

Exhaustivity and Focus Marking in Gitksan*

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Abstract: This paper investigates two Gitksan words, *k'am* and *xsax*, that have previously been treated as exhaustive/exclusive focus markers. I confirm the previous finding (Bicevskis, Davis, and Matthewson 2017) that *k'am* prefers to associate with predicates, and *xsax* with arguments and adjuncts. I also investigate the distribution of the *k'am xsax* construction. I then show that, contra Rigsby (1986) and Bicevskis et al. (2017), *xsax* is not exhaustive.

Keywords: Gitksan, focus, information structure, exhaustivity, exclusivity

1 Introduction

In this paper, I discuss two putative exhaustive/exclusive focus operators in Gitksan, *k'am*¹ and *xsax*, which have been previously treated as rough semantic equivalents of English *only* (Bicevskis et al. 2017). I show that, as proposed by Bicevskis et al. (2017), *k'am* prefers to associate with predicates, while *xsax* prefers to associate with arguments and adjuncts. However, I also make the novel claim that while *k'am* is exhaustive, *xsax* is not. This means that *xsax* cannot be equivalent in meaning to *only*, and I therefore propose that it may mark information focus rather than identificational focus, as described by Kiss (1998).

I will begin in §2 by introducing Gitksan's two purportedly exclusive focus operators, *k'am* and *xsax*, and discussing their distribution and behaviour with regards to focus associates and focus movement. I will then introduce two tests for exhaustivity and use them to show that *xsax* is not exhaustive (§3). Finally, I will introduce a very tentative analysis of these facts (§4).

2 The distributions of *k'am* and *xsax*

Gitksan is an Interior Tsimshianic language spoken in the Skeena River region of British Columbia. The language has two words that are usually translated as English *only*: *k'am*, shown in (1), and *xsax*, shown in (2)²:

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¹ All data, unless otherwise indicated, is from elicitations in 2018–2019 with Hector Hill, a speaker from Gitsegukla.

² This paper uses the following abbreviations: 1/2/3 = 1st/2nd/3rd person, I/II/III = series I/II/III pronoun, AX = transitive subject extraction, CN = common noun connective, COM = comitative transitive, FOC = focus marker, NEG = negation, PCNJ = phrasal coordinator, PN = proper noun connective, SG = singular. Affixes are marked by a hyphen '-' and clitics by an equal sign '='. The elicitation method is indicated in brackets.

(1) k'am maa'y=hl gub-'y. (vf)
k'am berries=CN eat-1SG.II
 'I only ate berries.'

(2) xsax ts'uuts'=hl gya'a-'y. (vf)
xsax bird=CN see-1SG.II
 'I only saw a bird.'

Hindle and Rigsby (1973) provide the definition “only (verb proclitic)” for k'am and “only, just (verb proclitic)” for xsax³. Bicevskis et al. (2017) gloss both forms as “only”. Native Gitksan speakers also translate English sentences using *only* by using one or both of these words, and translate sentences with xsax or k'am into English sentences with *only*.

2.1 Choice of focus associate

Bicevskis et al. (2017) generalize that k'am associates with predicates. Indeed, k'am shows a strong preference for predicate associates. In contexts that suggested predicate focus, k'am was always volunteered.

In addition, k'am occurs with quantificational associates. My consultant invariably volunteered k'am when a number or quantifier was being focused:

(3) Context: I went to a party last weekend and kissed some people. I kissed a few of the men, but not all of them.
k'am homjeha-'y hlagats'oo=hl git. (vf)
k'am kiss-1SG.II some=CN man
 'I only kissed some of the men.'

(4) Context: My sister told me there were 12 birds in the forest, but when I went for my walk I only saw 2 of them.
k'am gilbil ts'uuts'=hl gya'a-'y. (vf)
k'am two bird=CN see-1SG.II
 'I only saw two birds.'

However, k'am does not seem to be possible with argument/adjunct associates. When I tested sentences with intended argument focus and k'am, my consultant either rejected them or provided an alternative context where the predicate was focused:

Forms volunteered by the consultant as translations from English are indicated by 'vf' (volunteered form) and forms that were suggested by the elicitor and judged by the consultant are indicated by 'sf' (solicited form). I do not gloss k'am or xsax because their specific contributions are the subject of the paper.

³ Hindle and Rigsby (1973) also list a third form meaning “only, nothing but (noun proclitic)”, max. However, my consultant has never volunteered this form and so I leave it aside for the time being.

- (5) Context: There are many kinds of food on the table — bread, cheese, berries, meat — but I only eat the berries and I don't eat any other kind of food.

