

## Chapter 16

# Information-Structural Variations in Siouan Languages

Bryan James Gordon

Most previous information-structural analysis on Siouan languages has been fragmentary and based on incommensurable definitions and frameworks. A corpus study drawing on transcribed and recorded utterances from languages in all major branches of Siouan represents a first step towards generalizable and practical knowledge of the morphosyntactic and intonational indices of information-structural categories in Siouan languages. This study focuses on variations previously noted in the literature – intonational marking and demarking, postverbal arguments, reduction of referring expressions, OSV word order and switch-topic markers.

### 1 Introduction

The formal linguistic record offers excellent, comprehensive documentation of morphological, syntactic and phonological structures in Siouan languages. The documentary record of those forms' functions and meanings, however, is hit-and-miss – fragmented, uncomprehensive, and characterized by individual linguists' often incommensurable functional analytical frameworks. Most of us documentary linguists, in fact, have been trained to seek out, describe and privilege descriptions of context-free levels of semantic meaning, and our work has less to say about the meanings that emerge in and create our linguistic and social contexts, which may well be the most important types of meanings to community-based language-reclamation projects who try to adapt and use our work. The work I present here, while not free of its own analytical framework, attempts to rectify this situation by providing a comprehensive albeit partial description



of one area of functional variation in form – information structure – based on a largely qualitative corpus study sampling data from nine Siouan languages.

Most, if not all, previous descriptions of Siouan grammars have had something to say about information structure. Rudin (1998), Koontz (2003) and Eschenberg (2005) provide grammar/discourse analyses of specific features of Umo<sup>n</sup>ho<sup>n</sup> Iye. Graczyk (1991:242-60) and de Reuse (1994) describe the functions of noun incorporation in Apsaalooke and Lak<sup>h</sup>ol'iapi, respectively. Rood offers analyses of presupposition (1977) and variation between definite articles (1985), also in Lak<sup>h</sup>ol'iapi. Kaufman (2008) offers some information-structural analysis of Taneksą. Wolvengrey (1990) describes a switch-topic marker (a “focus” marker in his terms) in Rų'eta. Issues of “oldness”, “emphasis”, “topic” and “focus” surface in various formal grammars including Cumberland's (2005) Nak<sup>h</sup>on'i'a and Boyle's (2007) Hidatsa grammar. Ingham's work (2003) is a notably comprehensive discourse-analytical approach to information-structural variations in Lak<sup>h</sup>ol'iapi. These works, however, generally focus on a single phenomenon, and do not all situate themselves as relevant to a more general field of information-structurally meaningful variation.

Here I adopt a toolkit which allows us to unify, enrich and extend previous findings under a common descriptive metalanguage. My hope is not so much to argue for or against previous analysts' theoretical or methodological goals (or my own, despite the fact that I necessarily highlight my own), but to make possible a more coherent and useful conversation about Siouan information-structural variations for a variety of audiences, including but not limited to theoretical linguists and community-based language-reclamation programs.

## 2 Method

For this study I coded interlinear text from nine languages, and audio data from four, a corpus comprising the majority of text and audio available to me at time of study in 2009. These languages span the four branches of the Siouan language family, including all three subbranches of the large Mississippi Valley Siouan subfamily: Rų'eta (Mandan<sup>1</sup>); Taneksą (Biloxi - Ohio Valley Siouan); Hidatsa and Apsaalooke (Crow - Missouri Valley Siouan); and the Mississippi Valley Siouan languages Nak<sup>h</sup>on'i'a (Assiniboine), Lak<sup>h</sup>ol'iapi (Lakhota), Umo<sup>n</sup>ho<sup>n</sup> Iye and Pa<sup>n</sup>ka

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<sup>1</sup> I use autonyms where available for language names, providing the English colonial name in parentheses only on first mention. It should not be assumed that the autonyms have the same reference as English colonial names. “Mandan”, for example, refers to a group of related varieties of which Rų'eta is only one.

Iye (Omaha and Ponca), Hocak (Winnebago), and Baxoje Ich<sup>ê</sup> and Jiwere Ich<sup>ê</sup> (Ioway and Otoe). Of these I was able to access audio data in Hidatsa, Umo<sup>n</sup>ho<sup>n</sup> Iye, Baxoje Ich<sup>ê</sup> and Hocak. My sample, although representative of genetic diversity within the Siouan family, is not balanced across considerations of genre, time period or other sociolinguistic factors. These sources and the speakers who produced them are listed, with an utterance or page count, under the “Primary Resources” section of the bibliography. I coded each primary resource for formal variation (intonational, segmental and morphosyntactic criteria summarized in §2.2–2.3) and information-structural function (criteria summarized in §2.1). Some of these resources I coded in their entirety; in others (e.g. Dorsey, 1890) I simply sampled a few works, attempting to capture multiple genres. I also drew many examples for this paper from secondary resources, and they are cited as such when they occur.

## 2.1 Information-structural coding procedure

The following is a condensed version of my coding criteria. My criteria are drawn with some modification from the Givenness Hierarchy (Gundel et al., 1993) and Ward & Birner’s (2001) framework, with attention towards commensurability with other frameworks. Because commensurability is one of my objectives, I do not use the terms given, old, topic or focus without specifying modifiers and definitions. I am the sole coder, so I have no intercoder reliability measure for these criteria, but it may be noted that I was applying Gundel’s criteria in the Minnesota Cognitive Status Research Group<sup>2</sup> at the time this study was conceived, and that we achieved 85% intercoder reliability. All errors and misapplications are my own.

- (1) a. Code a form as a LINK if its referent stands in a poset relation with a salient or inferrable alternative. See Ward & Birner (2001: 121) for examples, and cf. the categories of CONTRAST and RESTRICTION in Erteschik-Shir (2007). Forms coded as links are underlined.
- b. Code a form as RECOVERABLE if its referent is an ATTENTION-CENTRAL entity or an INFERRABLE predicate. These categories are operationalized as in Gundel et al. (1993, 2010), but I replace Gundel’s term IN FOCUS with ATTENTION-CENTRAL to avoid confusion with relational focus. A referent is attention-central if its utterer can assume that her audience is consciously attending to it (cf.

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<sup>2</sup> The Minnesota Cognitive Status Research Group was funded by a National Science Foundation grant, *A cross-linguistic study of reference and cognitive status* (BCS0519890, PI Jeanette Gundel).

CONTINUING TOPIC in Erteschik-Shir, 2007, and HIGHLY ACCESSIBLE in Ariel, 1990). A referent is inferrable if the discourse model at time of reference gives ample and recoverable evidence for its validity (if a predicate) or existence (if an entity). Such evidence may be logical, narrative, stereotypic or based on general cultural knowledge. Forms coded as recoverable are *italicized*.

- c. Code a form as a RELATIONAL TOPIC or RELATIONAL FOCUS if its referent stands in a directed relation (i.e., a relationship of semantic scope like quantification, or pragmatic/framing scope in the sense of Goffman, 1974, e.g. stage topics, scene-modifiers, activating topics, extragrammatical mentions, unactivated definites, deixis, “aboutness” and “predication-of”). Relational topics are forms whose referents take scope, and relational foci are forms whose referents are under scope. Forms coded as relational topics are followed by a right angle bracket >, while those coded as relational foci are followed by a left angle bracket <.

