

COORDINATION DATA AS EVIDENCE OF CONFIGURATIONALITY IN NAKODA

Shannon West

Department of Linguistics
University of Victoria, B.C., Canada

1. INTRODUCTION¹

The most important piece of evidence supporting a configurational analysis of a language is the existence of a VP, in which, the object is sister to the verb, and the subject is structurally higher, c-commanding the object. By definition, a configurational language has a VP, and a non-configurational language does not. Although there is some dispute about whether or not such a parameter even exists (Speas, 1990), it has been stated of the Siouan language Lakhota, that there is no VP in the structure (Van Valin, 1987; Williamson, 1984). In this paper, I show that although closely related to Lakhota, the Assiniboine dialect of Nakoda does, in fact, have evidence of a VP; the subject c-commands the object, but not vice versa. In order to accomplish this goal, I explore coordination data, which illuminates the asymmetries of Nakoda's grammatical relations that lead to the conclusion that there is a VP in the language. In the following sections, I show how coordination reveals the Verb Phrase. There are two main data points: First, argument sharing – only subjects are available to the second clause; Second, scope over conjuncts – auxiliaries, adverbs and post-verbal enclitics all may have scope over two verb phrase conjuncts. Such scope relations suggest that there is a VP, and that elements with scope over two conjuncts are structurally higher.

2. ARGUMENT SHARING

In the English sentence *Mary insulted Bill and sulked* the subject of the second clause must be the same as the subject of the first. Only Mary can be assumed as the subject of the verb *sulked*. The reason for this lies in the configurational structure of the English sentence; the object is not available for the second verb. The subject of the sentence is positioned outside of the VP, further from the verb the object, which is sister to the verb. The object is not in a position that the second verb may use for its subject.

In a non-configurational language, either the subject or the object are expected to be able to be assumed as the subject of the second verb because there is no structural difference between subject and object – they share the same structural relationship to the verb. However, in Nakoda, like English, only the subject may be understood as shared between the two conjuncts.

1) John Mary yu- šikna hīkná šikná- yāga
J. M. CAUS- angry CONJ angry- sit
John insulted Mary and sulked.²

2) Hokšína že [ta- kóna -gu apa] hīkna [čéya]
boy the POSS- friend -det hit CONJ cry
The boy hit his friend and cried.
*The boy hit his friend and he (his friend) cried

3) Wíyā že [wičá že wayága] hīkna [čéya]
woman the man the see CONJ cry
The woman saw the man and cried.
*The woman saw the man and he cried

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² All unreferenced data is from my field notes collected between 1996 and 2003.

- 4) Hokšina [ta- kóna -gu apá] hīkna [čeyí] kta
 boy poss- friend -det hit CONJ cry IRR
 The boy will hit his friend and then will cry.
 *The boy will hit his friend and then he (the friend) will cry

In (1), *Mary* cannot be the subject of the second verb regardless of whether that makes more semantic sense. It would be logical for *Mary* to sulk after being insulted, but that reading is not licit.³ The unacceptability of the object of the first conjunct being assumed as the subject of the second demonstrates an asymmetry of subject and object and this is evidence of a verb phrase, because *Mary* seems to be closer to the verb *yušikna* ‘to insult’ than *John* is. When *yušikna* is conjoined with *sulk*, *Mary* is obligatorily included in the conjunction, while *John* is not. This demonstrates a verb and object being treated as if they were a single constituent, which clearly must be a VP. However, if we were to conclude that (1) was an example of verb coordination, as opposed to verb phrase coordination, there would be no motivation to disallow *Mary* as the subject of the second conjunct.

In (1) *Mary* cannot be understood as the subject of the second conjunct, and furthermore, no other 3rd person may be the subject, even though 3rd person subject marking is always null. Were the second conjunct a clause on its own, any other third person marker would be predicted as a licit subject of the verb ‘sulked’. However, since only *John* can be the subject, the second conjunct cannot be a separate clause, and is here construed as a VP.

Examples (2) – (4) are similar to (1) in that the first conjunct is a transitive verb with an overt object and the second conjunct is an intransitive verb with no specified subject; the only available subject is the one shared with the first conjunct. The subject is structurally higher than the object, because it is the object of the first verb that is included in the conjunction structure, excluding it from being understood as the subject of the second clause. However, the subject of the first clause is not included in the conjunction, so it must be structurally higher than the object.

