Observations on the Syntax of Adjunct Extraction in Kaqchikel[*]

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1. Introduction

When members of a certain class of adjuncts appear in a non-canonical preverbal position in Kaqchikel, the clitic *wi* follows the verb.

(1)   a.   X-Ø-in-löq'   pa k'ayb'al.[1]
               CPL-A3s-E1s-buy P   market
               I bought it in the market.

           b.   Pa k'ayb'al x-Ø-in-löq'   **wi**.
               P   market   CPL-A3s-E1s-buy **wi**
               In the market I bought it.

           c.   *Pa k'ayb'al   x-Ø-in-löq'.
               P   market   CPL-A3s-E1s-buy
               In the market I bought it.

Following is a discussion of the Kaqchikel construction in (1), which I will call adjunct-indexing, following Ayres (1983).[2] Adjunct-indexing is enticing because it affects a subclass of what are commonly called circumstantial adverbials (time, place, manner, comitative etc.). Even in the most stringent theories of adjuncts, where different adverbs

[1] The abbreviations used in the work are: 1=first person, 2=second person, 3=third person, A=absolutive, ADV=adverb(ial), AP=antipassive, APP=antipassive, BEN=benefactive, CLF=classifier, COM=comitative, COMP=complementizer, CONJ=conjunction, CPL=completive, DAT=dative DEM=demonstrative, DET=determiner, DIM=diminutive, E=ergative, FOC=focus, FUT=future, NCPL=incompletive, INS=instrumental, INDF=indefinite IRR=irrealis LOC=locative, NEG=negation, PASS=passive, p(l)=plural, P=preposition, PAR=Particle, PROG=progressive, Q=question particle/marker, REFL=reflexive, REL=relative, s(g)=singular, TOP=topic
[2] Ayres (1983) actually uses the general term 'indexing' to cover both ergative-indexing as well as the adjunct cases. I am concerned primarily with adjuncts, which I want to make clear by using a more transparent form.

have particular positions in the specifiers of a universal hierarchy of functional heads (Cinque, 1999), circumstantials are allowed to permute freely (p.15, 28-9). The fact that adjunct-indexing does not apply uniformly across circumstantials in Kaqchikel suggests that there are structural distinctions within the class. Moreover, analyses that allow circumstantials to adjoin freely do not predict that adjunction to a preverbal position should be any different than postverbal adjunction. Instead, phenomena like the *wi* clitic in Kaqchikel suggest that there are non-canonical positions for circumstantial adverbials, and when appearing in these positions, they maintain a relationship with their base positions, which can be realized through morphology.

After presenting the basic data in §2, I address the three primary barriers to our understanding of adjunct-indexing. The first problem is to see how the adjuncts that trigger *wi* can be distinguished from those that do not. §3 shows that the relevant adjuncts are the core adjuncts, which correspond to the high applicatives and are predicated of the event. Having established the class of adjuncts and its base position, §4 argues that *wi* is triggered by A'-extraction of the relevant adjuncts, which answers the question of how they get to their preverbal position under adjunct-indexing. It also helps to clarify the status of the clitic itself, that is, it cannot be a resumptive pronoun. In §5 I seek a positive answer for the question of what exactly is *wi* morphology and why is it triggered by extraction. I propose that *wi* is the realization of the focus feature that drives its movement. §6 reviews and suggests ways to extend the results presented in earlier sections.

2. Basic data

Although example (1) gives the canonical case of a preposed adjunct appearing with *wi*, it does nothing to delineate the scope of the phenomenon. The following section will expand on (1), presenting the basic facts about adjunct extraction that must be addressed by a theory of adjunct-indexing. In doing this, §2 will mirror the structure of the larger discussion through the order it presents the data. After detailing the subset of adjuncts that can co-occur with *wi*, I will present some common constructions that condition its appearance, and then give a descriptive account of the position of *wi* in the clause.

2.1. Adjuncts that participate in adjunct-indexing

Kaqchikel adjuncts can be roughly split into three groups. Some come after the verb, others are strictly preverbal, and there are those that are unmarked on either side of the predicate. The *wi* phenomenon is restricted to adjuncts of the first class, which include adverbs of place, instrumentals, comitatives, and other circumstantial adjuncts. Example (2) gives the case of a preposed locative adjunct, which is representative of the adjuncts in the following list (3) for which the same facts hold.

(2)   a.   X-Ø-pe   wawe'.
                CPL-A3s-come here
                He came here.

b. Wawe' x-Ø-pe   **wi**.
  here CPL-A3s-come **wi**
  Here he came.

c. *Wawe' x-Ø-pe.
  here CPL-A3s-come
  Here he came.

(3) a. Place
  b. Instrument
  c. Comitative
  d. Theme
  e. Prepositional Dative

  The classes in (3) form an exhaustive list of the adjunct types that condition *wi*. While most fit into the greater class of circumstantial adjuncts, not all circumstantial adjuncts induce *wi* when appearing in front of the verb. Temporal adverbials, for example, are usually considered to be circumstantial adjuncts, yet they are ungrammatical with *wi*. Example (4) shows that adjunct-indexing is not sensitive to morphological shape. Even though the preposition *pa* makes the adjunct *pa toq'a* 'at night' morphologically indistinguishable from many place adjuncts, *wi* is still illicit.