Example 2 diagrammatically represents the coding marks as they are presented in all examples taken from primary sources:

(2) link      *recoverable*      relational topic >      relational focus <

## 2.2 Intonation-structural coding procedure

Armik Mirzayan (2011) has developed a ToBI coding protocol (cf. Pierrehumbert, 1980; Beckman & Pierrehumbert, 1986; and Pierrehumbert & Hirschberg, 1990) for Lakħol’iapi, but at the time of this study no such protocol was available, so I developed one myself. This section principally includes the basic description and justification of the protocol I developed; precise coding criteria have been omitted for length considerations and are available on request.

The four sampled languages display the standard array of prosodic phrase levels: the ACCENT PHRASE (AccP), the INTERMEDIATE PHRASE (IntP) and the INTERNATIONAL PHRASE (IP). Accent phrases in all four languages maximally consist of a low-high-low contour in which either the high point or the high-low fall is accorded greatest prosodic prominence. Such contours are represented in ToBI notation as LH\*L, and all four languages have them, although the first L tone in particular is often absent. Intermediate phrases in all four languages consist of one or more accent phrases followed by a phrase accent, either !H or L; and international phrases in all four languages consist of one or more intermediate phrases

followed by a boundary tone, either !H% or L%. The exclamation point before H phrase accents and boundary tones indicates downstep: I found no evidence of upstepped H phrase accents or boundary tones in any of the four languages.

My protocol was designed to cover four languages (Umo<sup>n</sup>ho<sup>n</sup> Iye, Hocak, Baxoje Ich<sup>ê</sup> and Hidatsa) rather than one, and so is shallower and less detailed than Mirzayan's. The simple apparatus sketched here is designed to capture high-level intonational variations across Siouan languages, and should not be taken as evidence that Siouan intonational structures are simple. Besides Mirzayan (ib.) see Larson (2009) on Umo<sup>n</sup>ho<sup>n</sup> Iye for richer descriptions of intonational variation in particular Siouan languages.

## 2.3 Selection of formal variants of interest

In information structure and intonational structure I have begun with high-level, a priori coding categories and attempted to apply them to the entire corpus. In deciding which formal (morphosyntactic and segmental as well as intonational) variations to correlate to information structure, however, I have made no such attempt. Instead, I have specifically looked at some of the formal variations in previous descriptions of Siouan languages: postverbal arguments (§3.2); degrees of reduction of noun phrases or referring expressions, from zero reference to “determiner drop” and noun incorporation (§3.3); OSV word order (§3.5); switch-topic markers (§3.6); and intonational processes of “marking” and “demarking” which surfaced during my ToBI coding (§3.4 and §3.1, respectively).

# 3 Findings

## 3.1 Deaccenting

I use the term DEACCENTING to describe intonational variations in which a given word or string of words may be realized either with or without the H\* pitch-accent head of an AccP. The variant without the pitch accent is the DEACCENTED variant. This term implies that the accented variant is canonical. Bolinger (1986: 100) makes this explicit: “[A] neutral sentence accents all content words, ... and a non-neutral or marked sentence would be one in which one or more words have been deaccented.”

Every audio resource I coded has examples of deaccenting, and all examples of deaccenting signal a recoverable referent. In example 3, Umo<sup>n</sup>ho<sup>n</sup> Iye speaker Clifford Wolfe, Sr., deaccents the strings *k<sup>hi</sup> égithe* “and so it happened that” and

*ahii* “arrived there”. Both are absorbed into the LH\*L contour of the AccP headed by *weáhidexti* “truly far”:

- (3) Shkó<sup>n</sup>-t<sup>h</sup>e waséko<sup>n</sup>, k<sup>h</sup>i égithe weáhidexti ahí.<sup>3</sup>  
 shkó<sup>n</sup>-t<sup>h</sup>e > waséko<sup>n</sup> < k<sup>h</sup>i égithe weáhidexti  
 [L H\* L] [L !H\* L] L [L H\* L  
 movement-the fast and it.happened.that ahead.really  
*ahí* <  
 ] L L%  
 arrive.there.PROX  
 She was moving fast, so it happened that she got pretty far ahead.

In example 3 and in other audio examples, I provide a ToBI line under the information-structural coding and above the gloss line. Here, AccP’s are represented by square brackets. IntP’s are recognisable by their pitch accents outside square brackets, and the IP by its boundary tone.

For this example, I also provide a praat screenshot, but omit it from subsequent examples due to space considerations. In the screenshot, the blue line is the pitch contour in Hz, and the green line the intensity contour in dB.<sup>4</sup> The ToBI line in my praat annotations is simplified relative to the ToBI line in the examples presented in this paper. Glosses in the praat annotations my provided at the IntP level, which is a technique I use to simulate the intermediate-level prosodic chunking present in the audio.

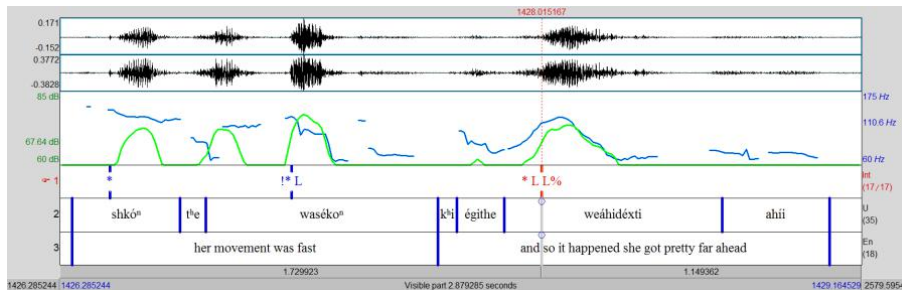


Figure 1: praat screenshot corresponding to example 3

In example 3, two sections have been deaccented and absorbed into the L tones that bound an adjacent H\* phrase accent. Both have been coded as recoverable:

<sup>3</sup> Rudin field tapes

<sup>4</sup> It should further be noted that the blue line, being a computed estimate of pitch, is not sufficient evidence for any ToBI coding criterion, but must be accompanied by impressionistic auditing.

*k<sup>hi</sup> égithe* because it is a frequent discourse marker that is likely always recoverable in narrative. The predicate *ahii* is inferrable given immediately preceding references to motion, speed and distance.

We may distinguish between “true” deaccenting, as in example 3, where the deaccented part of the pitch contour is either flat or very slowly declining, and “weak” deaccenting, as in example 4, where Mr. Wolfe uses a compressed version of the LH\*L contour. We are looking at *níkshi<sup>n</sup>ga*, whose ToBI line is annotated with (LM\*L). This is because the pitch range of this contour is compressed within a range smaller than the pitch range of the L tone in the adjacent AccP, so that it is realized as something more like (LM\*L) than a full [LH\*L] AccP.

