Sentence Type and Association with Focus in Aymara

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Sentence type marking is realized by two suffixes in Aymara, one marks declaratives and the other polar sentences (polar questions and negated sentences) by picking out one or two propositions, respectively. A third suffix, initially associated with wh-questions, turns out to be a (scalar) additive and unrelated to sentence type. The sentence-type-related suffixes associate with focus and the additive can associate with focus by attaching to the focused constituent.

Keywords: Focus, Association with Focus, Sentence Type, Aymara

1 Introduction

In the Aymara language there is a set of suffixes which, on a cursory view, seem to mark sentence type and focus simultaneously. These suffixes attach to the focused constituent and each of them seems to correspond to a sentence type. Suffix *-wa* appears in declarative sentences (1-b), *-ti* in polar questions (2-a) and *-sa* in wh-questions (1-a).

(1) a. Jupa-x   juma-n kuna-ma-**sa**?
         s/he-TOP you-G/L what-2.POS-sa
         'How are you related to her?'[1]

     b. Jupa-x   naya-n kullaka-ja-**wa**.
         s/he-TOP I-G/L   sister-1.POS-wa
         'She is my sister.'

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[1] Abbreviations used for glosses: 1,2,3,4: grammatical person; ABL: ablative; ADD: additive; ALL: allative; COM: comitative; DEM: demonstrative; EXCL: exclusive; FD:far distant; FUT: future; G/L: genitive/locative; INF: infinitive; LIM:limitative; LOC: locative; NCOMP: incompletive; ND: near distant; NMLZ: nominalizer; PAST: past; PL: plural; POS:possessive; PROG: progressive; Q: question particle; REFL: reflexive; SUB: subordinator; TOP: topic; VOC: vocative

(Yapita, 2007, 34)

(2)   a.   Jupa-x   juma-n   kullaka-ma-**ti**?
           s/he-TOP you-G/L sister-2.POS-ti
           'Is she your sister?'

      b.   Jisa, kullaka-ja-**wa**.
           yes   sister-1.POS-wa
           'Yes, she is my sister.'

(Yapita, 2007, 34)

In this article, I will specify how the suffixes correlate with sentence type and that they attach to the focused constituent. I use the term sentence type in the sense of grammatical configuration of linguistic elements of a sentence. The grammatical configuration consists of the syntactic configuration of lexical and functional elements and of the prosody. A sentence type stands in a relation to a speech act. I take declarative sentences in Aymara to express assertions. Both polar questions and wh-questions express interrogative speech acts.

An analysis of *-wa*, *-ti* and *-sa* will be sketched. The suffix *-wa* singles out a proposition and thus expresses an assertion. Suffix *-ti* picks out a proposition and additionally generates the complement proposition. This accounts for the polar nature of *-ti*. The suffix *-sa* turns out to be an additive operator and does not directly influence the sentence type interpretation.

Aymara is one of the three members of the Aymaran language family spoken by two to three million people, mainly around Lake Titicaca in western Bolivia and southern Peru. Typologically, it is an agglutinating SOV language, in which the verb shows agreement with the subject and the direct object. There is no previous formal semantic work on Aymara. Unless indicated otherwise, the data is my own, elicited during field trips between 2010 and 2013.

Section 2 presents focus data in Aymara and shows that the three suffixes attach to the focused constituent. Section 3 shows the distribution of *-wa*, *-ti* and *-sa* in sentences in which they co-occur and that the suffixes interact in a systematic way. Suffix *-sa* needs closer scrutiny, therefore section 4 is devoted to inspecting

the environments it appears in and its functions. A preliminary analysis of *-wa*, *-ti* and *-sa* is given in section 5. A possible mechanism for the relation between suffixes and focus is sketched in section 6. Section 7 concludes.

2 Association with Focus

This section presents data illustrating how the suffixes under discussion attach to focused constituents. The suffixes *-wa* and *-ti* attach to whatever constituent is focused. Suffix *-sa* attaches to the wh-element in a question. In order to identify the focused constituents, question-answer pairs and the exclusive marker *-ki-* and the additive marker *-raki-* are used. Exclusives and additives are known to be focus associating elements across languages.