(4) a. N-Ø-a-bän   ri qa-wäy pa toq'a.
  NCPL-A3s-E2p-make DEM E1p-food P night
  You make our food at night.

b. *Pa toq'a n-Ø-a-bän   **wi** ri qa-wäy.
  P night NCPL-A3s-E2p-make **wi** DEM E1p-food
  At night you make our food.

Temporal adjuncts behave differently with respect to *wi*, but they also have a different distribution than other circumstantials. Although they are felicitous in clause final position, they more naturally fall before the verb (García Matzar and Rodríguez Guaján, 1997). Adjuncts that can only appear preverbally, such as quantificational, speaker-oriented, and manner adverbs, behave similarly with respect to the *wi* clitic.

  The evidence up to this point suggests that adjunct-indexing is a property of displaced circumstantial adjuncts with a postverbal base position. While this generalization covers most of the data, it misses wrinkles introduced by the benefactive and the prepositional dative. The prepositional dative is usually not taken to be a circumstantial adjunct, but it has a postverbal base position and conditions *wi* when preposed (5). The benefactive, on the other hand, is grouped with the circumstantials, but it cannot be preposed with *wi* (6), even though it has a postverbal base position.

(5)   a.   *Chi r-e   a-te'   x-Ø-in-ya'   ri   uq.
               P   E3s-DAT E2s-mother CPL-A3s-E1s-give DEM corte
               To your mother I gave the corte.

        b.   Chi r-e   a-te'   x-Ø-in-ya'   **wi** ri   uq.
               P   E3s-DAT E2s-mother CPL-A3s-E1s-give **wi** DEM corte
               To your mother I gave the corte.

(6)   a.   R-ichin   a-te'   x-Ø-in-löq'   ri   uq.
               E3s-BEN E2s-mother CPL-A3s-E1s-buy DEM corte
               For your mother I bought the corte.

        b.   *R-ichin a-te'   x-Ø-in-löq'   **wi** ri   uq.
               E3s-BEN E2s-mother CPL-A3s-E1s-buy **wi** DEM corte
               For your mother I bought the corte.

The *wi* clitic operates on both postverbal and circumstantial modifiers, but the critical example is (6), which shows that having the status of postverbal circumstantial is not enough to guarantee participation in the adjunct-indexing phenomenon. Because neither property, nor their combination is sufficient for adjunct-indexing, the basic data show that the analysis will have to draw a structural distinction within the class of postverbal modifiers that likewise partitions the circumstantial adjuncts.

2.2. Common constructions

        Due to the fact that adjunct-indexing affects canonically postverbal adjuncts, the intuition is that the appearance of *wi* is tied to the additional structural prominence afforded the relevant adjuncts under preposing. The intuition is confirmed when looking at the other constructions in which *wi* appears. Each case involves placing the adjunct in a preverbal position, but the issue of prominence is more transparent than in the case of simple preposing.[3]

        First notice that *wi* is necessary when adjuncts of the appropriate type are negated (7) or polarity questioned (8). If the adjunct is not one of the relevant types, *wi* is ungrammatical in these constructions (7c-8c).

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[3] The case of simple preposing will most likely turn out to be not so simple. When presented out of context, speakers assign sentences with an indexed adjunct a contrastive focus interpretation. This cannot be the final answer though, because they are used in cases where a contrastive interpretation is odd or impossible, for example, in the first utterance of a narrative (Sotz Mux, *Xib'inel*).

(1)   a.   Ojer ojer kan, pa jun tinamït e   k'o wi ka'i' achi-'a'. Re achi-'a' re' . . .
                     old old DIR, P INDF town   A3p EXT wi two man-pl. DEM man-pl DEM . . .
                     A long time ago in this one town there were two men. These guys . . .

(7) a.   Man wawe' ta   x-Ø-wa'   **wi**.
           NEG here   IRR CPL-A3s-eat   **wi**
           It's not here where he ate.

     b.   *Man wawe' ta   x-Ø-wa'.
           NEG here   IRR CPL-A3s-eat
           It's not here where he ate.

     c.   *Man chanin ta   x-Ø-wa'   **wi**.
           NEG quickly IRR CPL-A3s-eat **wi**
           It's not quicky that he ate.

     d.   Man chanin ta   x-Ø-wa'.
           NEG quickly IRR CPL-A3s-eat
           It's not quickly that he ate.

(8) a.   La wawe' x-Ø-a-löq'   **wi** ri   äk'?
           Q here   CPL-A3s-E2s-buy **wi** DEM chicken
           Did you buy the chicken here?

     b.   *La wawe' x-Ø-a-löq'   ri   äk'?
           Q   here   CPL-A3s-E2s-buy DEM chicken
           Did you buy the chicken here?

     c.   *La iwïr   x-Ø-a-löq'   **wi** ri   äk'?
           Q   yesterday CPL-A3s-E2s-buy **wi** DEM chicken
           Did you buy the chicken yesterday?

     d.   La iwïr   x-Ø-a-löq'   ri   äk'?
           Q yesterday CPL-A3s-E2s-buy DEM chicken
           Did you buy the chicken yesterday?