- (4) Hi<sup>n</sup>béazhi-t<sup>h</sup>e égithe, táxti sí-t<sup>h</sup>e, thiwágazui níkshi<sup>n</sup>ga.<sup>5</sup>  
hi<sup>n</sup>bé-ázhi-t<sup>h</sup>e      égithe >      táxti      sí-t<sup>h</sup>e <      thiwágazui  
 [L H\* L]      ] !H      [L H\* L] [L !H\* L] [L H\* L  
 moccasin-not-that it-happened-that deer      foot-that notice-PROX  
 níkshi<sup>n</sup>ga  
 (L M\* L)] L L%  
 person  
 The man noticed that she was not wearing shoes, but rather had the feet  
 of a deer.

Mirzayan (2011: 121-3) presents similar compressed AccP’s in Lakǰol’iapi. This phenomenon may suggest a continuous process at work, in which the degree of accenting in AccP’s is continuously gradient. Such a process would challenge the usefulness of a discrete annotation system like ToBI for capturing deaccenting phenomena in Siouan languages. If this scale from “true” to “weak” deaccenting corresponds to variation in information-structural function, however, my coding criteria have not captured it. Instead, all types of deaccenting I have described signal recoverability of referents. This finding is entirely dependent on my methodology, however, and the area of gradient deaccenting and potential information-structural corollaries needs to be investigated further.

In short, all the audio resources I coded display deaccented forms, and all such forms have recoverable referents.

### 3.2 Postverbal arguments

Since all Siouan languages canonically position verbs after their arguments, the syntactic status of postverbal arguments is controversial. All Siouan languages at

<sup>5</sup> Rudin field tapes

very least permit postsentential referring expressions to clarify one or more verbal arguments, but grammarians have varied in accepting postverbal arguments as elements of the same sentence (cf. Rudin, 1998; Mithun, 1999; Ingham, 2003: 76; Cumberland, 2005: 421; Boyle, 2007: 292-3; Gordon, 2008). My attention to deaccenting phenomena in this study may shed light on this question and enabling language workers to distinguish between those postverbal arguments which are clearly “outside” the sentences and those which are more likely “inside”.

Accented postverbal arguments (those which are pronounced with the [LH\*L] contour of an AccP) typically have nonrecoverable referents. Instead, they clarify uncertain information, providing new information about both entities and predicates. (See Graczyk, 1991: 103, for a relevant discussion on Apsaalooke afterthought.) Accented postverbal arguments are usually separated from the verb not only by an AccP boundary but by a prosodic break (i.e. an IntP phrase accent or IP boundary tone). In example 5, Baxoje Ich<sup>e</sup> speaker ThigréPi concludes an IntP on *ráye u<sup>n</sup>k<sup>u</sup>ñe<sup>u</sup>su<sup>n</sup>* “they gave me a name”, as seen in the L phrase accent, here evidenced by early and sustained low pitch. Then he adds another IntP in pronouncing the postverbal argument *Baxóje ráye* “a Baxoje name”:

- (5) Woxáñi migragáñi<sup>u</sup>su<sup>n</sup>, ráye, ráye u<sup>n</sup>k<sup>u</sup>ñe<sup>u</sup>su<sup>n</sup>, Baxóje ráye.<sup>6, 7</sup>  
 woxáñi migragáñi<sup>u</sup>su<sup>n</sup> < ráye < ráye u<sup>n</sup>k<sup>u</sup>ñe<sup>u</sup>su<sup>n</sup> <  
 [L H\* L L] [L H\* L L] [L H\* L L]  
 cherished me.their.named.now name name me.give.PL.now  
 Baxóje < ráye  
 [L !H\* L L] L%  
 loway name  
 They named me as a cherished one, a name, they gave me a name, a  
 Baxoje name.

Deaccented postverbal arguments, in contrast – like *nikshi<sup>n</sup>ga* in example 4 – are not separated by prosodic breaks, and signal recoverable referents. Example 6 is a useful model of the relationship between postverbal arguments and recoverability in general. Hidatsa speaker Helen Wilkinson says *kúahe* “this” first in preverbal position when it is not recoverable, and then in postverbal position when in the second sentence (with the form *kúac* it is recoverable:

<sup>7</sup> ThigréPi in GoodTracks (2004)

<sup>7</sup> Square brackets in the ToBI line here refer to IntP boundaries rather than AccP boundaries as previously.



- (6) Kúáhe aku-iháaraci. Maapúkšaruxpáaka wáahaap<sup>h</sup>aak ráahaa'he  
 ita-arukiwé' kúac.<sup>8</sup>  
 kúáhe > aku-iháaraci < Maapúkšaruxpáaka wáahaap<sup>h</sup>aak ráahaa'he  
 Here.this different.sorta Snake.People raid go.CAUS.that  
ita-arukiwé' < kúac  
 their.story.tell here.this  
 This is a different story [from the story of the Bird Woman]. This is the  
 story of the Shoshone raid.

There are some examples of multiple postverbal arguments. In example 7, I present two. In example 7a, Helen Wilkinson first gives us the recoverable postverbal argument *maa-iháa's* “the enemy” before then further specifying *Waapúkšaruxpáaka's* “the Snake People”. Although the two phrases share the same entity referent, the function of *Waapúkšaruxpáaka's* is to supply a predicate which is not inferable at this point in the discourse model, so *Waapúkšaruxpáaka's* is coded nonrecoverable (one of the few unseparated by commas which I coded nonrecoverable). In example 7b, however, the telling of the Baxoje legend of Béñeiñe recorded by Gordon Marsh (1936) displays two postverbal arguments. Here the two are not coreferent, nor are they in the same argument relation to the verb, and they are both recoverable.

- (7) a. Hii šee awá ihtúutiru ú'siak káawarec maa-iháa's  
 Waapúkšaruxpáaka's.<sup>9</sup>  
 hii šee awá > ihtúutiru ú'siak káawarec < *maa-iháa's*  
 and that ground hill.base.at arrive.ss be.there.PL.NE enemy.PL.DEF.the  
 Waapúkšaruxpáaka's <  
 Snake.People.PL.DEF.the  
 And the enemy, the Shoshone, were on that ground, having gotten to  
 the base of the hill.
- b. Nahésge, igwáhuñe súnje Béñeiñe.<sup>10</sup>  
 nahésge > igwáhuñe < *súnje Béñeiñe*  
 be.if his.know horse Béñeiñe  
 And so the horse<sub>i</sub> recognized his<sub>i</sub> [owner] Béñeiñe.

Without audio we can't be sure whether the apparent double postverbal arguments are really all part of the same utterance, but it makes sense to specu-

<sup>8</sup> Parks, Jones & Hollow (1978: 18: 1)

<sup>9</sup> Parks, Jones & Hollow (1978: 22: 26)

<sup>10</sup> Marsh (1936)

late that, of the two, Ms. Wilkinson's example is more likely to involve a major prosodic break than the Baxoje Ich<sup>h</sup>e example.

In written transcripts for which no audio is available, I found the transcriber's comma a somewhat useful index of prosody – and recoverability. Many of the postverbal arguments I coded – like Ms. Wilkinson's in example 6 – were not separated by commas from preceding material. Although transcriber's commas may somewhat reliably correlate with IntP or IP boundaries as annotated in ToBI, we cannot be too sure of how strong this correlation is. Still, nearly all of the postverbal arguments not separated by commas had recoverable referents. Presence of a comma, on the other hand, does not seem to reliably predict recoverability of the referent.