As stated above, a VP analysis provides an explanation of why the object of the first clause cannot be coindexed with the subject of the second conjunct, but further evidence is available in (5) and (6) where a verb plus object is in both conjuncts.

- 5) Wičá že [bisbiza =bi =na žé=na wa-wiča-yaga] hīkná
 man the mouse =pl =dim the=pl IO⁴-3pO-see CONJ
 [búza =bi=na žé =na wičá-gičo]
 cat =pl=pl the =pl 3pO-call

The man saw the mice and called the cats.
 The man[i] saw the mice and then he[i,*j] called the cats.
 *The man saw the mice and she called the cats

- 6) John [axhúyabi skúya yúda] hīkna [mni ĭbixā óda yatká] ogfhi
 J. bread sweet eat CONJ water boil lots drink can
 John can eat a cake and drink lots of beer.
 *John can eat a cake and she can drink lots of beer

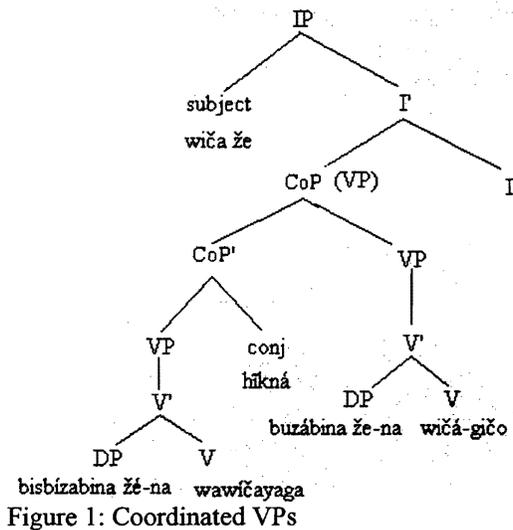
In (5) and (6), the second verb phrase shares a subject with the previous verb, and cannot have a disjoint subject. One might expect that (5) and (6) are examples of conjoined sentences, but such a scenario doesn’t hold because the conjuncts are obligatorily interpreted as sharing a subject. No other subject can be understood as external argument of the second verb. Each conjunct is a verb and object sharing the subject *John*. The only logical

³ To achieve a reading in which *Mary* is made to sulk, the sentence requires an auxiliary verb *kiya*, meaning ‘to cause to be’, to follow the second verb, making the sentence read, “John insulted *Mary*, and made her sulk”.

⁴ The existence of the Indefinite Object marker on this particular verb is a lexicalization. Usually, this prefix indicates that the verb is intransitive, but that there is an indefinite object. However, in the case of the verb ‘to see’, the *wa-* prefix has joined the word, and is used regardless of whether or not there is an overt object.

explanation for this is VP coordination.

Figure 1 is a representation of (5)⁵.



The VPs in Figure 1 both have their own objects, and share the subject *wičá že*. The features of the I node have scope over both conjuncts. The nature of scopal relations over conjuncts and how they pertain to the configurational nature of the sentence is the focus of the sections below.

2.1 Optional agreement morphology on 1st conjunct

Third person agreement in Nakoda is almost always null. The exception is the third person animate plural object agreement prefix *wičá*, which is almost certainly a historically incorporated noun, as it is homophonous with the word for 'man'. When the object of the verb is animate and plural, the verb must prefix *wičá*. In (5), both verbs in the CoP exhibit this object agreement. However, in (7), *wičá* is only marked on the second conjunct⁶.

- 7) *wičá* *že* *buzá=bi žé* =na [wayága] *hīkná* [*wičá-gičó*]
 man the cat =pl the =pl see CONJ 3pO-call
 The man sees the cats and calls them.
 The man sees and calls the cats.

Despite the lack of object agreement morphology on the first verb, the verb is transitive, and the object is *buzábi* 'the cats'. If the second conjunct is a clause, then it would be predicted to be optional, but removing *hīkná wičágičó* from (7) leaves an ungrammatical sentence. This cannot be clause coordination.