#k'am maa'y=hl gub-'y. (sf)

k'am berries=CN eat-1SG.II

'I only ate berries.'

Comment: "No, that doesn't work. You could say that if someone asked why you weren't eating, and you wanted to say 'I am only GOING TO eat the berries', k'am maa'yhl dim gub-'y."

Bicevskis et al. (2017) claim that xsax usually associates with "focus-fronted argument and adjunct phrases". This was verified by my results — my consultant generally volunteered xsax or k'am xsax when arguments or adjuncts were being focused. However, I have found that xsax is also acceptable with predicate and quantificational associates, albeit not volunteered:

- (6) Context: I was hoping to talk to John at the party last night, but he left before I got a chance. So I just saw him from across the room, and didn't go up to him or talk to him at all.

xsax gya'a-'y John nee=dii-n di-dalk-'t. (sf)

xsax see-1SG.II John NEG=FOC-1SG.I COM-talk-3SG.II

'I only saw John, I didn't talk to him.'

Although xsax often appears in argument/adjunct-focusing sentences, k'am xsax was at least as prevalent. As in previous cases, it could also be used with predicate focus associates, although it was rarely, if ever, volunteered in predicate focusing contexts. Interestingly, however, k'am xsax does not seem to be able to take quantificational associates:

- (7) Context: I had a big basket of berries, but I only ate three of them.

#k'am xsax gwlel maa'y=hl gub-'y. (sf)

k'am xsax three berries=CN eat-1SG.II

'I only ate three berries.'

Comment: "Maybe you could say this if someone asked who ate all the berries. It's not good like this."

The consultant's comment seems to indicate that only focus on the unquantified subject (*[I]_F only ate three berries*) is possible.

My findings are summarized in the following chart, where ✓ indicates a fully acceptable, volunteered form, ✗ indicates an impossible form, and ? indicates a form that is judged acceptable but rarely or never volunteered.

Table 1: Distribution of k'am and xsax

	arguments and adjuncts	predicates	numbers and quantifiers
<u>k</u> 'am	✗	✓	✓
<u>xsax</u>	✓	?	?
<u>k</u> 'am <u>xsax</u>	✓	?	✗

2.2 Movement of the focus associate

Although the basic word order of Gitksan is strictly VSO (Hunt 1993:120), so-called “focused”⁴ sentences, where an argument or adjunct is moved to the left of the predicate, abound (Rigsby 1986).

As shown by the following examples, *k'am* can associate with a predicate in both VSO and fronting environments.

- (8) a. Context: I went to a party and saw my friend Mary, but I didn't talk to her or greet her or anything else. I just saw her from across the room.

k'am *gya'a-'y=hl* Mary. (sf)

k'am see-1SG.II=CN Mary

'I only saw Mary.'

- b. *k'am* Mary=*hl* *gya'a-'y*. (sf)

k'am Mary=CN see-1SG.II

'I only saw Mary.'

However, the same cannot be said of *xsax* — sentences with argument/adjunct focus where focus-fronting has not occurred cannot have the intended interpretation:

- (9) a. Context: I went to a party and the only person I knew there was Mary. I didn't see any of my other friends there.

xsax Mary=*hl* *gya'a-'y*. (sf)

xsax Mary=CN see-1SG.II

'I only saw Mary.'

- b. *#xsax* *gya'a-'y=hl* Mary. (sf)

xsax see-1SG.II=CN Mary

'I only saw Mary.'

⁴ Although the moved constituent is treated as a focused element by Rigsby (1986) and Hunt (1993), I suspect based on preliminary elicitation data that it may in fact be topicalized, due to the behaviour of this construction in discourse contexts. Consider the following example:

- (i) a. Context: We are having a conversation about our friend Mary. All of a sudden, I remember that I needed to tell you something about Peter.

#gubi=s Peter=*hl* apple. (sf)

eat=PN Peter=CN apple

'Peter ate an apple.'

- b. Peter an *gup=hl* apple. (vf)

Peter AX *eat=CN* apple

'Peter ate an apple.'

This seems to be a clear case of topicalization, since the fronted constituent is the “entity that the utterance is about” (Neeleman, Titov, Van de Koot, Vermeulen, et al. 2009) and the movement seems to be triggered at the discourse level (rather than the propositional level, as would be the case for focus). However, this limited data is far from conclusive, and so I will follow (Rigsby 1986) in treating this fronting as an expression of focus for the time being.

In a different context with predicate focus, the sentence in (10) is perfectly acceptable:

- (10) Context: I saw Mary at a party, but I didn't talk to her.
xsax gya'a-'y=hl Mary. (sf)
xsax see-1SG.II=CN Mary
'I only saw Mary.'