Not all languages (or speakers) are alike with respect to the frequency of postverbal arguments. I found many examples of postverbal reference to recoverable entities in Taneksa, Ru'eta, Hidatsa, and Umo<sup>h</sup>o<sup>n</sup> Iye and Pa<sup>n</sup>ka Iye texts, and very low rates in Hocak and Apsaalooke texts – but still nearly all of the postverbal arguments in the Hocak and Apsaalooke texts I coded had recoverable referents. All the languages I looked at allow at least some use of postverbal arguments to refer to recoverable entities. In some languages, like Umo<sup>h</sup>o<sup>n</sup> Iye and Pa<sup>n</sup>ka Iye, this use may be (or have been) obligatory. In Gordon (2008), I sampled 51 continuing topics in Umo<sup>h</sup>o<sup>n</sup> Iye and Pa<sup>n</sup>ka Iye and found 42 of them were referred to postverbally. Of the 9 preverbal, most were within repeated collocations. This suggests that in some languages recoverable referents not only *can* be referred to postverbally, but *must* in most contexts.

To summarize, all the languages in this study make use of postverbal arguments, although they vary in frequency. Even without audio data to distinguish between deaccented and accented postverbal arguments, the strong tendency is observable for postverbal arguments to refer to recoverable entities. The index of the transcriber's comma may serve as circumstantial evidence. Its absence indirectly indexes recoverability of postverbal referents while also directly, if weakly, indexing deaccenting. Forms with nonrecoverable referents are often found after commas, on the other hand. Where audio data is available, the case is clearer: deaccented postverbal arguments, like other deaccented material, have recoverable referents, and are intrasentential (part of the same sentence as the verb they follow) by intonational if not syntactic criteria.

### 3.3 Reduced nominal referring expressions

#### 3.3.1 Determiner drop in languages with two indefinite articles

Of the languages represented in this study, four – Lakħol’iapi, Nak<sup>h</sup>on’i’a, Apsaalooke and Hocak – have two indefinite articles, one specific and one inspecific. The texts I coded in these four languages display determiner use in all nominal expressions which are specific (i.e. which refer to entities and not just to predicates or types) but nonrecoverable, allowing bare nominal expressions only for inspecific or recoverable referents<sup>11</sup>. In example 8 Apsaalooke speaker Francis Stewart refers twice to a specific quantity of water, but only the second reference is recoverable. This exemplifies how, among specific referents, recoverability makes the difference between determiner use and bare expressions:

- (8) Hinné wíliash kala iháatak huuk. Bilé xatáakelak.<sup>12</sup>  
hinné wíliash kala > iháatak < huuk *bilé* xatáakelak <  
 this water.the now strange hearsay water move-DS  
 This water (they say) was getting weird now. The water was moving.

This finding at first glance contradicts Cumberland (2005), who found bare specific NP’s acceptable in elicitation with Nak<sup>h</sup>on’i’a speakers. However, my finding is based on text analysis as opposed to elicitation – a social informational setting which presents extraordinary information-structural pragmatic conditions even when information structure is deliberately controlled (as it usually is not). It may also be noted that Cumberland’s definition of “specific” is not information-structural.

#### 3.3.2 Determiner drop in languages with one or no indefinite article

Three other languages – Umo<sup>n</sup>ho<sup>n</sup> Iye and Pa<sup>n</sup>ka Iye, Rų’eta and Hidatsa – have either one or no indefinite article. These languages tend to fit a weaker version of the generalization in §3.3.1, with the exception that speakers do sometimes refer to specific indefinite referents (nonidentifiable entity referents) using bare nominal expressions. In example 9, Hidatsa speaker Annie Eagle makes two specific indefinite references – “a sinew” and “a fire” – but only uses a determiner on the first. This may be because sinews are more canonically objectlike and therefore have higher specificity potential than fires.

<sup>11</sup> I do not consider generic reference in this study.

<sup>12</sup> Wallace (1993: 194: 178)

- (9) Macúawa rúhcak wiráa' úawa.<sup>13</sup>  
 macúawa rúhcak wiráa' úawa <  
 sinew.a take.ss fire make.fire.TEMP  
 He [the Thunderbird] took a sinew and made a fire.

The extreme case is Rų'eta, which has no indefinite articles at all. Specific indefinites, thus, are usually bare in Rų'eta, as in example 10 from speaker Stephen Bird:

- (10) Dá'ha·mį·mį· mąnərok pá·xe híro·mąko'š.<sup>14</sup>  
 dá'ha·mį·mį· > mąnərok > pá·xe > híro·mąko'š <  
 go.while.PROG.PROG tree.in potato arrive.there.NARR.PST.DECL.M  
 While he was going along, he came to some wild potatoes in the woods.

A possible explanation for the difference between the languages in this section and those in §3.3.1 follows: Languages with both a specific and an inspecific indefinite article may tend to make the use of the specific indefinite article obligatory while leaving the use of the inspecific indefinite article optional. Languages which lack this distinction, on the other hand, do not have the opportunity to develop obligatory use of their one indefinite article – and those with no indefinite article at all, like Rų'eta, must allow bare expressions to refer to specific indefinite referents.

### 3.3.3 Determiner drop in all sampled languages

One generalization may be made which holds of all nine languages in this study, including those with incipient article classes (Taneksą and Baxoje Ich'e and Jiwere Ich'e): The majority of bare nominal expressions have referents which are either inspecific or recoverable, regardless of the particular distribution or grammatical constraints involved in each individual language. This is, surprisingly, true even of languages like Baxoje Ich'e which regularly use bare nominal referring expressions for specific and nonrecoverable referents. In example 11 speaker Wa<sup>n</sup>·sigeChéMi uses a bare nominal referring expression for a recoverable referent. Had “my grandmother” not been recoverable (e.g. had she been new to the narrative), a determined form like *hi<sup>n</sup>kúñi nahé* would have been more likely (Jimm GoodTracks, p.c.).

<sup>13</sup> Parks, Jones & Hollow (1978: 15-16: 76-77)

<sup>14</sup> Carter (1991: 29-30: 8)

- (11) Ídare hi<sup>n</sup>kúñi wárudhàshgu<sup>n</sup> warúje.<sup>15</sup>  
 ídare > hi<sup>n</sup>kúñi wárudhàshgu<sup>n</sup> < warúje  
 then my.grandmother some.take.INFER food  
 Then it seems my grandmother took some of the food.

This generalization is weak, and may say nothing special about Siouan languages, but it raises interesting theoretical questions. Why are recoverable referents, and referents which lack a specific entity, lumped together on the same end of a formal variation? I speculate that they are similar in their light processing load.

### 3.3.4 “Determiner-drop drop”: recent rises in obligatoriness

In older Lakhol’iapi narratives speakers often use bare nominal expressions to refer to recoverable referents. In example 12, Ella Deloria uses a bare form to refer to Rabbit:

- (12) K’eyaš Maštíŋčala tákuni yútešni čhaŋké tókħa-wok’uśni ke’.<sup>16</sup>  
 k’eyaš Maštíŋčala tákuni yútešni < čhaŋké > tókħa-wok’uśni <  
 but Rabbit nothing ate.not so how-something.give.not  
 ke’.  
 HEARSAY.DECL  
 But Rabbit ate nothing and so he had nothing to give [to the boy], they  
 say.