The *wi* clitic also appears in the remnants of the Kaqchikel instrumental construction. The suffix *-b'e* appears on the verb, while the instrumental is obligatorily preverbal (9a, García Matzar and Rodríguez Guaján (1997)). The fact that the instrumental is always preposed means that *wi* is ubiquitous in these constructions (9b).

(9) a.   R-ik'in   tz'iba'b'al x-Ø-in-tz'ib'a-b'e-j   **wi** ri   wuj.
           E3s-INST pen   CPL-A3s-E1s-write-INT.V-TR **wi** DEM paper
           With a pen I wrote the paper.

     b.   *R-ik'in   tz'ib'ab'al x-Ø-in-tz'ib'a-b'e-j   ri   wuj.
           E3s-INST pen   CPL-A3s-E1s-write-INT.V-TR DEM paper
           With a pen I wrote the paper.

The next two examples confirm that adjunct-indexing is not dependent on the morphological shape of the displaced constituent. The clitic appears when adjuncts of the correct class are constituent questioned (10) or provide the base on which a relative clause is built (11).

(10)   a.   Akuchi' x-a-b'e   **wi**?
                where   CPL-A2s-go **wi**
                Where did you go?

        b.   *Akuchi' x-a-b'e?
                where   CPL-A2s-go
                Where did you go?

        c.   *Janpe' x-a-b'e   **wi**
                when   CPL-A2s-go **wi**
                When did you go?

        d.   Janpe' x-a-b'e?
                when   CPL-A2s-go
                When did you go?

(11)   a.   Y-a-b'iyin   akuchi' n-Ø-kayi-x   **wi** ri   lawx.
                NCPL-A2s-walk where   ICPL-A3s-buy-PS **wi** DEM   nails
                You walk to where nails are bought.

        b.   *Y-a-b'iyin   akuchi' n-Ø-kayi-x   ri   lawx.
                NCPL-A2s-walk   where   ICPL-A3s-buy-PS DEM nails
                You walk to where nails are bought.'

The data show that adjunct-indexing is a more general syntactic phenomenon and is not tied to a specific construction. The appearance of *wi* in constituent questions and relative clauses, though, suggests that movement could be the uniting factor, although it is not so clear that we can implicate movement in the cases of simple adjunct preposing, the negation of adjuncts, or in instrumental voice constructions. Section §4 examines this question in depth and shows that movement is a critical property of adjunct-indexing, but first I want to examine the distribution of the clitic itself.

2.3. The postverbal position of *wi*

At first glance it might appear as if *wi* comes to occupy the base position of the displaced constituent, but this hypothesis is quickly disconfirmed. The *wi* clitic appears before directionals (12a), but it is strongly ungrammatical for adjuncts to sit in the same position (12b).

(12)   a.   Wawe' x-e-b'iyin   **wi** pe.
                here   CPL-A3p-walk **wi** DIR
                Here they walked.

        b.   *X-e-b'iyin   wawe' pe.
                CPL-A3p-walk here   DIR
                They walked here.

Instead, *wi* sits in a field of clitics between V° and the direct object (13a, García Matzar Rodríguez Guaján (1997):306).

(13)   a.   Pa q'equ'm   x-Ø-b'e-ki-q'etej   yan ta   chïk **wi** pe
                P   darkness CPL-A3s-DIR-E3p-hug PAR IRR PAR **wi** DIR
                k-i'.
                E3p-REFL
                They had already been hugging again in the darkness.

The correct descriptive generalization is that *wi* occurs immediately before the directionals, following all other postverbal clitics.

2.4. Summary

        To recap, the adjunct-indexing phenomenon is centered on the circumstantial adjuncts, but its boundaries meander. Even when restricting the generalization to postverbal circumstantials in order to improve coverage, the benefactive and the prepositional dative cause problems. Although the benefactive is a postverbal circumstantial and the prepositional dative is not, the later triggers *wi* on the verb when fronted, while the benefactive cannot. We have also seen that *wi* must appear on the verb when the appropriate adjuncts are displaced for negation, polarity questioning, instrumental applicatives, constituent questioning, relative clause construction, or simple preposing. I have also shown that when *wi* is triggered by one of the previous constructions, it does not appear in the position of the displaced constituent. Instead, *wi* is grouped with other postverbal clitics and directly precedes the directionals. The remainder of the work will seek an account of *wi* that is sufficiently general, while covering the basic properties of *wi* discussed here. The next section will begin the process by better classifying those adjuncts that condition the appearance of *wi*.

3. Can we determine the adjuncts that trigger *wi*?

3.1. Base position

        The data presented in §2.1. give a linear ordering for Kaqchikel adjuncts. The adjuncts relevant to the *wi* clitic are those with a postverbal base position. They are different from the obligatorily preverbal adjuncts, which are primarily sentential operators, such as quantificational and modal adverbials. Such elements usually take scope of the entire clause, which suggests that they are structurally superior. Although it

is not surprising that left peripheral material would be structurally superior, more interesting is the position of the adjuncts that participate in adjunct-indexing with respect to adjuncts that can appear on either side of the predicate. First note that the unmarked position for postverbal adjuncts is following the subject.