Having established that (7) is not an example of clause coordination, another analysis is warranted. I argued that (1) - (6) are examples of VP coordination, but I do not feel this is the correct analysis for (7). Instead, I argue that it is verbs conjoined in (7), not verb phrases. The verbs share an object. If it were VPs that are conjoined, then it would be predicted that each could have its own object, but that is not possible. The second conjunct cannot have a null 3rd person object of its own, because then a licit disjoint reading would be predicted, and such a prediction proves false. Furthermore, the bare verb would have an object with which it shows no agreement.

⁵ CoP is a Conjunction Phrase. Johannessen (1998) noted that conjunctions act as heads, and as such should project to the phrasal level. The CoP may represent the conjunction of any identical categories.

⁶ It is interesting to note that of all person marking, only *wičá* may be optional on one conjunct. All other person marking must be shown on both verb conjuncts. Because this thesis is devoted to sentence structure, not coordination, I cannot delve deeply into the subject.

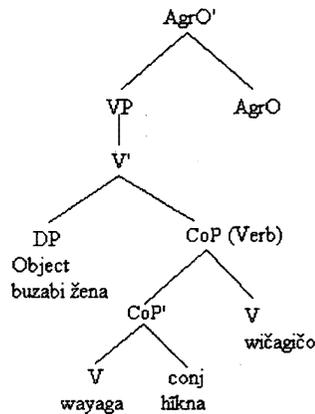


Figure 2: Verb coordination

Figures 1 and 2 represent coordination structures where verb phrases or verbs are conjoined. Note that in both structures the conjunction forms a constituent with the first conjunct, not the second. There are two reasons for this: first, the language is head-final and conjunctions act as functional heads (Johannessen, 1998: Ch3); second, there are numerous examples in the literature of sentences ending in conjunctions. Were the conjunction to be attached to the second conjunct, the conjunction would not be allowed in sentence final position as it would be missing part of the constituent. Examples of conjunction final sentences are provided in (8) and (9).

- 8) žéčēn eyáš wīčápaha éyagu žé=na kówa akné wīča-kiya hīkna
 then well scalps take the=pl also return 3pO-CAUS CONJ
 So then he took those scalps [and] he made them take all of them back.
 (Parks & DeMallie, 2003 - Shields, 81)

- 9) Wāgám gákiya ĩjídā wāgán ĩjídā na kogám hiyú' ĩč'i- ya
 up over there very far up very far over the edge throw REFL CAUS
 néce wīcá-yuza hīk
 this way 3pO-hold CONJ

Over there it was high up, very high up; he threw himself over the edge and he held on to them like this.
 (Parks & DeMallie, 2003 - Walking Chief, 39)

3. SCOPE RELATIONS

Nakoda has a wide variety of post-verbal enclitics.

hta	irrealis
xti	optative
bi	plural – subject (animate, all persons), object (animate, 1 st and 2 nd persons)
s'a	habitual
cha	evidential (no attested examples with coordination)
hā	durative
šī	negative
wo	imperative (male speaking)
hwo	interrogative (male speaking)
he	interrogative (optional) (female speaking)
no	declarative (male speaking)

These enclitics mark aspect, modality, mood, negativity, and plurality. One test for the constituency of the VP is to see if the enclitics have scope over both conjuncts. If they do, that provides evidence that there is a VP. If

there were no VP, and the structure were flat, as previously analysed in the Dakotan languages, the enclitic would not be expected to have scope over all the conjuncts. However, this is not the case; all the enclitics may have scope over two conjuncts.

3.1 Scope of Enclitics

In (10) and (11) below, the aspectual clitic *s'a* means 'habitually' or 'usually' refers to both *špāyābi* and *gaḡéḡebi* (cooked and sewed), not just to 'sewed' (see figure 3). It cannot read 'The women cooked the food and usually sewed the clothes'. In my analysis, *s'a* is the head of the function projection AspP (Aspect Phrase), which has scope over the conjoined VPs. This is further evidence that there is a verb phrase in Nakoda sentences. Similarly, in (11), *s'a* 'usually' refers to both 'put them there' – *ewičaknāgabi* and 'put up/erect' – *ózibabi*. The people usually put up the tent and usually put the body of the favoured child in it.