On nominal constituents the three suffixes attach after the case marker, on verbal constituents after the person agreement marker, as can be seen for *-wa* in (3). Case marking in Aymara comes in three different guises. The nominative is expressed by zero case marking, the accusative is identified by the suppression of the final vowel after the base (before the suffixes under consideration) (Adelaar, 2004, 273). All other cases are expressed by suffixes, like the allative marker *-ru*. This is exemplified in example (3). The subject *Mariax* is not morphologically marked for case, the indirect object *wawaru* (to the baby) carries the allative marker *-ru-* and the direct object is identified by the absence of the final vowel, *a* of the basic form, *t'ant'a* (bread). So the morphological pattern by which case marking is realized differs between subject, direct object and indirect object.

(3)   Maria-x   wawa-**ru** t'ant' chur-i-wa.
       Maria-TOP baby-ALL bread give-3-wa
       'Maria gave bread to the baby.'

Aymara has an intricate system of vowel elision. As Adelaar (2004, p. 272) notes "[s]yntactically motivated vowel suppression affects the final vowel of any

major constituent of a sentence which does not occupy the final position in that
sentence." For example, in example (3), the final vowel of the topic marker *-xa*
on the subject is elided. The final vowel of the the allative marker *-ru-* is however
not suppressed in this example. The dialects of Aymara differ in how frequent
or obligatory these vowel elision processes are (Adelaar, 2004, footnote 61, p.
272). In the following subsection, data are presented showing subject, direct
object, indirect object, adjunct, sentence, VP and verb focus.

2.1   -sa and -wa

Wh-questions in Aymara are realized by a wh-element and the suffix *-sa*. Usu-
ally the wh-element occurs in its canonical position and *-sa* attaches to the wh-
element. Fronted foci are also possible and examples of that are given below.
Both suffixes, *-wa* and *-sa*, are subject to the vowel elision described above. In
the question-answer pairs below the marker *-sa* attaches to the wh-constituent in
the question (4-a), and the marker *-wa* attaches to the corresponding constituent
in the answer.

Subject focus:

For example, in (4-a), *-sa* is attached to the wh-subject *khiti-* ('who') and *-wa*,
in (4-b), to the focused subject *Maria*.

(4) a.   Khiti-**s** wawa-ru t'ant' chur-i?
          who-sa baby-ALL bread give-3
          'Who gave the bread to the baby?'

     b.   Maria-**w** wawa-r   t'ant' chur-i.
          Maria-wa baby-ALL bread give-3
          '*Maria* gave bread to the baby.'

In (5-b) *-wa* attaches to the focused subject right after the exclusive particle *-ki-*.

(5) a.   Carlos-amp Maria-mpe-x   vacaciona-r   sara-sik-i.
          Carlos-COM Maria-COM-TOP vacation-ALL go-PROG-3

'Carlos and Maria are going on vacation.'

b.   Jani-wa! Carlosa-ki-**w**   sara-sk-i.
      No-wa   Carlos-EXCL-wa go-PROG-3
      'No! Only Carlos is going.'

Direct object focus: Suffix *-sa* attaches to the wh-element in question (6-a). Suffix *-wa* doesn't appear attached to the base of the direct object in (6-b). The minimal pair carrying *-wa* on the direct object is ungrammatical (6-c). Various authors assume a zero allomorph of *-wa* in this case, among them Hardman et al. (1988). Another option would be to assume that *-wa* is erased in the same process as the vowel.

(6)   a.   Maria-x   wawa-ru kun-**s**   chur-i?
             Maria-TOP baby-ALL what-sa give-3.
             'What did Maria give to the baby?'

       b.   Maria-x   wawa-r   t'ant' chur-i.
             Maria-TOP baby-ALL bread give-3.
             'Maria gave *bread* to the baby.'

       c.   *Maria-x   wawa-r   t'ant'-**wa** chur-i.
             Maria-TOP baby-ALL bread-wa give-3.
             'Maria gave *bread* to the baby.'

Constituent answers containing *-wa* on the direct object are possible (7-b). Fronting of the direct object is possible (7-c) but even then the direct object may not carry *-wa* (7-d).[2]

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[2]   The decisive factor for elision seems to be the position with respect to the verb. Cerrón-Palomino (2000) presents examples of fronted verbs in which the direct object does not lose its final vowel and carries *-wa*.

(i)   Mun-ta t'ant'a-**wa**.
         want-1 bread-wa
         'I *want* bread.'

      Briggs (1993, 142) also gives examples of a zero complement (the direct object) which follows the verb which is marked by *-wa*.

