate with the syntactic function of referentiality. The next problem to be addressed is where in the syntactic spine κ:*referential* is located.

4 Syntactic height

Wiltschko (2014) provides two diagnostics for syntactic position: absolute height as determined by association with a particular function within the spine, and relative height as determined by comparison to the height of other syntactic elements. Demonstratives can be tested with each of these diagnostics. I have argued here that the demonstrative is associated with the κ:*referential* layer of the syntactic spine, just as the CP is in the verbal domain. In this section I present evidence that the demonstrative is the nominal parallel of CP, establishing the absolute height of the κ:*referential* layer, and evidence from the relative height of demonstratives in Blackfoot (and cross-linguistically) to suggest that that layer exists between the κ:*anchoring* and κ:*linking* levels.

4.1 Nominal – Verbal Parallelism

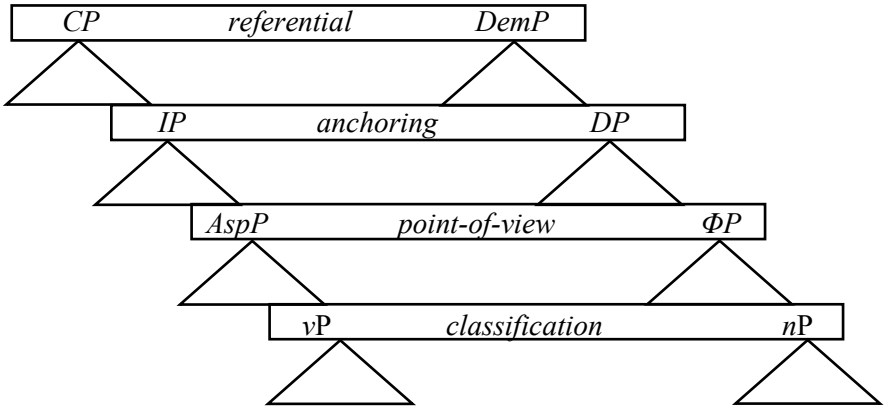
Parallels between the nominal and verbal domains have been well established in the literature (Abney 1987; Siloni 1990; Szabolcsi 1994; Giusti 1996; Lecarme 1996, 1997, 2008; Bennis *et al* 1998; Radford 2000; Bernstein 2001a, b; Ogawa 2001; Witschko 2003, 2014; Aboh 2004; Nordlinger & Sadler 2004; Haegeman 2006; Haegeman & Ürögdi 2010; Kayne 2010; Bliss 2013). This parallelism can be demonstrated by the two sentences in (17) in English:

(17) a. Who said [that Richard$_{agent}$ gave$_{V}$ cake$_{theme}$ to the children$_{goal}$]$_{CP}$ generously?
b. Oh [that Richard's$_{agent}$ gift$_{N}$ of cake$_{theme}$ to the children$_{goal}$]$_{DemP}$ was generous?

For reasons of space, I will assume the analysis of authors such as Cinque (1990), Szabolcsi (2006), Haegeman (2006), de Cuba (2007), de Cuba & Ürögdi (2009), and de Cuba & MacDonald (2012, 2013) is correct and referentiality is a function of the CP layer within the verbal domain. In §3, I gave evidence that demonstratives, at least in Blackfoot, are also associated with the syntactic function of referentiality whereas they showed alternations under different referentiality readings based on discourse context, and are in complementary distribution with the non-referential suffix.

Beyond referentiality, demonstratives have another feature in common with the CP layer: Haegeman (2006) argues that the referential features of the CP layer are best analyzed as speaker deixis. This is a remarkable parallel with the features assumed to be inherent to demonstratives as deictic elements which specify a referent based on locative deixis. Summing all of the evidence, this gives me reason to posit a different parallel structure than that provided by Wiltschko (2014) where she suggested KP and CP were parallels based on the κ:*linking* function. A preliminary version of the new structure that I argue for here is presented in (18) to be revised subsequently:

(18)



I find no evidence to suggest that any of the commonly associated categories below the referential layer should be altered from Wiltschko's original proposal. However, this calls into question the status of the κ:*linking* layer and the KP which associates with it, which I address now.