Like *xsax*, *k'am xsax* prefers to associate with a fronted argument/adjunct constituent: sentences where a DP is focus-fronted cannot have a predicate-focus interpretation:

- (11) Context: I ate some berries that my sister picked. My mom asks me if I picked them, and I tell her I only ate them.
k'am xsax (#maa'y=hl) gub-'y. (sf)
k'am xsax (#berries=CN) eat-1SG.II
'I only ate them.'

Since *k'am* prefers to associate with predicates, it makes sense that focus-fronting does not affect its interpretation. However, because *xsax* can only focus adjacent constituents and prefers to focus DPs, and Gitksan is a predicate-initial language, the use of *xsax* usually co-occurs with focus fronting. Similarly, the use of focus-fronting with *k'am xsax* triggers an interpretation where the fronted constituent is focused.

3 Exhaustivity

English *only* is exhaustive: its focus associate represents the full and complete set of elements which make the relevant proposition true (this is also referred to as exclusivity). This can be shown using two exhaustivity tests which use entailment relations and additive particles (Keupdjio in prep; Kiss 1998, 2010). However, only one of Gitksan's two purported words for *only* is exhaustive: *k'am*. As will be shown in the following sections, *xsax* is not exhaustive when used alone.

3.1 Entailment relation test

Generally, if a sentence expresses that propositions *p* and *q* are true, it also entails that *p* is true: (12a) entails (12b).

- (12) a. John ate bread and cheese.
b. John ate bread.

However, this entailment relation no longer holds when the sentences contain exhaustive operators such as *only*: (13a) does not entail (13b), and indeed both (13a) and (13b) cannot be simultaneously true.

- (13) a. John only ate bread and cheese.
b. John only ate bread.

This pattern has been used as a diagnosis for exhaustivity by Szabolcsi (1981) and Kiss (1998).

A similar pattern appears in Gitksan sentences with *k'am* or *k'am xsax*: the (a) sentences do not entail the (b) sentences, and in fact both sentences cannot be simultaneously true.⁵

(14) a. *k'am xsax anaax gan=hl maa'y=hl gub-'y.* (vf)
k'am xsax bread PCNJ=CN berries=CN eat-1SG.II
 'I only ate bread and berries.'

b. *#k'am xsax anaax=hl gub-'y.* (sf)
k'am xsax bread=CN eat-1SG.II
 'I only ate bread.'

Comment: 'No, you can't say that. You would be lying because you didn't just eat bread.'

(15) a. *k'am miiluxw gan=hl limx-'y halaa-'y.* (vf)
k'am dance PCNJ=CN sing-1SG.II know-1SG.II
 'I only know how to dance and sing.'

b. *#k'am miiluxw halaa-'y.* (sf)
k'am dance know-1SG.II
 'I only know how to dance.'

Comment: 'That's not true. You said you know how to dance too.'

However, the same cannot be said for sentences with *xsax* alone, suggesting that *xsax* is not exhaustive. The (a) and (b) sentences can be simultaneously true, and (b) is entailed by (a).⁶

(16) a. *xsax anaax gan=hl maa'y=hl gub-'y.* (vf)
xsax bread PCNJ=CN berries=CN eat-1SG.II
 'I only ate bread and berries.'

b. *xsax anaax=hl gub-'y.* (sf)
xsax bread=CN eat-1SG.II
 'I only ate bread.'

Comment: 'Yes, that's true. You said you ate bread before and now you are saying again that you ate bread.'

(17) a. *xsax miiluxw gan=hl limx-'y halaa-'y.* (vf)
xsax dance PCNJ=CN sing-1SG.II know-1SG.II
 'I only know how to dance and sing.'

b. *xsax miiluxw halaa-'y.* (sf)
xsax dance know-1SG.II
 'I only know how to dance.'

Comment: 'Yes. You said you know how to dance both times.'

⁵ In order to avoid introducing the notion of entailment into my elicitations, I simply asked my consultant whether the (a) and (b) sentences could both be truthfully stated of the same scenario.

⁶ Note, however, that my consultant was sometimes unhappy with the (b) sentences because they "leave something out," despite saying that they were true — in fact, he rejected some (b)-like sentences that had proper names as the focus associates, commenting that it is "not right because you are ignoring people." I'm treating that as a pragmatic (maxim of quantity) rather than semantic issue based on that comment and the clear pattern exhibited with non-human focus associates, but it is certainly worth exploring further.

This is very surprising, because *xsax* is usually translated as *only*, and yet it departs here quite markedly from the semantics of *only*.