(7) a. Maria-x   wawa-ru kun-**s**   chur-i?
         Maria-TOP baby-ALL what-sa give-3.
         'What did Maria give to the baby?'

     b. T'ant'-**wa**.
         bread-wa
         'Bread.'

     c. T'ant' Maria-x   wawa-r   chur-i.
         bread Maria-TOP baby-ALL give-3
         'Maria gave *bread* to the baby.'

     d. *T'ant'a-**w** Maria-x   wawa-r   chur-i.
         bread-wa Maria-TOP baby-ALL give-3
         'Maria gave *bread* to the baby.'

If another suffix like the commitative marker *-mpi-* in (8-a) intervenes between the base and *-wa*, *-wa* can appear on the direct object. The same holds if instead of *-mpi-* the exclusive maker *-ki-* intervenes (8-b).

(8) a. Juana-x   manzana-mp poqota-mpi-**w**   al-i.
         Juana-TOP apple-COM   banana-COM-wa buy-3
         'Juana bought an apple and a banana.'

     b. Jani-wa! Poqota-ki-**w**   al-i.
         No-wa   Banana-EXCL-wa buy-3
         'No! She just bought a banana.'

Indirect object focus: In (9-a), *-sa* attaches to the wh-element and *-wa* attaches to the indirect object. Both follow the allative case marker *-ru-* (9-b).

(9) a. Maria-x   khiti-ru-**s**   t'ant' chur-i?
         Maria-TOP who-ALL-sa bread give-3

(ii)   Na-x suy-t'a-sk-ta   jicha-x   chacha-j-**wa**.
       I-TOP wait-?-PROG-1 now-TOP husband-1.POS-wa
       'I am waiting for my husband.'

   In the case above, it is the vowel of the subject which is supressed. The subject directly precedes the verb. This hints at a syntactic or phonological explanation for the vowel reduction.

'To whom did Maria give the bread?'

b. Maria-x wawa-ru-**w** t'ant' chur-i.
Maria-TOP baby-ALL-wa bread give-3
'Maria gave bread *to the baby*.'

Adjunct focus: Suffix *-sa* attaches to the wh-adjunct in the question (10-a) and *-wa* attaches to the temporal adjunct in sentence (10-b).

(10) a. Kuna-pacha-kama-**sa** La Paz marka-n-k-äta?
what-time-LIM-sa La Paz place-G/L-NCOMP-2.FUT
'Until when will you be in La Paz?'

b. Phisi semana-mpi-**w** La Paz marka-n-k-ä
five week-COM-wa La Paz place-G/L-NCOMP-1.FUT
'I will be in La Paz for five weeks.'

The exclusive in (11-b) attaches to the adjunct *jichuru* (today), and *-wa* to the exclusive.

(11) a. Kuna ur-kama-**sa** aka-n-k-äta?
what day-LIM-sa here-G/L-NCOMP-2.FUT
'Until what day will you be here?'

b. Jichhuru-ki-**w** aka-n-k-ä
today-EXCL-wa here-G/L-NCOMP-1.FUT
'I will be here only today.'

Sentence focus: The suffix *-sa* in (12-a) attaches to sentence-final verbalized wh-element. The verbalization can be seen by the wh-element carrying the second person singular agreement marker *-ta*. In (12-b), *-wa* attaches to the verbalized spatial adverb.

(12) a. Kawki-n-ta-**sa**
where-G/L-2-sa
'Where are you?'

b.   Uta-ja-n-k-t-**wa**.
      house-1.POS-G/L-NCOMP-1-wa
      'I am at home.'

In the second part of (13), the additive *-raki* and *-wa* attach to the verb. This constitutes a case of VP focus or possibly sentence focus.

(13)   Jani-wa futbola-ki-t   gust-k-i-ti,   challwa katu-ña
        no-wa   football-EXCL-ABL like-NCOMPL-3-ti fish   fish-INF
        gusta-raki-**wa**.
        like-ADD-wa
        'He doesn't only like football, he also likes fishing.'

VP: The data below show the additive *-raki* and *-wa* attaching to a VP embedded under *sari* ('going'). In (14-b) *-wa* attaches to the same constituent as the additive marker, to *fishing*. This contrasts with *futbola* (football) in the preceding question, which is marked by the exclusive and *-ti*, by indicating that there is another activity besides playing football which Juan pursues.