4.2 Vocative K

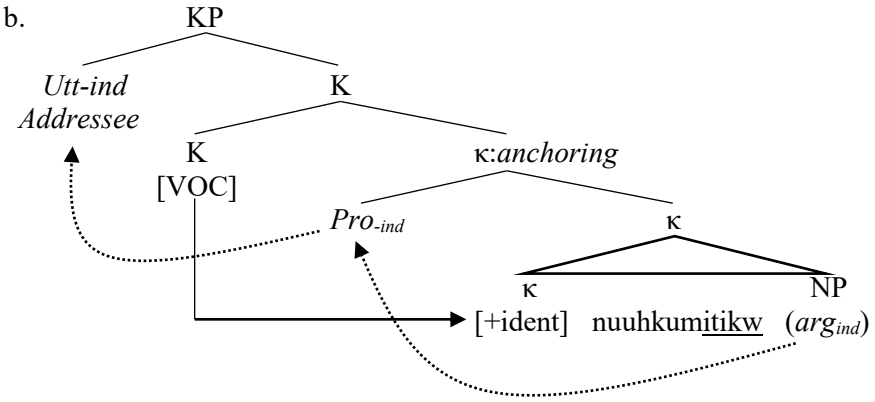
In the English parallelism example provided in (17) above, one might notice that what I suggest is a DemP is introduced by a vocative 'oh' in order to make a demonstrative + proper noun combination licit. Because, at least in English, the vocative head appears to be relatively high compared to demonstratives, this provides a rationale to investigate what nominal elements can appear above the demonstrative in Blackfoot within the nominal spine.

Bliss (2013) and Wiltschko (2014) argue that the projection above the demonstrative in Blackfoot is the KP or LinkP, depending on proximate or obviative case, and that the case feature is merged in the head of K/Link. Due to the assumption of the Mirror Principle (Baker 1985), and the fact that case is instantiated in Blackfoot as a bound suffix, Bliss (2013) and Wiltschko (2014) assume that nominals must raise to the K^0/$Link^0$ to receive case, and then the demonstrative must raise to a higher specifier to preserve the linear order that demonstratives obligatorily precede nominals (see example 4). Further, because Blackfoot lacks additional case markers, we are left with the fact that nothing within the nominal domain precedes demonstratives in that language. Thus, I am forced to look cross-linguistically for evidence of the demonstrative's height relative to KP.

Wiltschko (2014) argues that vocative case is a feature of the K^0 which, in languages like Upper Austrian German, f-values a [+ident] feature on a lower head (D^0), which in turn spells out vocative morphology. This can be seen in (19) where I adapt Wiltschko's (2014:244) example for South East Cree:

(19) a. nuuhkumitikw
n-uuhku-m-itikw
1.SG-grandmother-POSS-VOC.PL
'grandmothers!'

b.



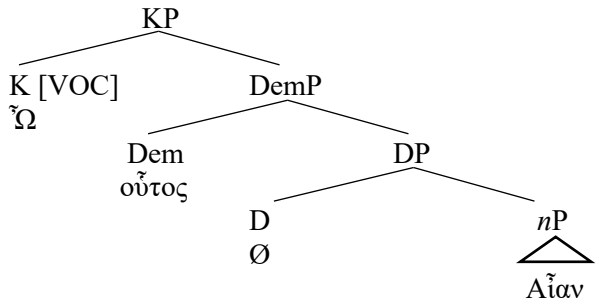
If we start with the assumption that Wiltschko is correct, and vocative case is a feature of the K^0 which can f-value a DP as [+ident], then we predict that other languages may spellout a vocative morpheme in the K^0 which would m-value the argument as vocative. This prediction is borne out in at least two languages in which vocatives and demonstratives can co-occur, Attic Greek, and Irish which are represented in (20) and (21) respectively:

(20) a.