(14)   a.   V + O + S + OBL/ADV

        b.   X-Ø-u-löq'   ri   äk'   ri   nu-te'   pa k'ayb'al.
                CPL-A3s-E3s-buy DEM chicken DEM E1s-mother P   market
                My mother bought the chicken in the market.

        c.   X-Ø-u-bän   ri   qa-wäy   ri   nu-te'   pa toq'a.
                ICPL-A3s-E3s-make DEM E1p-food DEM E1s-mother P   night
                My mother makes our food at night.

Example (14b-c) cannot distinguish the positions of the postverbal temporal and the locative, but they are not the same. The temporal is actually in a structurally superior position to that of the locative, which allows us to distinguish postverbal adjuncts that require *wi* under preposing from those that do not, like temporals.

The first argument is that temporals do not permute freely with the adjuncts that trigger *wi*.

(15)   a.   X-Ø-u-sipaj   chi r-e   nu-te'   iwïr.
                CPL-A3s-E3s-give P   E3s-DAT E1s-mother yesterday
                He gave it to my mother yesterday.

        b.   ?X-Ø-u-sipaj   iwïr   chi r-e   nu-te'
                CPL-A3s-E3s-give yesterday P   E3s-DAT E1s-mother
                He gave it yesterday to my mother.'

(16)   a.   Xi-Ø-xajon   r-ik'in   w-ana'   iwïr.
                CPL-A3s-dance E3s-COM E1s-sister yesterday
                He danced with my sister yesterday.

        b.   ?Xi-Ø-xajon   iwïr   r-ik'in   w-ana'.
                CPL-A3s-dance yesterday E3s-COM E1s-sister
                He danced yesterday with my sister.

Notice that the temporal is better to the right of other adjuncts, which I take to be an indication of structural superiority. There is additional evidence from subject extraposition that structural superiority is the relationship that correctly explains the difference in grammaticality between the (a-b) sentences in the previous examples. Although the natural order is for adjuncts to follow the subject, extraposition of the

subject is possible, as in example (17a). Notice, though, that the subject cannot extrapose over a temporal (17b), which is clearly worse.

(17)   a.   X-Ø-u-löq'   ri   äk'   pa k'ayb'al ri   xta Irma
               CPL-A3s-E3s-buy DEM chicken P market   DEM CLF Irma
               Irma bought a chicken in the market.

        b.   *X-Ø-u-löq'   ri   äk'   iwïr   ri   xta Irma
               CPL-A3s-E3s-buy DEM chicken yesterday DEM CLF Irma
               Yesterday Irma bought a chicken.

The previous data show that temporal adjuncts are structurally superior to the adjuncts that trigger *wi* under preposing. If we follow Aissen (1992) and make the natural assumption that temporals adjoin to tense (TP/IP), then we can immediately establish TP as an upper bound for the base position of the relevant adjuncts.

3.2. Winnowing the postverbal adjuncts

    Having distinguished the adjuncts that prepose with *wi* from the (optionally) preverbal adjuncts through structural superiority, we can now tackle the more important question, namely why the benefactive does not trigger *wi*, even though it is a circumstantial adjunct that is base generated below TP. To correctly predict the class of relevant adjuncts, I will use the insights about applicatives presented in Pylkkänen (2002). Pylkkänen splits applicatives into two classes, high and low. The central distinction is that high applicatives modify the semantic event, while low applicatives combine with the direct object (Pylkkänen, 2002, p.17-26). I propose that the adjunct counterparts of the high applicatives form the class of adjuncts that trigger *wi* under preposing. This move makes sense of the uniform behavior of the relevant adjuncts, while both excluding those adjuncts that don't condition *wi* and making correct predictions about their distribution.
    We can use Pylkkänen's insights about applicative constructions to help understand adjunct-indexing in Kaqchikel, but first we need to connect the two phenomena, which we can do through the applicative morpheme *-b'e-*. We have already seen the remnants of the Kaqchikel instrumental voice, but note that even in modern Kaqchikel the adjuncts that trigger *wi* under preposing alternate with an applicative counterpart licensed by *-b'e-* (García Matzar and Rodríguez Guaján, 1997, p.384-385).

(18)   a.   X-Ø-u-pal-b'e-j   jun   pop ri   ixtän.
               CPL-A3s-E3s-stand-APP-TR INDF mat DEM girl
               The girl stood on a mat.

        b.   X-Ø-u-ch'o-b'e-j   ri   ixöq.
               CPL-A3s-E3s-speak-APP-TR DEM woman
               He spoke to the woman.

     c.   X-at-ru-tzijo-b'e-j   ri   ixöq.
             CPL-A3s-E3s-say-APP-TR DEM woman
             The woman talked about you.

     d.   X-Ø-u-samaji-b'e-j   w-achb'il.
             CPL-A3s-E3s-work-APP-TR E1s-friend
             He worked with my friend

Examples (18a-d) show that locatives, datives, themes, and comitatives can all become direct verbal arguments with the applicative morpheme -*b'e-*. These data indicate that adjunct-indexing affects the core adjuncts, that is, those that are most like arguments and that can become applied arguments. Moreover, if the semantics of the applicative counterparts of the core adjuncts are indistinguishable, which speakers will attest to, then we can extend Pylkkänen's semantic diagnostics for high and low applied arguments to the adjunct cases.