- 10) Wiyá =bi žé =na [woyúta špāyá =bi] hīkná [hayábi
 woman =pl the=pl food cook =pl CONJ clothes

 gaḡéḡe =bi] s'a
 sew =pl HAB

The women usually cooked the food and sewed the clothes.

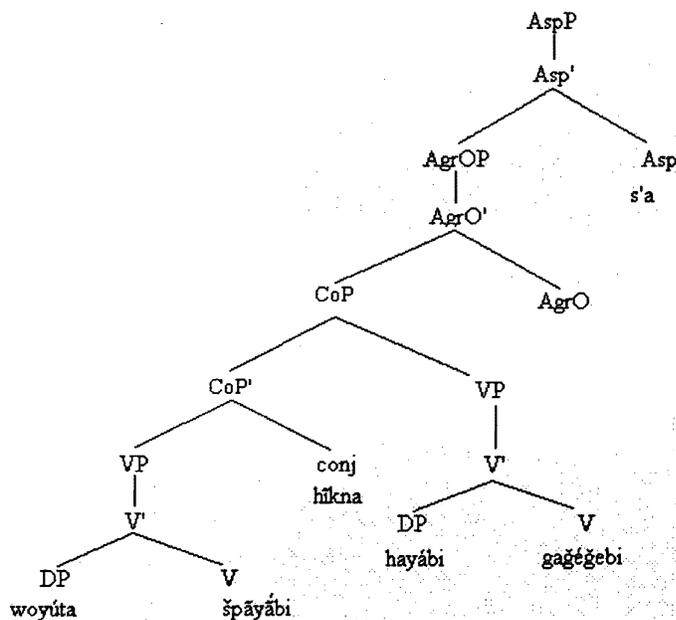


Figure 3: Scope of Aspect over conjoined VPs

- 11) žéčen žéhāč'ehā ikčewīčašta hokšičījabige né- ča
 then at that time Indians favored child this- kind
- t'á=bi hāda, wīyā =bi košká eštá [wí žé-ča wašte
 die=pl when, woman =pl men either tent that-kind good
- né- ča óziba=bi] hīkna [žén é- wiča- knāga =bi]
 this- kind erect=pl CONJ there LOC- 3pO- put =pl
- s'a, hūštá
 HAB it is said

In those days, when a “favored child” died, whether women or young men, the Indians put up a good tent and then they used to put them into it, it is said.

(Parks & DeMallie, 2003 - Shields, 44)

It is not only aspectual enclitics that can have scope over both conjuncts. In (12), the irrealis *hta*, has scope over *yabi* – ‘to go’ and *koyakwičayabi* ‘they made them wear’, despite the fact that it is only marked on the second conjunct – on the verb ‘to go’

- 12) [šūgatāga ne čā- ba- kmikma en koyak- wiča -ya =bi] hīk
 horse this wood- instr- round LOC wear- 3pO -CAUS =pl CONJ
- [žehān doki ya =bi] =kta hāda žehān i- ya- ya- =bi
 then where go =pl =IRR when then LOC- go- REDUP=pl

They made the horses wear the wagons and then they went where they went. (Strict translation - mine)

They harnessed the horses to the wagons. Then wherever they wanted to go, they went. (very loose translation – Schudel’s)

(Schudel, 1997: 196 (16-17))

Other dialects of the Dakotan family also exhibit signs of a verb phrase. From Teton Dakota (Lakhota), a construction similar to (12) has both the irrealis *hta* and the assertative *lo* enclitics with scope over the conjoined VPs:

- 13) Ni -hū okiyaka yó [léchi hēyata tókhī é?-ū-thipi] na [héchiya
 2 -mother tell IMP here away s/where loc-1p-live CONJ there
- wóyute i- wá- gni] kte ló
 food LOC- 1sS- find IRR ASSR

Tell your mother we will go camp in this direction somewhere out in the wilds and I will try to find food there.