Ὦ	οὗτος,	Αἶαν,	δεύτερόν	σε	προσκαλῶ
O	hout-os	Aian,	deuteron	se	proskal-o
VOC	DEM-VOC	Ajax.VOC	second	2.SG	call-1.SG.PRES.IND

'Oh Ajax, I call you again' [Sophocles Trag., Ajax, Line 89][4]

b.



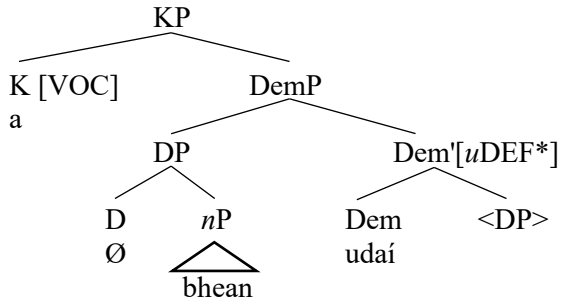
(21) a.

a	bhean	udaí
VOC	woman.VOC	DEM

'Hey you over there (addressed to a woman)' (McCloskey 2004:3)

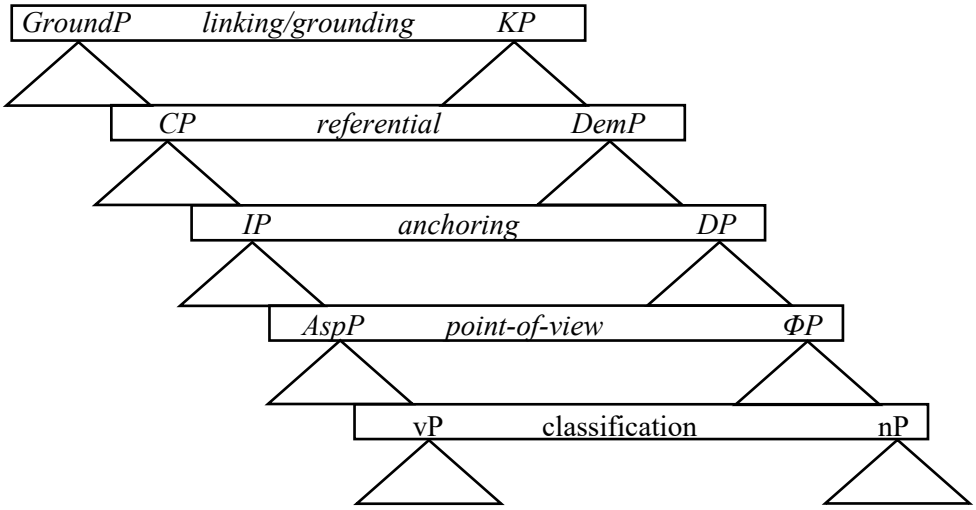
[4] I am thankful to Blake Lewis for providing the translation and glossing for this example.

b.



As can be seen in the two structures above,[5] when these languages spellout a free vocative morpheme, presumably in the K^0 à la Wiltschko (2014), it precedes the demonstrative in the head of DemP. If we assume that the syntactic hierarchy of functions is universal, as captured in the USH, this suggests that the κ:*referential* layer—instantiated above as DemP—is nested between the κ:*linking* (KP) and κ:*anchoring* (DP) layers. The data in (20) and (21) above support the conclusion that the proposed κ:*referential* function does not replace the κ:*linking* function, but is rather inserted into the syntactic spine below it. Because I argue that the verbal parallel of the DemP is most commonly CP, this seemingly leaves KP without a verbal parallel, creating an imbalance in otherwise identical structures. However, this may resolve a similar problem from the verbal domain; Thoma (2014) proposes an additional functional layer of the spine above the CP concerned with κ:*grounding*, a function which, to the best of my knowledge, thus far does not have a nominal parallel. Thus, in lieu of counter evidence, I will suggest that Thoma's GroundP in the verbal domain and the KP of the nominal domain may in fact be parallels, providing the revised structure of the universal spine in (22), revised from (18) above to include KP and GroundP:[6]

(22)



[5] See Windsor (2014, 2016) for an analysis of DP raising in Irish.