In more contemporary registers, however, Lakhol’iapi tends not to exhibit determiner drop, requiring determiners for all specific referents. Many contemporary speakers, thus, consider the bare NP *Maštíŋčala* in (16) to be missing its article *kiŋ* or *k’uŋ*. Hiroki Nomoto (p.c.) informs me that the same phenomenon occurs in certain obligatory-classifier languages such as Cantonese, in which speakers vary on whether they drop determiners (classifiers) or even accept determiner drop as grammatical for highly presupposeable referents. Similarly, at the Title VII Umo<sup>n</sup>ho<sup>n</sup> Language and Cultural Center we often “reinsert” dropped determiners into transcripts and materials, and this is described as a correction. I believe that this move may emerge in part from the influence of the “rule”-based project of documentary linguistics upon community-based programs. Documentary linguistics has set in motion rapid codificational change to community

<sup>15</sup> Marsh (1936)

<sup>16</sup> Deloria (1932: 4-5: 12)

language ideologies, and has privileged questions of speaker skill and grammaticality (heard as “correctness” by most audiences) over descriptions of legitimate variation. Determiner drop has not, however, disappeared from fluent spoken language, and may be viewed as itself correct.

It’s possible that the shift towards obligatoriness in Lakħol’iapi will be completed in Umo<sup>h</sup>ho<sup>n</sup> Iye too, and that in both cases it will have been led by stylistic variation driven by the metalinguistic notion of correctness. Interestingly, the Nak<sup>h</sup>on’i’a speakers who worked with Cumberland viewed determiner use metalinguistically as optional in general, and accepted constructed examples with determiner drop regardless of recoverability (Cumberland, 2005: 345), but Nak<sup>h</sup>on’i’a texts do not differ appreciably from Lakħol’iapi or Umo<sup>h</sup>ho<sup>n</sup> Iye texts in the use of bare nominal expressions for recoverable referents. In all cases, a broader spectrum of genres and registers will need to be analysed before drawing conclusions about the state of determiner drop in Siouan languages as a whole.

### 3.3.5 Determiner drop and noun incorporation as continuum

Noun incorporation occurs primarily in Missouri Valley Siouan, and is most extensive in Apsaalooke. Graczyk (1991) considers a variety of its functions, information-structural and otherwise, and synthesizes from the literature his claim that incorporated objects tend “to be non-referential, non-individuated, non-specific, non-autonomous, non-countable, and the object-verb compound typically expresses unitary, habitual, characteristic, typical, institutionalized activities”. (p. 244) Autonomy, individuation and countability are characteristic of entity referents, so what Graczyk says here is essentially that incorporated nouns tend to refer inspecifically, and that the noun-verb compound itself has a relatively unitary concept structure. This second claim touches on an aspect of information structure which I have not covered in this study.

As for the first claim, this study supports it as a statistical generalization, although not as a categorical one. Apsaalooke does display instances of incorporated nouns with specific referents, as in example 13 (uncoded):

- (13) a. biittaashteelitdialalak<sup>17</sup>  
          *biittaashteelitdialalak*  
          me/my.shirt.sorta.make.you.if  
          if you make my shirt *or* if you make me a shirt  
      b. Basahpawaannáastawiilakoosh ítchikissuuk.<sup>18</sup>

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<sup>17</sup> Graczyk (1991: 247)

*basahpawaannáastawiilakoosh*                      *ítchikissuuk*  
 me/my.moccasin.bead.you.string.me.you.give.the good.sport.PL.DECL

The moccasins that you beaded for me are pretty.

Example 13a is ambiguous between two readings. In one, the 1<sup>st</sup>-person pronominal *b-* is interpreted as a possessive prefix on the incorporated noun *iíttaashtee* “shirt”, and in the other it is interpreted as a pronominal argument on the predicate *iíttaashteelitdia* “make-shirt”. In example 13b, the possessed phrase (*b*)*asahpa* “(my) moccasins” is incorporated in the predicate *waannáasta* “you string beads” which itself has the incorporated *waan* “bead” in it. This double-incorporation is essentially an example of the body-part incorporation in example 13a, except that the possessor is another incorporated object.

The specific referents of the incorporated nouns *iíttaashtee* and *asahpa* in example 13 are both recoverable, and thus fit my observations about determiner drop in §3.3.3: Like determiner drop, incorporation may be conditioned similarly by both inspecificity and recoverability. Even in the case of inspecific referents, as in example 14 (uncoded), recoverable references to types are made by incorporated nouns (*hunnáappaxbialalak*) while less recoverable first references are made by bare nouns (*hulé*):

- (14) *Dáassuua ashkawúuan hulé dappaxíssah, hunnáappaxbialalak awéeleen díah.*<sup>19</sup>

*dáassuua ashkawúuan hulé dappaxíssah*  
 your.house inside.at bone split.not.COMMAND  
*hunnáappaxbialalak awéeleen díah*  
 bone.you.split.MOD.you.if outside.at do.COMMAND

Don’t split bones inside. If you want to split bones, do it outside!

Although Lakħol’iapi lacks full incorporation of the sort seen in Missouri Valley Siouan, de Reuse (1994) considers noun incorporation and determiner drop as related phenomena in his study. He finds cases of recoverable referents with determiner drop (“noun stripping” in his terms), like the second instance of *ištá* in example 15 (uncoded):

- (15) Čaṇké mağážu mní ištá kiṇ owíčhakičaštaṇ hiṇ na úṇ ištá  
 wičhákiciyužaža haṇ čaṇké tuṇwáṇ pi skhé’.<sup>20</sup>

<sup>18</sup> Graczyk (1991: 257)

<sup>19</sup> Graczyk (1991: 250), cited as Old Coyote (1985: 13)

čhaŋké mağážu mní ištá kiŋ owíčhakičšaŋ hiŋ na úŋ  
 and.so rain water eye the in.them.BEN.INSTR.pour CONT and INSTR  
 ištá wičhákičiyužaža haŋ čhaŋké tuŋwáŋ pi skhé'  
 eye them.textscben.instr.wash CONT and.so see PL INFER.DECL  
 So he poured rain water in their eyes, and washed their eyes with it until  
 they were able to see.

De Reuse considers “syntactic compounding” as an intermediate phenomenon between “noun stripping” (determiner drop) and full noun incorporation. He cites the example in 16 (uncoded), from Ella Deloria. Although de Reuse’s example is out of context, it appears that “the child” is likely recoverable and certainly specific:

- (16) Hokší okile pi škhé.<sup>21, 22</sup>  
 hokší okile pi škhé  
 child look.for PL INFER.DECL  
 they looked for the child.

As Graczyk noted, linguists have often drawn associations between noun incorporation and inspecificity. Recoverability has perhaps been less frequently associated, but as de Reuse (1994) suggested, and as my study corroborates, it is useful to look at how recoverability functions alongside inspecificity to encourage not only noun incorporation, but a continuum of related variations with noun incorporation on one extreme and determiner drop near the other.