(14)   a.   Kuna-s Juana-n lurä-wi-pa-xa?   Futbola-ki-t   anat-i?
              what-sa Juan-G/L do-NMLZ-3.POS-TOP Football-EXCL-ti play-3
              'What does Juan do? Does he only play football?'
        b.   Jani-wa! Challwa katu-ri-raki-**w**   sar-i.
              No-wa   fish   catch-NMLZ-ADD-wa go-3
              'No, he also goes fishing.'

Verb: In (15-b) *-wa* attaches to the verb which is marked by the exclusive.

(15)   a.   Maria-sti mä moxsat'ant' lur-i,   ukat moxsat'ant' manq'-as-i.
              Maria-sti one sweet:bread make-3, then sweet:bread eat-REFL-3
              'Maria made a sweetbread and then she ate a sweetbread.'
        b.   Jani-w lur-k-i-ti!   Manq'a-k-i-**wa**.
              no-wa make-NCOMP-3-ti eat-EXCL-3-wa
              'She didn't make it! She just ate it.'

2.2 -ti

Suffix *-ti* can attach to focused subjects, direct and indirect objects and focused sentences/verbs. It can also attach to the negation particle *jani-*.

Subject focus: In the polar question (16-a) suffix *-ti* attaches to the subject. The affirmative constituent answer (16-b) consists of the subject Maria marked by *-wa*. The negative short answer consists of the negation particle marked by *-wa* and the verbalized subject *Maria* carrying the incompletive marker, person agreement marker and *-ti*.

(16) a. Mariya-**t** wawa-r   t'ant' chur-i.
          Maria-ti baby-ALL bread give.3
          'Did *Maria* give bread to the baby?'

      b. Mariya-**wa**.
          Maria-wa
          '(Yes,) it was Maria.'

      c. Jani-w Mariya-**k**-i-**ti**.
          no-wa Maria-NCOMP-3-ti
          'No, it was not Maria.'

                                                    (Hardman, 2001, p. 174)

Direct object focus: In the polar question (17-a), *-ti* attaches to the direct object. The affirmative constituent answer (17-b) consists of the direct object from the question, *t'ant'* marked by *-wa*. In the negative constituent answer *t'ant'* is marked by *-ti* (17-c).

(17) a. Maria-x   wawa-r   t'ant'-**t** chur-i.
          Maria-TOP baby-ALL bread-ti give-3
          'Did Maria give *bread* to the baby?'

      b. T'ant'-**wa**.
          bread-wa
          'Yes, bread.'

    c.   Jani-w t'ant'-**ti**.
           no-wa bread-ti
           'No, not bread.'

<div align="right">(Hardman, 2001, p. 174)</div>

Indirect Object: Suffix *-ti* in (18-a) attaches to the indirect object.

(18)   a.   Maria-x   wawa-ru-**t** t'ant' chur-i.
               Maria-TOP baby-ALL-ti bread give.3
               'Did Maria give some bread *to the baby*?'

        b.   Wawa-ru-**wa**.
               baby-ALL-wa
               'Yes, to the baby.'

        c.   Jani-w wawa-ru-**ti**.
               no-wa baby-ALL-ti
               'No, not to the baby.'

<div align="right">(Hardman, 2001, p. 174)</div>

Sentence focus: In (19-a) *-ti* attaches to the verb in sentence-final position. Since the default position for verbs is sentence final, the example could also constitute a verb or VP focus in an appropriate context.

(19)   a.   Masuru-x   uta-ma-n-ka-yäta-**ti**?
               yesterday-TOP house-2.POS-G/L-NCOMP-2.ND-ti
               'Have you been at home yesterday?'

        b.   Jisa, uta-ja-n-ka-yät-wa,   luza-t   jut-i.
               yes, house-1-POS-G/L-NCOMP-1.ND-wa, light-ABL come-3
               'Yes, I was at home, the guy from the electricity company came by.'

Negation particle: In the following question-answer pair *-ti* attaches to the negation particle in the question (20-a) and *-wa* to the negation particle in the corresponding answer (20-b).

(20)   a.   Jani-**t** awt al-k-ta.
                not-ti car buy-NCOMP-2
                'Didn't you buy a car?'

        b.   Jani-**wa**.
                no-wa
                'No.'

<div align="right">(Yapita, 2007, 58)</div>

2.3 Section conclusion

This section presented data illustrating that *-wa*, *-ti* and *-sa* attach to focused subjects, direct objects, indirect objects and sentences. *-wa* and *-sa* were shown to also attach to focused adjuncts, VPs and verbs. *-ti* also attaches to the negation particle. The presented data showed that the three suffixes attach to focus. It remains to be shown whether the attachment to focus is obligatory. For that, negative evidence is required, which shows that if focus and one of the suffixes mark different constituents, the sentence is ungrammatical. This I have to leave to future work.