3.2 Additive particles test

In order to confirm that *k'am* is indeed exhaustive and *xsax* is not, an additional test is needed.

Additive particles like *also* presuppose that there is at least one alternative to their focus associate that is also true for the proposition in which they are contained (Krifka 1998). This fact, combined with the exhaustive nature of *only*, means that (18b) is not a suitable response to (18a), but (18c) is:

- (18) a. Jenny only ate bread.
 b. #Yes, she also ate cheese.
 c. No, she also ate cheese.

As predicted by the results of the previous test, *k'am* and *k'am xsax* pattern identically to *only* with responses using *hox* 'also', where (b) and (c) are possible responses to (a):

- (19) a. *k'am xsax anaax=hl gubi=s John.* (vf)
k'am xsax bread=CN eat-PN John
 'John only ate bread.'
 b. #ee, *hox=dii gubi-t=hl maa'y.* (sf)
 yes, also=FOC eat-3SG.II=CN berries
 'Yes, he also ate berries.'
 c. nee, *hox=dii gubi-t=hl maa'y.* (vf)
 NEG, also=FOC eat-3SG.II=CN berries
 'No, he also ate berries.'

Just as in the entailment test, *xsax* does not behave like an exhaustive operator:

- (20) a. *xsax anaax=hl gubi=s John.* (vf)
xsax bread=CN eat-PN John
 'John only ate bread.'
 b. ee, *hox=dii gubi-t=hl maa'y.* (vf)
 yes, also=FOC eat-3SG.II=CN berries
 'Yes, he also ate berries.'
 c. #nee, *hox=dii gubi-t=hl maa'y.* (sf)
 NEG, also=FOC eat-3SG.II=CN berries
 'No, he also ate berries.'

These two tests clearly show that *xsax* is not exhaustive. Therefore, it cannot be semantically equivalent to *only*. This explains why *k'am xsax* is so often used: *k'am* must be added in order to express exhaustive focus; *xsax* alone does not suffice. However, if *xsax* does not contribute exhaustive focus, what does it contribute, both when it is used alone and when it is used in combination with *k'am*?

4 Analysis

4.1 Identificational vs. information focus

Kiss (1998) proposes a distinction between two types of focus: identificational and information. Identificational focus is the type of focus expressed by *only*: it is exhaustive and takes scope. Meanwhile, information focus is non-exhaustive and simply marks that the constituent being focused is not presupposed. Kiss (1998:251) identifies English pitch-accent topicalization, as in [A HAT, Mary picked for herself], as a form of information focus.

In this framework, *k'am* would be treated as an identificational focus marker, because its focus associate is interpreted exhaustively. However, *xsax* could be analyzed as an information focus marker, due to its non-exhaustive interpretation.

This analysis explains why *xsax* is non-exhaustive, while *k'am* is exhaustive. However, it does not explain why *k'am* cannot be used alone to express identificational focus on arguments and adjuncts.

4.2 *K'am* is only semantically compatible with predicates

K'am is compatible with two types of associates: predicates and quantified arguments. In my data and Bicevskis et al. (2017), all examples where *k'am* associates with an argument or adjunct involve an overt quantifier or number. It seems to be unable to associate with unquantified arguments/adjuncts.

The arguments and adjuncts I have tested with *k'am* and *xsax* are individual-denoting DPs of semantics type $\langle e \rangle$. Meanwhile, predicates and (generalized) quantifiers are set-denoting.

Based on these facts, and on the use of *xsax* with *k'am* when exhaustively focusing arguments, I propose that *k'am* is semantically incapable of associating with individual-denoting DPs. The question of *xsax*'s semantic contribution then becomes even more relevant; however, I leave that issue for later work.

5 Conclusion

In this paper, I investigated two focus markers in Gitksan: *k'am* and *xsax*. I confirmed the findings of Bicevskis et al. (2017) with regard to their preferred focus associates, and also found that *k'am* *xsax* prefers argument/adjunct focus associates, and that *k'am* is not compatible with unquantified arguments.

Unexpectedly, I found that *xsax* is non-exhaustive, despite its previous description as the equivalent of the exhaustive focus marker *only* by Hindle and Rigsby (1973) and as an “exclusive” by Bicevskis et al. (2017). In order to account for this difference in meaning, I adopted the framework in Kiss (1998) and proposed that *xsax* expresses information focus, while *k'am* expresses identificational focus. Finally, to account for the use of *xsax* with *k'am* in exhaustive argument/adjunct focus contexts, I suggested that *k'am* may be semantically incompatible with individual-denoting argument/adjunct associates.

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