     Pylkkänen (2002) classifies applicatives across languages through tests derived from the semantics she proposes for her two types of applicatives. Informally, the high applicative construction is a two place relation between the event and an entity, while the low applicative construction denotes a change-of-possession relation between the direct object and an entity (Plykkänen (2002), p. 17-26).

     If the adjunct counterparts to high applicatives are predicated of the event, then the adjuncts that trigger *wi* should be ungrammatical when there is no semantic event. Individual level predicates provide an appropriate test because they do not introduce an event (Parsons, 1990; Kratzer, 1989). The following data show that locatives and comitatives are ungrammatical in individual level predicates (19). The same is true of datives, themes, and instrumentals.

(19)   a.   *Nïm r-aqän rija'.   pa   ch'at.
              Big   A3s-leg PRN.3s   PREP bed
              He is tall in bed.

     b.   *Nïm r-aqän rija'   r-ik'in   r-achb'il.
             Big   A3s-leg PRN.3s   E3s-COM E3s-friend
             He is tall with his friend.

In contrast, benefactives are grammatical in predicates without an event, but their semantics are different; they indicate possession (20).

(20)   a.   Nïm r-aqän   ri   ch'at w-ichin.
              Big   A3s-leg DEM bed E1s-BEN
              My bed is tall.

The data support the semantics of a high/low distinction within the Kaqchikel adjuncts. The semantics of high adjuncts require an event, and when there is no event they are

ungrammatical. The implications of example (20) are more complex. One possibility is that when there is a change of state, the benefactive denotes a change-of-possession relation, while when the predicate is static, the benefactive indicates just possession. Although more work needs to be done, there is a distinction between the postverbal adjuncts that trigger *wi* and the benefactive, and it is supports the idea the high adjuncts modify the event, while low adjuncts, such as the benefactive, do not.

 The distinction I have drawn between the benefactive and other postverbal adjuncts in Kaqchikel makes another prediction, this time on the distribution of the benefactive. Low applicatives and their adjunct counterparts should be ungrammatical with intransitive verbs because they would have an unsaturated argument position (Pylkkänen 2002, p.23). If the adjuncts that trigger *wi* correspond to the high class, they should be grammatical with intransitives, while the benefactive should not. The prediction is borne out in Kaqchikel because the distribution of the benefactive does, in fact, depend on the transitivity of the verb, which distinguishes it from its English counterpart, as well as the class of adjuncts that trigger adjunct-indexing. Notice in (21a) that while the benefative is grammatical when the verb has a direct object, it is illicit when the verb is intransitive (21b).

(21) a. X-Ø-in-löq'   ri äk'   r-ichin   nu-te'.
          CPL-A3s-E1s-buy DEM chicken E3s-BEN E1s-mother
          I bought the chicken for my mother.

      b. *X-i-b'e   r-ichin   nu-te'   pa   k'ayb'al.
          CPL-A1s-go E3s-BEN E1s-mother PREP market
          I went to the market for my mother.

The adjuncts that trigger *wi* under preposing can all appear in intransitive clauses.

(22) a. Y-i-samäj   pa k'ayb'al.
          NCPL-A1s-work P   market
          I work in the market.

      b. Y-i-samäj   r-ik'in   jun   w-achb'il.
          NCPL-A1s-work E3s-COM INDF E1s-friend
          I work with a friend

      c. Y-i-samäj   r-ik'in   jun   ikäj.
          NCPL-A1s-work E1s-COM INDF hatchet
          I work with a hatchet.

      d. Y-i-samäj   pa ru-wi'   ri   aq'om.
          NCPL-A1s-work P   E3s-THEME DEM medicine
          I work about (in) medicine.

Even the prepositional dative, which canonically occurs with ditransitive verbs, is still licit when the verb is detransitivized through antipassivization. In contrast, the benefactive is ungrammatical with antipassive verbs (23-24).

(23)   a.   X-Ø-in-tz'ib'aj r-ichin nu-te'.
                CPL-A3s-E1s-work E3s-BEN E1s-mother
                I wrote it for my mother.

        b.   *X-i-tz'ib'an   r-ichin   nu-te'.
                CPL-A1s-write-AP E3s-BEN E1s-mother
                I wrote for my mother.

        c.   X-i-tz’ib’a-n   chi r-e   nu-te’.
                CPL-A1s-write-AP P   E3s-DAT E1s-mother
                I wrote to my mother.

(24)   a.   X-e-ch’o-n   chi r-e   ri   q’atöy tzij.
                CPL-A3p-speak-AP P   E3s-DAT DEM mayor
                They spoke to the mayor.

        b.   *X-e-ch’o-n   r-ichin   ri   q’atöy tzij.
                CPL-A3p-speak-AP E3s-BEN DEM mayor
                They spoke for the mayor.