As Andreas Haida (p.c.) pointed out to me, the suffixes are not focus markers themselves but associate with focus. Evidence for that is that elements which associate with focus, like exclusives, attach to the base of the constituent, before *-wa*, *-sa* or *-ti*. If *-wa*, *-sa* or *-ti* were focus markers, the focus-sensitive exclusive had to attach to them and not the other way around (21).

(21)   Carlosa-ki-**w**   sara-sk-i.
        Carlos-EXCL-wa go-PROG-3
        'Only Carlos is going.'

Data suggesting that it is not even obligatory for all of the three suffixes to attach to focus is presented in the following section. Sentences containing two or even three of the suffixes are unlikely to be cases of double or triple focus. But an explicit context is required for these sentences in order to locate the focus. That

is also left to future work.

3   Sentence Type Marking

This section presents data on *-wa*, *-ti* and *-sa* illustrating their linguistic be-
haviour and their interaction with each other with respect to the sentence type.
This additional data will serve as basis for the elaboration of their respective
meanings in section 5.

Sentences containing multiple of the suffixes under consideration make clear
that there cannot be a simple one-to-one relation between suffix and sentence
type because that would result in a conflict between multiple sentence types. For
example, all three suffixes co-occur together in (22) below. Note that the three
occurrences of *-wa*, *-ti* and *-sa* most likely do not indicate that (22) is an instance
of triple focus, although closer scrutiny is required to settle this question.

(22)   Jani-**w** makina-s   kuna-**s** utja-p-k-itu-**ti**.
         not-wa machine-4.POS what-sa exist-PL-NCOMP-3>1-ti
         'We don't have any kind of machine.'

                                                                      (Hardman, 2001, 177)

Is there a principled way in which a combination of the suffixes stands to sen-
tence type? All possible combinations of the suffixes are found, all three to-
gether, *-wa* and *-ti* together, *-wa* and *-sa* together and *-ti* and *-sa* together. A
pattern is observable.

Suffix *-wa* always takes widest scope and gives rise to declarative sentences no
matter which other suffixes occur in the sentence. In (22), *-wa* scopes over *-ti*
and *-sa*. In the negative declarative sentence (23), *-wa* takes scope over *-ti*. Suf-
fix *-wa* attached to the negation particle *jani-* in (24) takes scope over *-sa* which
is attached to a wh-element.

(23)   Maria-x   jani-**w** wawa-r   t'ant' chur-k-i-**ti**.
       Maria-TOP not-wa baby-ALL bread give-NCOMP-3-ti
       'Maria didn't give bread to the baby.'

(24)   Jani-**w** kamach-k-i-**sa**.
       not-wa what.to.do-NCOMP-3-sa
       'S/he did nothing.'

<div align="right">(Hardman, 2001, 189)</div>

Suffix *-ti* in a sentence without *-wa* takes scope over *-sa* (25) giving rise to a polar question.

(25)   Juma-x jupa-ru-x   kun-**s**   chur-ta-**ti**.
       you-TOP s/he-ALL-TOP what-sa give-2-ti
       'Did you give her anything?'

<div align="right">(Hardman, 2001, 184)</div>

The pattern which arises from this data is that *-wa* always takes widest scope marking a sentence as declarative, *-ti* takes scope over *-sa*, marking the sentence as a polar interrogative question and *-sa* takes narrowest scope.

4   **-sa**

In order derive the meaning of *-sa*, we need to look at it in more detail, since it occurs in all sentence types. Contrary to its first appearance, I claim that *-sa* is not a question marker, but a (scalar) additive operator.[3] Additive operators are known to associate with focus across languages. The additive use is illustrated in (26) and the scalar additive use in (27).

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[3]   Here I don't decide whether *-sa* is an additive, like the English 'also' or a scalar additive, like 'even'. For the present purpose this is not of importance.

(26)   Jupa-x   saku-**s**   pantaluna-**s**, uka-nak ch'uku-sk-i.
       s/he-TOP jackets-sa trousers-sa   DEM-PL sew-PROG-3
       'He is sewing jackets, trousers, all of that.'