[6] Deciding whether the correct function to categorize this layer is κ:*linking* or κ:*grounding* is beyond the scope of the current paper.

The revised universal spine provided in (22) has two main advantages: First, it captures the cross-linguistic evidence that CPs have a syntactic referentiality function which parallels with the function of Blackfoot demonstratives argued for here; and second, it provides a nominal parallel of the previously argued for GroundP in the verbal domain (Thoma 2014; Wiltschko 2014), maintaining the strong parallelism at the core of the USH. A final advantage of this analysis is a consequence for previous studies of Blackfoot demonstratives which I discuss in the next section.

5 Consequences

In previous analyses, Bliss (2013) and Wiltschko (2014) have concluded that, because demonstratives obligatorily precede nominals in Blackfoot, the DemP (which they argue is base associated with Spec, DP) must raise to the higher Spec, KP position to achieve the correct word order. The raising analysis follows from the basic assumption of the Mirror Principle (Baker 1985) as a diagnostic of relative height. Because case in Blackfoot is argued to be a bound suffix located in the K^0/$Link^0$, their assumption forces them to assume that the noun undergoes successive head movement to K^0/$Link^0$ in order to receive case. With the noun in the highest nominal head, the DemP in Spec, DP must undergo word-order movement to the higher specifier. Under the present analysis though, the DemP is not in a specifier position, but rather, part of the syntactic spine associated with a function above the DP. If this analysis is accepted, we must reconsider what movement operations are licit, and/or required within the Blackfoot nominal domain: Either the demonstrative must be part of the successive head movement operation similar to adjectival prefixes and person prefixes, or we must eliminate several of the previously argued for movement operations, such as n^0-to-Φ^0 and Φ^0-to-K^0.

Determining whether successive head movement in the Blackfoot nominal structure is needed to achieve the syntactic facts of the language is beyond the scope of the current paper, but is discussed in Windsor & Lewis (this volume) who argue that the interfaces with PF and LF suggest that a raising analysis is not supported by the phonological and semantic facts. That article supports the present hypothesis that demonstratives are associated with a κ:*referential* layer of the syntactic spine above the κ:*anchoring* (DP) layer.

6 Conclusion

In this short article, I have provided evidence that suggests that the syntactic feature that demonstratives associate with in Blackfoot is referentiality. I used that evidence to support the hypothesis that κ:*referential* is a functional layer of the universal spine in a Universal Spine Hypothesis framework (Wiltschko 2014). This proposal was additionally supported by cross-linguistic evidence to show that in languages which allow the co-occurrence of vocative particles and demonstratives, such as Attic Greek and Irish, the vocative particle precedes the demonstrative and noun suggesting that the DemP is higher than the DP (Irish) or NP (Greek), but lower than the KP. Finally, I suggested that this addition to the syntactic spine allowed the previously established KP in the nominal domain and the GroundP in the verbal domain to be the parallel of one another. However, what the correct function to associate each of these phases with (κ:*linking* or κ:*grounding*) was beyond the scope of the current article and requires further study.

A consequence of the present proposal is that it removes the option of DemP raising from Spec, DP to Spec, KP in order to achieve the correct word order for Blackfoot (Bliss 2013 and Wiltschko 2014), and necessitates a different analysis of Blackfoot nominal structure if accepted. Providing an analysis of Blackfoot nominal structure which does not rely on this, or other, types of movement is also beyond the scope of the present paper, but, see Windsor & Lewis (this

volume) for a proposal on how this might be accomplished, supported by evidence from the interfaces with PF and LF.

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