Example (23b) could not be used, for example, if my mother could not write. Even though the situation is plausible and not inherently semantically incoherent, the construction is ungrammatical.   The (23-4b) examples are especially telling because the verbs are canonically transitive. The ungrammaticality of the benefactive is thus due to the semantic requirement that the verb have a direct object, and not notional aspects of verbal semantics.
        Futher consideration of the same requirement produces a second prediction. Assuming semantic composition is local, the benefactive should have restricted distribution with respect to the direct object. This prediction also holds. We have already seen that the adjuncts that trigger *wi* appear on either side of the subject due to extraposition. In contrast once again, the benefactive cannot be in a position superior to the subject.

(25)   a.   X-Ø-u-löq'   ri po't   k-ichin   ri   nu-te'.
                CPL-A3s-E3s-buy DEM blouse E3p-BEN DEM E1s-mother
                My mother bought the blouse for them.

        b.   *X-Ø-u-löq'   ri   po't   ri   nu-te'   k-ichin.
                CPL-A3s-E3s-buy DEM blouse DEM E1s-mother E3p-BEN
                My mother bought the blouse for them.

(26)   a.   X-Ø-ukem   ri   pas w-ichin   ri   nu-metz'.
                CPL-A3s-E3s-weave DEM belt E1s-BEN DEM E1s-girlfriend
                My girlfriend wove the belt for me.

       b.   *X-Ø-u-kem   ri   pas ri   nu-metz'   w-ichin.
                CPL-A3s-E3s-weave DEM belt DEM E1s-girlfriend E1s-BEN
                My girlfriend wove the belt for me.

The data in (25-6) complement what we have seen concerning the transitivity restriction on the distribution of the benefactive. Unlike the high applicatives and their adjunct counterparts, which do not need a direct object and can occur in various positions, the benefactive is dependent on the presence of the direct object and cannot be separated from it by the subject.

3.3. Summary

A requisite to understanding the *wi* clitic is to be able to correctly classify the adjuncts that trigger its appearance. The reason is that we would like to be able to abstract from the class the common property or properties that *wi* is sensitive to. Most of the literature refers to *wi* and similar morphology in other languages as locative focus or the locative particle.[4] The important question, though, is why do themes and datives pattern with locatives, while temporales and benefactives do not? This section is a first attempt to answer this question, and the primary advance is the previously unnoticed transitivity restriction on the benefactive. Benefactives need a direct object to operate on, while the adjuncts that trigger *wi* modify the event and are the adjunct counterparts to high applicatives. The base position of the adjuncts under discussion is consistent with this conclusion. The adjuncts that trigger *wi* sit just below TP, which is the nexus of the event, while benefactives are lower in the clause, being dependent on the direct object. Having established the properties of the critical class of adjuncts, the next section considers how they get from their base position below TP to their structurally superior preverbal position when preposed with *wi*.

4. How do adjuncts get to a preverbal position?

When an element looks to have been displaced, the immediate question is whether it has moved or was base generated in the unexpected position. I will argue that when an adjunct appears in front of the verb in the presence of *wi*, it has been displaced via A'-movement. To do so, I will consider data from island phenomena, unbounded movement, as well as strong and weak crossover. Applying these tests to Kaqchikel unambiguously shows that adjunct-indexing is a movement phenomenon.

Complex-NP and adjunct islands are both strong barriers to extraction. When an adjunct has been preposed, *wi* cannot appear inside of the island. Example (27) demonstrates the ungrammaticality of extracting an adjunct from a complex-NP island, while examples with conditional, temporal, and reason clauses appear in (28).

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[4] Presumably this is because examples with locatives are frequent in texts.

(27)   a.   X-Ø-in-tz'ët   ri   achin ri   n-Ø-samäj   ke la.
                      CPL-A3s-E1s-see DEM man REL.PRN ICPL-A3s-work there
                      I saw the man that works there.

         b.   *Ke la x-Ø-in-tz'ët   ri   achin ri   n-Ø-samäj   **wi**.
                      There ICPL-A3s-E1s-see DEM man REL.PRN ICPL-A3s-work **wi**
                      There I saw the man that works.

(28)   a.   Y-i-kikot   wi x-Ø-b'e   Tojil pa k'ayb'al.
                      NCPL-A1s-happy if CPL-A3s-go Tojil P   market
                      I am happy if Tojil went to the market.

         b.   *Pa k'ayb'al y-i-kikot   wi x-Ø-b'e   **wi** Tojil.
                      P   market NCPL-A1s-happy if CPL-A3s-go **wi** Tojil
                      To the market I am happy if Tojil went.

         c.   Y-i-kikot   toq ni-Ø-b'e   Tojil pa k'ayb'al.
                      NCPL-A1s-happy when NCPL-A3s-go Tojil P   market
                      I am happy when Tojil goes to the market.

         d.   *Pa k'ayb'al y-i-kikot   toq ni-Ø-b'e   **wi** Tojil.
                      P   market NCPL-A1s-happy when NCPL-A3s-go   **wi** Tojil
                      To the market I am happy when Tojil goes.

         e.   Y-i-kikot   roma x-Ø-b'e   Tojil pa k'ayb'al.
                      NCPL-A1s-happy because CPL-A3s-go   Tojil P   market
                      I am happy because Tojil went to the market.

         f.   *Pa k'ayb'al y-i-kikot   roma   x-Ø-b'e   **wi** Tojil.
                      P   market NCPL-A1s-happy because CPL-A3s-go **wi** Tojil
                      To the market I am happy because Tojil went.