### 3.3.6 Zero reference (argument drop)

All Siouan languages make use of zero reference in all argument positions, in all persons. The referents of such zero expressions are recoverable. Rų’eta speaker Stephen Bird says utterance 17 at a point in the narrative where both Trickster and some potatoes are recoverable, and so he refers to both with no nominal expression:

- (17) Ó’haranĭ ké’ŋĭ dutó’maĭko’š.<sup>23</sup>

<sup>20</sup> de Reuse (1994: 232)

<sup>22</sup> Deloria (1932: 48: 4), cited in de Reuse (1994)

<sup>23</sup> De Reuse uses the grave accent, as on *okile*, to indicate that the word does not receive primary stress, i.e., that it is part of the same AccP as the preceding word. By “syntactic compounding”, he may be referring to intonational structure rather than a strictly compositional syntax.



ó'haranĭ > ké'nĭ    dutó·maĭko's̥ <  
 so.and      dig.and eat.NPST.DECL.M  
 And so he digs and eats them.

### 3.4 Intonational bounding of links, relational topics and relational foci

We have seen the importance of AccP boundaries in previous sections: Words which do not project one have recoverable referents. In this section we will see how the phrase accents which bound IntP are put to use in demarcating informationally prominent material. IntP boundaries tend to coincide with strings coded as having referents which are either links, relational topics or relational foci. The converse is not true: Links, relational topics and relational foci do not in general tend to require an IntP boundary in the texts I have coded. Recoverable referents, on the other hand, tend *not* to be associated with forms specially demarcated by IntP (or AccP) boundaries. Examples in this section follow the ToBI presentation I used in §3.1, with the exception that square brackets here represent IntP boundaries instead of AccP boundaries, and thus include rather than exclude phrase accents.

Pierrehumbert & Hirschberg (1990) generalize that H phrase accents are projected on relatively “forward-looking” material. If this generalization holds of Siouan languages, then the threshold of “forward-looking enough” must be higher in Siouan languages than in English, where a L phrase accent on a stage topic might sound a bit odd. I found stage topics are referred to by IntP's with both L and !H phrase accents, but L phrase accents were more common in this study. A Hidatsa example from the Water Buster Account is given in 18:

- (18) Še'erúhaak waapixupá rúupatook kiráahuac.<sup>24</sup>  
 še'erúhaak waapixupá rúupatook > kiráahuac <  
 [L H\* L L] [L H\* L !H] [L H\* L L]    [L H\* L L] L%  
 then          Sunday      two              we.came.for.them  
 Then, two weeks later, we came for them.

The first and third IntP in example 18 provide complete stage topics, but the second ends with a hesitation not resolved until the third. The second IntP is the only one with a !H phrase accent. This weakly supports Pierrehumbert & Hirschberg's generalization in that it is the most “forward-looking” of the three.

<sup>23</sup> Carter (1991: 33: 28)

<sup>24</sup> Lowie (1939)

The fourth IntP, like nearly all the other relational foci I coded, receives a L phrase accent.

In example 19, Hocak speaker Cecil Garvin uses a !H phrase accent on both the linking *coowexjışgera* “just a little” and the stage topic *karacq* ‘*uṇqqaşgera* “since they were drinking”. On the other hand, the last two links – *coowera* “a little” and *hoinak haanışge* “I started too” – both of which are also coded as relational foci, receive L phrase accents:

- (19) Coowexjışgera karacq ‘uṇqqaşgera coowera hoinak haanışge.<sup>25</sup>  
 Coowexjışgera karacq ‘uṇqqaşgera > coowera < hoinak haanışge <  
 [L H\* L !H] [L !H\* L L] [L !H\* L L] [L H\* L L] [L H\* L L] [L %]  
 just.a.little drink they.were.since a.little I.start I.too  
 Since they were drinking, just a little, I started a little too.

Another kind of material we might even more strongly expect to take a !H phrase accent, following Pierrehumbert & Hirschberg, are explicitly forward-looking references like list items and other incomplete references, e.g. *waapixupá* in example 18. But, like stage topics and links, forward-looking reference appears to make use of both !H and L phrase accents in Siouan languages. The speaker in the Hidatsa example 20, again from the Water Buster Account, makes a complete predication in his first IntP, and then elaborates it in his second. He may have used the !H phrase accent “forward-lookingly”, to signal that an elaboration was planned:

- (20) Úuwaca kirakap<sup>h</sup>a’áhku pirakíhtia toopatóok kirakap<sup>h</sup>áapak.<sup>26</sup>  
 úuwaca kirakap<sup>h</sup>a’áhku < pirakíhtia toopatóok kirakap<sup>h</sup>áapak <  
 [L H\* L L !H\* L !H] [L H\* L L !H\* L L] L %  
 money they.kept.collecting hundred four they.collected  
 They kept raising money; they raised four hundred dollars.

ThigréPi’s forward-looking reference *ráye* “name”, on the other hand, has a L phrase accent in example 21 (repeated from example 5). It is unclear to me whether these L-final IntP’s convey more of a sense of autonomy or finality than the “incomplete” IntP in example 20.

- (21) Woxáñi migragáñi<sup>ˆ</sup>su<sup>n</sup>, ráye, ráye u<sup>n</sup>k<sup>ˆ</sup>ú<sup>n</sup>ñe<sup>ˆ</sup>su<sup>n</sup>, Baxóje ráye.<sup>27, 28</sup>

<sup>25</sup> “Connection (humour)” in Hartmann & Marschke (2010)

<sup>26</sup> Lowie (1939)

woxáñi migragáñi<sup>n</sup>su<sup>n</sup> < ráye < ráye u<sup>n</sup>k<sup>u</sup>ñe<sup>n</sup>su<sup>n</sup> <  
 [L H\* L L] [L H\* L L] [L H\* L L]  
 cherished me.their.named.now name name me.give.PL.now  
 Baxóje < ráye  
 [L !H\* L L] L%  
 Ioway name  
 They named me as a cherished one, a name, they gave me a name, a  
 Baxoje name.

Example 22, from Umo<sup>n</sup>ho<sup>n</sup> Iye speaker Clifford Wolfe, Sr., contains three boundaries between different coding categories. There is a boundary between the linking stage topic *shó<sup>n</sup>xti* “nevertheless” and the nonlinking activating topic *wa’ú-thi<sup>n</sup>* “the woman”, then one before the relational focus *ní tható<sup>n</sup>-bzhíi* “he didn’t drink water”, and another before the separate relational focus *wa’ú-thi<sup>n</sup> uthúhai* “he followed the woman”. Each of these relational boundaries coincides with an IntP boundary:

- (22) Shó<sup>n</sup>xti, wa’ú-thi<sup>n</sup>, ní tható<sup>n</sup>-bzhíi, wa’ú-thi<sup>n</sup> uthúhai.<sup>29</sup>  
 shó<sup>n</sup>xti wa’ú-thi<sup>n</sup> > ní tható<sup>n</sup>-bzhíi < wa’ú-thi<sup>n</sup> uthúhai <  
 [L H\* L !H] [L H\* L !H] [L !H\* L L] [L H\* L L] L%  
 nevertheless woman.the water drink.not.PROX woman.the follow.PROX  
 Nevertheless, the woman, he didn’t [stop to] drink water, he just  
 followed the woman.