(Yapita, 2007, p. 125)

(27)   Uka-naka-x wiyka-tayn lluqalla-naka-rak isti ch'aka-nak-**s**.
       that-PL-TOP burn-3.FD   boy-PL-ADD   this bones-PL-sa
       'The boys burn[ed] this, too, (they cleaned) even the bones.'

(Coler, 2010, p. 385)

In a variety of languages, (scalar) additives combine with interrogatives to form indefinite pronouns (Haspelmath, 1997, p. 157). In section 3 with example (22), (24) and (25) we have observed that -*sa*, attached to *kuna*, serves an indefinite expression. Indefinites and interrogative pronouns are closely related in various languages. Haspelmath takes interrogative pronouns to be the basic form and derives the indefinite by attachment of an additive operator. Haida on the other hand considers "the identity of indefinite and interrogative pronouns as the basic phenomenon" (Haida, 2008, p. 48). As a wh-element is morphologically identical to the indefinite in Aymara (interrogative-indefinite + -*sa*), I opt for Haida's identity assumption and consider *kuna* and its kin to be indefinite-interrogative pronouns. Aymara basic indefinite-interrogatives are listed in table 1. There are other indefinite-interrogatives, but they are formed by one of the basic indefinite-interrogatives and other elements, like the Aymara equivalent to the English 'when' in (28).

kuna	what
khiti	who
kawki	where
qawqha	how much

Table 1: indefinite-interrogatives in Aymara

(28)   kuna-pacha
         what-time/space
         'when'

With respect to sentence type, I assume that *-sa* does not play a role. The interrogative function of a sentence in Aymara derives from the absence of the suffix *-wa*. A sentence not containing any of the three suffixes loses some of its illocutionary force. The paraphrases of the following minimal pair in (29) and (30) show this, and also the paraphrase of (31).

(29)   Naya-x sar-ä-**wa**.
         I-TOP   go-1.FUT-wa
         'I will go.'

(30)   Naya-x sar-ä-xa.
         I-TOP   go-1.FUT-TOP
         'I will go, I guess. All right?'

                                          (Hardman et al., 1988, p. 280)

(31)   Ch'armanti-x   juma-x-ay   iskuyla-r   jut-ta-xa.
         this.morning-TOP you-TOP-VOC school-ALL come-2-TOP
         'This morning (it was) you (who) came to school (right?).'

                                              (Hardman, 2001, p. 171)

From that I conclude that the interrogative force is not due to the presence of these suffixes, but to the absence of one, and is further strengthened by elements which induce alternatives, like focus and/or indefinites.

A wh-question in Aymara, as far as I can see, has two licensing conditions. First, it must not contain *-wa* or *-ti* and second, it must contain a (focused) indefinite-interrogative pronoun. We have seen evidence for the first condition in section 3. Sentences containing *-wa* or *-ti* never served as wh-questions. The second condition is based on the observation that all wh-questions we have seen (and I am aware of) contain an indefinite-interrogative pronoun. A further assump-

tion I make is that the indefinite-interrogative pronoun in a wh-question must be focused. Haida (2008, p. 48-52) gives examples in Lakhota, Korean and German in which an interrogative sentence containing an indefinite-interrogative pronoun serves as constituent question if the pronoun is focused. The following example is from Korean. If the indefinite *nwu(kwu)* is stressed, it is interpreted as a wh-element, as indicated by the paraphrase in (32-b), if unstressed, it is interpreted as indefinite (32-a).

(32)   nwu(kwu)-ka   pakkey w-ass-ni?
        someone/who-SUB outside come-PAST-Q
        a.   'Is there someone at the door?'
        b.   'Who is at the door?'

(Haida, 2008, p. 50)

In German, the same double use of indefinite-interrogative is observable. If the indefinite-interrogative pronoun *was* is stressed, sentence (33) is a double wh-question, as the paraphrase in (33-b) indicates, if unstressed, only reading (33-a) is available.

(33)   Wer hat was   gekauft?
        who has something/what bought
        a.   'Who bought something?'
        b.   'Who bought what?'

(Haida, 2008, p. 52)

The data in section 2 showed that the indefinite-interrogative pronoun in a wh-question in Aymara is focused. In the polar question (34-a), the indefinite-interrogative pronoun on the other hand is not focused and is interpreted as indefinite. The example also shows the more general fact that *-sa* does not always attach to the focused constituent, as it is not the indefinite which is focused in the question-answer pair in (34).