The previous examples all involve strong islands, which prohibit extraction of any sort.
The fact that adjunct-indexing is an adjunct extraction phenomenon predicts that weak
barriers to movement, such as WH-islands, will also prevent adjunct extraction with *wi*.
The prediction is borne out in (29-30), which manifest WH-superiority effects.

(29)   a.   N-Ø-aw-etamaj   achike xi-Ø-xajon   r-ik'in   ri
                      NCPL-A3s-E2s-know   who   NCPL-A3s-dance E3s-COM DEM
                      aw-achb'il?
                      E2s-friend
                      Do you know who danced with your friend?

       b.   *Achoj ik'in   n-Ø-aw-etamaj   achike x-Ø-ajon   **wi**?
                  Q   COM NCPL-A3s-E2s-know   who   ICPL-A3s-dance **wi**
                  With whom do you know who danced?

(30)   a.   X-Ø-a-tz'ët   achike   x-Ø-b'e   pa   k'ayb'al?
                  CPL-A3s-E2s-see who   CPL-A3s-go PREP market
                  Did you see who went to the market?

       b.   *Akuchi   x-Ø-a-tz'ët   achike x-Ø-b'e   **wi**?
                  where   CPL-A3s-E2s-see Q   CPL-A3s-go **wi**
                  Where did you see who go?

       Although the presence of both strong and weak island effects suggests that indexed adjuncts are moved from their base position, it might be the case that adjuncts in Kaqchikel cannot be extracted from their clause under any circumstances. Example (31) from natural text presents a counterexample to this second hypothesis.

(31)   a.   Akuchi n-Ø-ki-rayil   y-e'-apon   **wi**?
                  where   NCPL-A3s-E3p-desire NCPL-A3p-arrive **wi**
                  Where did they desire to arrive?

The adjunct has clearly been displaced from the embedded to the matrix clause in order to form the constituent question. The next group of sentences revisits the examples of weak island violations. Examples (32-33) parallel those in (29-30), with the exception that they are fully grammatical. Their grammaticality can be attributed to the removal of embedded WH-word, which prevents adjunct extraction from the lower clause.

(32)   a.   Achoj ik'in n-Ø-aw-etamaj   chi   xi-Ø-xajon   **wi**?
                  Q   COM NCPL-A3s-E2s-know   COMP NCPL-A3s-dance **wi**
                  With whom do you know he danced?

(33)   a.   Akuchi x-Ø-a-tz'ët   chi   x-Ø-b'e   **wi**?
                  where CPL-A3s-E2s-see COMP CPL-A3s-go **wi**
                  Where did you see him go?

Notice that the *wi* clitic marks the embedded clause as the origin of the adjunct. In these cases the adjunct cannot be misconstrued as modifying the matrix clause.

(34)   a.   Achoj ik'in x-Ø-a-tz'ët   chi   x-Ø-samäj   **wi**?
                  Q   COM CPL-3As-2Es-see COMP CPL-A3s-work **wi**
                  With whom did you see him work?
                  (*Who were you with. . ./Who was he with. . .)

b.   Achoj ik'in x-Ø-a-tz'ët   **wi** chi   x-Ø-samäj?
      Q   COM CPL-3As-2Es-see **wi** COMP CPL-A3s-work
      With whom did you see him work?
      (Who were you with. . ./?Who was he with. . .)

Example (34a) cannot be answered with the statement 'John was with me when I saw him work', which is the preferred reply for (34b). The available readings for an adjunct extracted from its clause strongly suggest that these adjuncts are merged in their base positions, then subsequently undergo A'-movement. The first claim receives support from the fact that the displaced adjunct is interpreted as modifying the clause in which *wi* appears, while the unbounded nature of preposing with *wi* confirms the movement analysis.

Further evidence supporting a movement account is that with respect to strong and weak crossover, adjunct-indexing patterns with A'-movement. The data are demonstrated in (35) and (36) respectively.

(35)   a.   Achoj ik'in n-Ø-r-etamaj   chi   x-e'-el   **wi**?
      who   COM NCPL-A3s-E3s-know COMP CPL-A3p-leave **wi**
      With whom does he know they left?
      (*who is such that he$_i$ thinks they left with him$_i$?)

(36)   a.   Achoj ik'in x-Ø-r-etamaj ru-te'   chi
      who   COM CPL-Ø-E3s-know E3s-mother COMP
      x-e'-el   **wi**.
      CPL-A3p-leave **wi**
      With whom did his mother know they left?'
      (*Who is such that his$_i$ mother thinks they left with him$_i$)

Notice in example (35) that the comitative question has crossed a pronominal that c-commands the extraction site. Crucially, the pronominal cannot bind the entity in question. The ungrammaticality of the configuration in question is due to strong crossover, which is a property of movement. The weak crossover case in (36) is similar, but focuses instead on the binding possibilities of the displaced comitative. The interrogative pronoun, which has moved across the possessor of *te'* 'mother', cannot bind it. A descriptive account of the problem is that to establish coreference, the base of the movement chain needs to c-command the pronoun in question. The next example shows that this requirement does not hold for the configuration in (37).