The fact that *ní tható<sup>n</sup>-bzhíi* “he didn’t drink water” concludes with a phrase accent, despite not being notably “forward-looking”, suggests that many IntP breaks may be arbitrary with respect to the narrow kind of information structure measured by my coding criteria, and conditioned by a more general, working-memory-related chunking process alongside other factors like weight, complexity and semantic unity. Generally, however, the recordings I have coded have the boundaries of links, relational topics and relational foci wherever a phrase accent occurs. The mapping tends to be 1-1, in that a single IntP tends to include a single relational category, but I suspect that in faster speech – of which I coded very little – speakers may stuff more than one relational category into a single IntP. When the referent of a string is a relational focus, it gets a L phrase accent,

<sup>28</sup> ThigréPi in GoodTracks (2004)

<sup>28</sup> Square brackets in the ToBI line here refer to IntP boundaries rather than AccP boundaries as previously.

<sup>29</sup> Rudin field tapes

while links and relational topics tend to get !H or L phrase accents, and tend to weakly support Pierrehumbert & Hirschberg's (1990) generalization that !H phrase accents are reserved for more "forward-looking" material, albeit with a different threshold than in English.

### 3.5 Object-subject-verb (OSV) word order

Like postverbal arguments, OSV word order occurs in all the languages I included in this study, albeit with varying frequency. It is generally used when the object (O) is a link. Hidatsa speaker Annie Eagle says utterance 23 at a point in the narrative when the subject of the previous clause is "our parents", so that *matawáč<sup>h</sup>o* "our relatives" is in a linking relation and is syntactically fronted:

- (23) Matawáč<sup>h</sup>o' maapúkšihííwa šé'ri p<sup>h</sup>éekšáwa.<sup>30</sup>  
matawáč<sup>h</sup>o' maapúkšihííwa šé'ri p<sup>h</sup>éekšáwa <  
 our.relative.PL.INDF snake.big.a that.ST eat.up.ITER.DS  
 Our relatives are always being eaten by this big snake.

Graczyk (1991: 102) presents Apsaalooke example 24 out of narrative context, so I have not coded it, but the linking relation between the two instances of *hawáte* "one" is clear even out of context. The second instance of *hawáte* is a syntactically fronted object:

- (24) Hawáte isdáxxiia kulushkúam hawáte áxpe dappiíok.  
*hawáte isdáxxiia kulushkúam hawáte áxpe dappiíok*  
 one his.gun grab.from.DS one his.companions kill.PL.DECL  
 One<sub>i</sub> of them, he<sub>j</sub> grabbed his<sub>i</sub> gun from him<sub>i</sub>, and the other<sub>k</sub>, his<sub>j</sub>  
 companions killed him<sub>k</sub>.

Example 25, from speaker Francis Stewart, may be evidence that Apsaalooke allows OSV for other information-structural categories besides links. Although the clause *huulé kala kuluúkkuk* has no overt subject, the position of the object before a time adverb indicates that a similar object-fronting process is at play. A linking poset relation like "remnant of" may in fact be at play here, and the predicate "bone" seems inferrable from the preceding word *chilishíak* "they ate them", but the context did not meet my coding criteria for LINK, and so the form is not coded as linking:

<sup>30</sup> Parks, Jones & Hollow (1978: 3: 14)

- (25) Chilishíak huulé kala kuluúkkuk huuk.<sup>31</sup>  
*chilishíak huulé < kala > kuluúkkuk < huuk*  
 they.ate.them.ss bone now they.piled.them.up HEARSAY  
 And after eating them, they piled their bones up.

### 3.6 Switch-topic markers

Switch topics are nonrecoverable referents which function to shift hearers' attention away from currently recoverable referents. Although switch topics are typically new, they may be recoverable. They send hearers the signal, "enough of the old topic, pay attention to this now". This definition of "switch topic" subsumes a variety of special cases linguists often describe as "presentational focus" or "topic competition/resolution". Many Siouan languages have special morphological marks which signal some type of switch topic. Here I give a few Rŭ'éta examples and make some observations about Yesánq (Tutelo, not otherwise included in this study), Lakħol'iapi and Nak<sup>h</sup>on'i'a morphology. See also Boyle (2007:288–93) for a syntactic analysis of the Hidatsa switch-topic marker *-ri*, which we saw in example 23. In that example, the snake, *maapúkšihíawa šé'ri*, does not function to fill an open proposition like "*what's eating our relatives?*", but rather is introduced as a new character for subsequent narrative.

Similarly, Wolvengrey (1990) analyses the Rŭ'éta suffix *-enq* as a "focus marker" which is used for presentation of new topics, as in example 26a, "atypical" subjects as in example 26b, and topic competition as in example 26c from speaker Stephen Bird. The material marked by *-enq* in each of these examples functions to replace the current attention-central discourse topic with another, so I find it more useful to describe *-enq* as a switch-topic marker than as a "focus" marker. Note that in example 26c the two characters marked with *-enq* are postverbal arguments with recoverable referents. This is a good case of how switch topics are not always *new* topics, and how, though they have much in common with relational foci, they are not relational foci either.

- (26) a. Kanĭ mi'henā heromaĭko's.<sup>32</sup>  
           kanĭ mi'henā heromaĭko's <  
           and woman.ST saw.DECL  
           And he saw a woman.  
       b. Orenā tinĭ; napupušereka'ehe.<sup>33</sup>

<sup>31</sup> Wallace (1993: 192: 153)

<sup>32</sup> Wolvengrey (1990: CWW9)

oreṇa tinī          napupušereka'ehe <  
fire.ST arrive.and burn.in.streaks.HEARSAY

A prairie fire arrived and burned him in streaks.

- c. Kašká'ñik inák kimá·xero·mako's, kinámá'kšise·ṇa. Káki "Míkó's"  
éhero·mako's, pá·xese·ṇa.<sup>34</sup>  
kašká'ñik >      inák < *kimá·xero·mako's*,      *kinámá'kšise·ṇa* káki >  
be.DISJUNCT.that again ask.NARR.PST.DECL.M Coyote.the.ST be.that  
"Míkó's" < *éhero·mako's*      *pá·xese·ṇa*  
no.DECL.M say.NARR.PST.DECL.M potato.the.ST  
But Coyote asked him again. And Potato said, "no".

Lakhol'iapi encodes switch-topicality grammatically. As a special case of contrast, switch topics may be marked with the *iš* set of independent personal pronouns as opposed to the non-contrastive *iyé* set. Nak<sup>h</sup>on'i'a similarly uses the suffix *-iš* on switch-topical pronouns (Cumberland 2005: 129–30); and Oliverio (1996: 149) describes similar functions for Yesánq *-ma*, *-sq* and *ik<sup>h</sup>á-*.

Independent personal pronouns rarely referred to recoverable entities in the texts I coded. When they do, there is typically a repeated or conventional collocation at play. My study suggests that all of the nine Siouan languages in this study may observe this constraint on pronoun use. Dakotan languages further set aside a series of pronouns for use in referring to switch topics and other contrastive referents only. Other languages lack this mark. Yet despite these differences, in all nine languages the majority of independent personal pronouns in the texts I coded functioned as switch topics.