(34) a. Juma-x jupa-ru-x   kun-**s**   chur-ta-ti.
          you-TOP s/he-ALL-TOP what-sa give-2-ti
          'Did you give her anything?'

      b. Naya-x jupa-ru-x   kun-**s**   chur-t-wa.
          I-TOP   s/he-ALL-TOP what-sa give-1-wa
          'I gave her anything/something.'

(Hardman, 2001, 184)

The data presented above are compatible with the assumption that an indefinite-interrogative pronoun needs to be focused in order for the sentence to serve as wh-question, but negative evidence is required to settle the question conclusively.

In this section we have seen that *-sa* is a (scalar) additive which can attach to an indefinite-interrogative pronoun. Furthermore, *-sa* often attaches to the focused constituent, but it need not, especially in the presence of other suffixes, which also associate with focus. With respect to sentence type, we have seen that it does not play a role, but that it is the absence of *-wa* and *-ti* which mark a sentence as interrogative. The absence of a sentence-type-marking suffix and the presence of a focused indefinite-interrogative is what is required in Aymara to form a wh-question.

5   Proposal for the meaning of -wa, -ti & -sa

In this section I sketch preliminary meanings for *-wa*, *-ti* and *-sa*, taking into account the data presented in sections 2, 3 and 4. All suffixes are focus sensitive and attach to the focused constituent if only a single suffix occurs in a sentence. Suffix *-wa* yields a proposition (a set of possible worlds), the meaning usually associated with an assertion. Suffix *-ti*, when applied to a proposition, yields a two-element set of propositions. It picks out a proposition and generates its complement proposition. Suffix *-sa* is an additive operator. With respect to sentence type marking, it does not have function.

5.1   -wa

Concerning *-wa* so far we have seen that it takes scope over the other two suffixes and marks the sentence as declarative. Therefore, I take the meaning of a sentence containing *-wa* to be a proposition, a set of possible worlds. *-wa* picks out the set of possible worlds which are true in the evaluation world. This is illustrated for a declarative sentence (35).

Declarative Sentence:

(35)   Sar-t-wa.
        go-1-wa
        'I went.'

p: I went
-wa(p) : $\{p\}$
-wa(p) yields a single proposition.

5.2   -ti

There are two uses of *-ti*. As seen above, *-ti* appears in polar questions, cf. (25), and in a corresponding negative answer to a polar question, a negative declarative sentence. Here it co-occurs with *-wa*. Considering this data, it appears that *-ti* induces polarity.

The meaning of a question is the set of possible answers (Hamblin, 1958), thus it is a set of sets of possible worlds. And a polar question divides the set of possible worlds into two sets, the set in which p is true and the set in which p is not true. This is what I propose that *-ti* does. It divides the possible worlds into two non-overlapping sets. Below, this will be represented by proposition p and its complement proposition $(W \setminus p)$. This set of sets is polarized, i.e. one of the two sets (the affirmative one) is more prominent than the other, since a positive answer to a polar question refers to one of the two propositions and not the other.

A negative answer, in contrast, makes the other proposition more prominent. I don't give more details to how this prominence works, but Roelofsen and van Gool (2010) model this by *highlighting*. They assume the meaning of a question consists of two components, the proposal-set and the highlight-set (Roelofsen and van Gool, 2010, p. 389). The second set, the highlight-set models what I call the prominent answer.

A negative declarative sentence, the second environment in which *-ti* appears, additionally contains the suffix *-wa*. The suffix *-ti* divides the possible worlds and yields a (polarized) set of propositions. Then, suffix *-wa* picks out the prominent proposition and yields a single proposition. In the following, the composition of meaning for *-ti* and *-wa* is exemplified for polar questions and negative declarative sentences.

Polar Question:

(36)   Sar-ta-ti?
        go-2-ti
        'Did you go?'

p = you went
W = set of all possible worlds
$W \setminus p$ = the complement of p in W

-ti(p): $\{p, W \setminus p\}$

Suffix *-ti*, applied to a proposition, yields a set of mutually exclusive propositions, the meaning of a polar question.

Negative Declarative:

(37)   Jani-w sar-k-t-ti.
        no-wa go-NCOMP-1-ti

'I didn't go.'

p = I didn't go
-ti(p): $\{p, \mathrm{W}\backslash p\}$
-wa(-ti(p)): $\{p\}$

Suffix *-ti* yields a set of two propositions and *-wa* picks out the prominent proposition, which results in a desired proposition, p ('I didn't go.').