(Boas & Deloria, 1941: 5.3)

Kta, the irrealis enclitic, means that the action hasn’t, won’t, might, or will take place. In (13), the young man and his family haven’t gone anywhere yet, but he says ‘we will live away from here’, and that he ‘will find food’. Clearly, the modal affects the reading of both verbs. This is especially clear because there is no past tense, or any tense at all, in the Dakotan languages. If *hta* didn’t have scope over both verbs, the reading ‘Tell your mother that we went to camp somewhere away from here, where I will try to find food’ would be predicted as a valid reading, but it is not. Therefore, *hta* must have scope over both conjuncts, and the conjuncts must be arranged hierarchically. (13) exhibits a parallel between Lakhota and Assiniboine Nakoda; both languages appear to allow the post-verbal enclitics scope over a pair of VPs.

In Assiniboine, the optative enclitic *xiti* is like *hta* – it can occur on both conjuncts, or only on the final conjunct.

- 14) Jim [na- ni- x'ũ] nagú [wa- ni- yagĩ] =kte =xti
 J. pre- 2O- hear CONJ pre- 2O- see =IRR =OPT
- duká gahnáge =šĩ
 but near =NEG

Jim wanted to see and hear you, but he wasn't close (enough).

*Jim heard you and wanted to see you, but he wasn't close (enough)

In (14) *xti* definitely has scope over both conjuncts. There is no system of morphological tense in Nakoda, and there is no marking on the verb to show time in any way, so if *xti* didn't have scope over both the conjuncts together, the disallowed translation could be expected to be valid. However, since *xti* does have scope over both *nanix'ũ* and *waniyaga*⁷, we can tell that these are VPs, not just simple verbs. Similarly, since neither of the actions actually occurred, this is another example in which the irrealis *kta* (ablauted to *kte*) has scope over two conjuncts.

In (15) below, three enclitics *bi*, *kta*, and *šĩ*, all have scope over *tímahen iyáya* 'go inside' and *yúda* 'eat her'.

- 15) ...tiyóba že-ná čā ūs xayá=bi dágu šũktógeja
 door the=pl wood with block=pl any wolf
- šũkjúk'ana eštá [tímahen iyáya] hĩk [yúda] =bi =kte =šĩ
 coyote or inside go CONJ eat =pl -IRR =NEG

... wove the door with sticks, so that no wolves or coyotes would go inside and eat her.
 (Parks & DeMallie, 2003 - Shields, 46)

Clearly, the speaker isn't saying, 'they blocked the door with wood so any wolf or coyote went in there and didn't eat her', which is the expected reading if the enclitics take scope only over the second conjunct. Although the negative enclitic *šĩ* has scope over both verb phrases in (15), it is more common that both verbs have the negative enclitic, as in (16) and (17).

- 16) bisbíza =bi =na žé=na jusína =bi nagú wa- snóya =bi =šĩ
 mouse =pl =DIM the-pl small =pl CONJ IO- know =pl =NEG
- The mice are small and don't know anything.
 colloq: The mice are small and stupid. (lexicalized? – possibly)
 *the mice not small and don't know anything

- 17) ĩgnĩge =šĩ hā nagũ ĩš oyage =šĩ
 pay attention =NEG DUR CONJ also tell =NEG
- He paid no attention and also didn't tell anyone.
 (Drummond, 1976: PP)⁸

The plural marker, *bi*, is almost always marked on both conjuncts, as in (10 -12), but (15) and (18) show that it can appear on the final conjunct only.

⁷ Certain verbs ablaut [a] to [ĩ] with *kta* (Schudel, 1997; Shaw, 1980).

⁸ I've changed the orthography of Drummond's text to match mine for consistency.

- 18) Pté wāži ó =bi čen tanó owáštege é- ča
 buffalo a shoot =pl because meat best that- kind
 maksá hĭk čo'úba hĭk že -n wóda =bi
 cut CONJ cook CONJ the -PROX eat =pl

They shot a buffalo, then cut the best meat, and cooked it, and they ate it there.
 (Parks & DeMallie, 2003 - Shields, 53)

Example (18) illustrates how *bi* can have scope over more than one conjunct. If *bi* didn't affect all three conjuncts, the sentence would have to read 'Because they shot a buffalo, they had the best kind of meat, which he cut, he cooked, and they ate', but this isn't a valid reading for this sentence in this context. There is no 'he' near enough to this sentence to which the verbs could be referring.