## 4 Discussion

The findings in §3 may be usefully sorted into two distinct categories. In §3.1 we saw that lack of a full [LH\*L] contour signals referent recoverability. In §3.2 we saw this same phenomenon intersect with postverbal argument position in a way that usefully distinguishes between two constructions. In §3.3 we considered bare (undetermined) nominal expressions, noun incorporation and zero reference as stages on a continuum of phenomena variably constrained by recoverability and inspecificity. I also suggested that the violent, colonial contact conditions under which recent language change is occurring may underlie a re-

<sup>33</sup> Wolvengrey (1990: SA17)

<sup>34</sup> Carter (1991: 31: 15–6)

cent shift away from optionality and towards obligatoriness of determiner use and overtiness of reference.

These first variations I term “prominence variations” – variations in which reduced variants are used for lighter (recoverable or inspecific) referents. In the other category are “marking variations” – variations in which marked variants are used to refer to referents with marked information-structural functions.

In §3.4, I showed how the phrase accents which demarcate intonational intermediate phrases (IntP) tend to coincide with the boundaries of information-structural categories like LINK, RELATIONAL TOPIC and RELATIONAL FOCUS. !H phrase accents are reserved for “forward-looking” material – and by no means all of it. Specific information-structural categories are also associated with fronted objects and OSV word order, as we saw in §3.5, and with switch-topic markers like Rù’éta *-enq* and Hidatsa *-ri*, as we saw in §3.6.

This distinction between prominence variations and marking variations maps roughly to Gundel’s (2003, 1988) distinction between “relational givenness” and “referential givenness”.

Although I have presented many of my findings as categorical generalizations when the data called for it, I caution readers away from assuming that any of these constraints really are categorically binding in all contexts in any one language, or in the family as a whole. More breadth and depth – more texts, more genres, more time periods, more languages; and more detailed, language-specific descriptions of documented variations with information-structural meaning – are required to be able to make any definitive statement on Siouan information structure, but I hope this sketch serves as a preliminary step towards imagining what such a statement might look like.

## Abbreviations

BEN: benefactive	M: masculine
CAUS: causative	MOD: modal
CONT: continuative	NARR: narrative
DECL: declarative	NE: narrative ending
DEF: definite	NPST: nonpast
DS: different subject	PL: plural
INDF: indefinite	PROG: progressive
INFER: inferential evidentiality	PROX: proximate
INSTR: instrumental	PST: past
ITER: iterative	SS: same subject

ST: switch topic

TEMP: temporal progression

## Primary resources

### **Carter (1991), Ru'eta**

- Stephen Bird: Kináma'kšini pá'xe (legend) – 74 utterances

### **Cumberland (2005), Nak'on'i'a**

- Bertha O'Watch: Snohéna T'hága (history) – 34 utterances
- Bertha O'Watch: Įktómi and Fox (legend) – 46 utterances
- The Red Fox (legend) – 27 utterances

### **Deloria (1932), Lakhol'iapi**

- multiple histories and legends

### **Dorsey (1880), Jiwere Ich'e**

- The Rabbit and the Grasshopper (legend) – 1½ pages

### **Dorsey (1890), Umo'ho<sup>n</sup> Iye and Pa'ka Iye**

- multiple histories, legends, stories and orations – 915 pages

### **Dorsey (1891), Umo'ho<sup>n</sup> Iye and Pa'ka Iye**

- multiple histories, legends, stories and orations – 915 pages

### **GoodTracks (2004), Baxoje Ich'e and Jiwere Ich'e**

- Tadá<sup>n</sup>jeMi: Reminiscences of Grandmother (reminiscence) – 1½ pages
- ThigréPi: Being a present-day (1970's) Ioway (history/metaculture) – 1½ pages

### **Hartmann & Marschke (2010), Hocąk**

- Bill O'Brien: A bear appears (reminiscence) – 24 utterances
- Bill O'Brien: Bill O'Brien & Hollywood (reminiscence) – 31 utterances
- Bill O'Brien: The moccasin game (picture description) – 54 utterances
- Child teaching (history/metaculture) – 100 utterances
- Bill O'Brien & Chloris Lowe, Sr.: Horses (history) – 113 utterances



- Cecil Garvin: Connection (humour) – 14 utterances
- Chloris Lowe, Sr.: Buffalo hunt (history) – 18 utterances
- Ed Lonetree: Stealing watermelons (reminiscence) – 25 utterances
- Richard Mann: A warrior honor (reminiscence) – 46 utterances
- Richard Mann: Picking cherries (reminiscence) – 12 utterances

**Ingham (2003), Lakħol'iapi**

- George Bushotter: Hunting eggs in the spring (reminiscence) – 1 page
- George Bushotter: How young men and women behaved towards each other among the People (reminiscence) – 2 pages
- George Bushotter: War customs (reminiscence) – 2 pages
- George Bushotter: Holy men and healers (reminiscence) – 1½ pages

**Kennard (1936), Ru'eta**

- untitled (legend) – uncounted utterances

**Lowie (1939), Hidatsa**

- First Worker Intrudes on Sun's Realm (legend) – 94 utterances
- First Worker Captures Geese But Loses Them to Spotted Tail (legend) – 68 utterances
- First Worker Captures Prairie Dogs But Loses Them to Spotted Tail (legend) – 71 utterances
- The Story of a Girl Who Became a Bear (legend) – 59 utterances
- The Water Buster Account (history) – 22 utterances

**Marsh (1936), Baxoje Ich'e and Jiwere Ich'e**

- MáñiHú – Twin Holy Boys (legend) – 14 pages
- Béñeiñe (legend) – 11 pages
- Mishjiñe Aheri Warax'edhe (legend) – 5 pages
- HinágeSda<sup>n</sup>: Udwa<sup>n</sup>ge Mishjiñe (legend) – 16 pages
- Wa<sup>n</sup> sígeChéMi: Hi<sup>n</sup>kúñi (reminiscence) – 7 pages

**Mixco (1997), Ru'eta**

- Résike Wíke (legend) – 220 utterances

**Parks, Jones & Hollow (1978), Hidatsa**

- Annie Eagle: Packs Antelope (history) – 85 utterances
- Helen Wilkinson: The Return of Wolf Woman (history) – 152 utterances
- John Brave: Lone Man and First Creator Make the World (legend) – 87 utterances
- John Brave: Old Man Coyote and the Rock (legend) – 149 utterances

**Rudin field tapes and transcripts, Umo<sup>n</sup>ho<sup>n</sup> Iye**

- field tapes and transcripts of Catherine Rudin (elicitation), Microsoft Word .doc format with CD audio – 19 CD's

**Wallace (1993), Apsaalooke**

- Francis Stewart: Thunder Medicine (history) – 203 utterances

**Yellow Brow & Short Bull (1980), Apsaalooke**

- Yellow Brow & Short Bull: Bitáalasshia Alítchiasshiituualak Baháa Awúuasshiituualak (legend) – 41 utterances

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