5.3   -sa

Suffix *-sa* is a (scalar) additive. Therefore it can and does appear in all sentence types, since it does not directly affect the formation of a particular sentence type. Additives merely introduce the presupposition that the predicate which holds for the focused constituent also holds for an alternative of the focused constituent. An additive does not contribute any truth-conditional meaning. Koch and Zimmermann (2010) capture this insight by representing the denotation of an additive by the identity function.

Wh-questions in Aymara arise in the absence of *-wa* and *-ti* and in the presence of a focused indefinite-interrogative. Focus in Aymara, in the absence of a suffix which structures the proposition, leads to the interpretation as a wh-question. The meaning of wh-questions is identified with the set of possible answers (Hamblin, 1958). This set corresponds to the set of focus alternatives. Focus in Alternative Semantics (Rooth, 1992) contributes a second layer of meaning, the focus meaning. These alternative propositions differ in the value of the focused constituent. The alternative values of the focused constituent range over the set of denotations of the semantic type of the focused constituent.

The focus alternatives directly act as sets of propositions which make up the denotation of a wh-question. This is illustrated below for (38).

Wh-Question:

(38)   Khiti-s sar-i
        who-sa go-3
        'Who went?'

p = somebody went

$[\![(38)]\!]^{o} =$ {p: ∃x[human(x)(w) & p = λw'.went(x)(w')]}

$[\![(38)]\!]^{Foc} =$ {p: ∃x[human(x)(w) & p = λw'.went(x)(w')],

            p: ∃y[human(y)(w) & p' = λw'.went(y)(w')],

            p: ∃z[human(z)(w) & p = λw'.went(z)(w')]}

$[\![]\!]^{o}$ is the ordinary interpretation function and $[\![]\!]^{Foc}$ is the focus interpretation function which yields all the focus alternatives. When it is not further restricted by *-wa* or *-ti*, $[\![(38)]\!]^{Foc}$ yields the final output which is a set of possible answers. Under this account, the presence of *-sa* in a wh-question is not necessary, since the communicative function of a wh-question is carried by the interaction of indefinite-interrogative and focus. If that is right, a wh-question should also be possible in the absence of *-sa* and only requires the absence of one of the suffixes under consideration and the presence of a focused constituent. This remains to be shown.

6   Discussion

Here I want to outline a possible mechanism by which the three suffixes under discussion associate with focus. The three suffixes do not necessarily associate with focus. They all carry a focus-checking feature. This feature can but need not check the focus feature of the focused constituent. The focus feature of the focused constituent on the other hand must be checked, but only once. This feature checking requirement triggers the movement and attachment to the

focused constituent of one of the suffixes under discussion. The suffixes are base-generated in sentence-final position. The order in which the suffixes are targeted by the checking requirement is first *-wa*, second *-ti* and last *-sa*. Multiple foci would result in multiple moved suffixes, provided that the sentence contains multiple suffixes. The feature checking mechanism must be able to explain multiple foci for simple declarative sentences (containing just one suffix, *-wa*). What checks the second focus feature and saves the derivation from crashing? We have seen that *-sa* does not always attach to the focused constituent. The movement and attachment to the (unfocused) indefinite-interrogative in example (34) of section 4 needs to be explained. This could be a more general requirement for *-sa* to attach to alternative inducing elements like indefinites, focus or listings/additive meanings.

7 Conclusion

The focus marking and sentence type indicating function of the Aymara suffixes *-wa*, *-sa* and *-ti* was examined. The suffixes don't mark focus, but associate with focus. When occurring alone, each of the suffixes attaches to the focused constituent. This was shown by the use of question-answer pairs and focus-associating elements like exclusives and additives. For focus-association of the three suffixes, a tentative explanation in terms of feature checking was discussed.

Suffix *-wa* was identified to mark declarative sentences by picking out a single proposition as the meaning of a sentence which contains *-wa*. *-ti* marks polar questions and, together with *-wa*, negative declarative sentences. This is explained by its two-proposition yielding denotation. It picks out a proposition and the corresponding complement proposition. Suffix *-sa* does not influence the sentence type. It is a (scalar) additive. A wh-question, in which *-sa* typically occurs, arises by the absence of one of the other two suffixes and a focused indefinite-interrogative pronoun. Without the proposition-restricting function of

of *-wa* and *-ti* the focus alternatives directly contribute the set of possible answers.

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