The Nakoda enclitics all may take scope over two or more conjuncts. In many cases, both verb conjuncts have enclitics, but it is also a valid construction to have the verbal enclitics only on the final conjunct, even when both verbs are affected. This supports my claim that the Nakoda language is configurational, because it demonstrates a hierarchical arrangement, in which the enclitics have scope over both conjuncts.

3.2 Scope of Auxiliaries

Auxiliary verbs are not commonly used in Nakoda, but what little data I do have with aux verbs in coordination structures further supports my claim that there is a verb phrase in the basic Nakoda sentence structure. Examples (19) and (20) both have the aux verb *ogíhi*, meaning 'to be able to'.

- 19) John wačí nagú nowá ogíhi
 J. dance CONJ sing can
 John can sing and dance.
 *John dances and can sing

The verbs in (19) are plain, uninflected, intransitive verbs. In (20), both verbs are transitive and have overt objects. In both sentences the aux verb has scope over both conjuncts.

- 20) John [aǵúyabi skúya yúda] hĭkna [mni ĭbĭxā óda yatká] ogíhi
 J. bread sweet eat CONJ water boil lots drink can
 John can eat a cake and drink lots of beer.
 *John ate a cake and can drink lots of beer

Sentences (19) and (20) both illustrate that the aux verb *ogíhi* can, and in fact, must, have scope over both of the conjuncts. Because both conjuncts in (20) are verbs plus objects, and the auxiliary has scope over both of them, we know that this is VP coordination, not clause coordination. The scope of the aux verb clearly illuminates the fact that there is a VP in the structure of the Nakoda sentence.

3.3 Scope of Adverbs

If adverbial expressions can also be shown to have scope over conjoined structures, we may derive arguments for a VP constituent from them. Examples like (21) show that, indeed, adverbial expressions, like auxiliaries and verbal enclitics, have scope over both conjuncts. Unlike the aux verbs and enclitics though, adverbs precede the conjuncts.

- 21) Daguškina že waná [máni nagú iʔa]
 baby the now walk CONJ talk
 The baby already walks and talks.

In example (21) both of the conjuncts share the adverb *waná* 'already/now'. It cannot have a reading in

which the adverb only refers to *mani*. This means that the adverb must c-command both verbs, not just the first one, as would be expected if the language were non-configurational. Example (22) below shows the same sentence negated.

- 22) daguškina že naxáx [mani =šĩ nagú iʔe =šĩ]
 baby the not yet walk =NEG CONJ talk =NEG
 The baby doesn't walk or talk yet.

Both the verbs are negated, and are under the scope of the adverb *naxáx*. So like the example in (21), the adverb must not be closer to the first verb than the second. Again, this is contrary to what one would expect of a non-configurational language, and further supports my argument that Nakoda has configurational structures.

Both (21) and (22) are examples of the coordination of two intransitive verbs. (23) is an example where both verbs are transitive and have overt objects. Here too, the adverb preceding the conjuncts has scope over both of the verbs. Clearly, the adverb is outside the conjoined structure in a position where it c-commands each verbal projection.

- 23) Wiyā =bi žé=na nus [woyúta špāyā =bi] hĩkna [hayábi gağége =bi]
 woman =pl the=pl quickly food cook =pl CONJ clothes sew =pl
 The women quickly cooked the food and sewed the clothes.

The sentence in (23) is unambiguous; the adverb *nus* 'quickly' refers to both the actions 'cook' and 'sew'. In order to have scope over only one of the verbs, it has to be before the second conjunct. The position that the adverb occupies in (23) c-commands the entire conjunction structure. If it did not, there would be no structural reason for the unambiguity of the sentence. This further supports my claim that there is a VP in the structure of the Nakoda sentence.

4. CONCLUSION

There are numerous ways to determine the structure of a sentence.⁹ In this paper, I concerned myself only with coordination data and what it could tell us about the structure and constituency of the Nakoda sentence, particularly about the existence of the verb phrase. Due to the overwhelming evidence that a verb and its object can be conjoined, and that clitics, adverbs and auxiliaries can have scope over them, I conclude that Williamson's (1984) and Van Valin's (1987) analysis of the lack of verb phrase in Lakhota cannot be upheld in the closely related Assiniboine Nakoda dialect.

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⁹ I discuss some other methods for determining the existence of configurational structure in West (1999).

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