(37)   a.   N-Ø-r-etamaj   ru-te'   chi   x-e'-el   r-ik'in
               NCPL-A3s-E3s-know E3s-mother COMP CPL-A3p-leave E3s-COM
               ri   a   Xwan.
               DEM CLF Xwan
               His$_{*i/j}$ mother knows they left with Xwan$_i$.

      The data from islands of various strength, as well as strong and weak crossover support an analysis that has adjuncts preposed with *wi* moving to their derived positions. The syntactic tests dovetail with the semantic fact that adjuncts which have been extracted across multiple clauses must be interpreted in the clause where *wi* appears. This semantic data has the bonus of independently establishing a base position from which movement can then occur.

      While the data from the movement tests unequivocally show that adjunct-indexing is an A'-movement phenomenon, they also narrow the set of possible analyses for the *wi* clitic itself. There is a history placing movement and the appearance of resumptive elements in binary opposition (for example, Ross, 1967; Chomsky, 1977). In the first case, a displaced element is related to a trace or copy that sits in its base position, while a resumptive pronoun is bound by an antecedent that is base-generated in a higher portion of the clause. The distinction means that instances of true resumption repair island violations and do not participate in weak crossover, for example, while the opposite holds for movement constructions. Having already shown that adjuncts fronted with *wi* have the previous properties, as well as others associated with movement, it must be the case that the clitic is not a true resumptive pronoun.

5. What could *wi be?*

5.1. Focus and Ayres's insight

      Ayres (1983) argues that the antipassive voice in Ixil is actually two constructions. The first is a true voice in which the verb changes valency, while the second is "indexing", which Ayres defines functionally as prominence marking for a class of elements (1983 p.21). Ayres shows that antipassive-indexing, as opposed to antipassive voice, is used when subjects of transitive verbs are focused, negated, questioned, and relativized (1983, p.30-33). In this way, he connects antipassive-indexing to locative-indexing, which would be the Ixil version of the *wi* clitic. I believe that Ayres's insight is essentially correct. The *wi* clitic in Kaqchikel is associated with prominence given to the extracted adjunct and is also closely related to antipassive-indexing. I will give evidence that prominence is, more explicitly, focus, and suggest why the class of adjuncts that triggers *wi* patterns with transitive subjects.

      Until this point I have called cases such as (38) simple preposing. There is distributional evidence, though, that movement to the preverbal position is actually movement to the projection that hosts focused constituents.

(38)   a.   Pa k'ayb'al x-Ø-u-löq'   **wi** ri   äk'.
                  P   market   CPL-A3s-E3s-buy **wi** DEM chicken
                  She bought a chicken in the market.

The strongest piece of evidence that indexed adjuncts sit in the position that hosts focus is
that while topicalized NPs can precede an adjunct preposed with *wi*, a focused NP cannot
follow a *wi*-fronted adjunct (39-40).

(39)   a.   Ri   nu-te'   pa k'ayb'al x-Ø-u-löq'   **wi** ri   äk'.
                  DEM E1s-mother P market CPL-A3s-E3s-buy **wi** DEM chicken
                  My mother bought a chicken in the market.

        b.   *Pa k'ayb'al ja   ri   nu-te'   x-Ø-u-löq'   **wi**
                  P   market FOC DEM E1s-mother CPL-A3s-E3s-buy **wi**
                  ri   äk'.
                  DEM chicken
                  My mother bought a chicken in the market.

(40)   a.   Ri   xta Irma pa ch'at n-Ø-wär   **wi**.
                  DEM CLF Irma P   bed   NCPL-A3s-sleep **wi**
                  In her bed Irma sleeps.

        b.   *Pa ch'at ja   ri   xta Irma n-Ø-wär   **wi**.
                  P   bed FOC DEM CLF Irma NCPL-A3s-sleep **wi**
                  In her bed Irma sleeps.

We know that adjuncts fronted with *wi* do not sit in some position before focus because
they cannot follow a focused argument.

(41)   a.   ??Ja ri   nu-te'   pa k'ayb'al x-Ø-u-löq'   **wi**
                  FOC DEM E1s-mother P   market CPL-A3s-E3s-buy **wi**
                  ri   äk'.
                  DEM chicken
                  My mother bought a chicken in the market.

        b.   ??Ja ri   xta Irma pa ch'at n-Ø-wär   **wi**.
                  FOC DEM CLF Irma P bed   NCPL-A3s-sleep **wi**
                  In her bed Irma sleeps.

In examples (41a-b), the adjunct follows a focused argument, which is evident from the
focus clitic *ja*. The two syntactic tests in (39-41) narrow down the distribution of *wi*-
fronted adjuncts to precisely the focus position. They can occur neither above nor below
another focused constituent. The evidence suggests that while arguments occupy either

the topic or the focus position, wi-fronted adjuncts must necessarily be in the projection that hosts focused constituents.

      Although we can show that the base case of adjunct-indexing is movement to the focus projection, it is nontrivial to prove that the other constructions that trigger the appearance of *wi* on the verb are all instances of focus movement.[5] There is another piece of evidence, though, that we should be looking in this direction for an explanation of the *wi* clitic. Example (42) shows that *wi* is used in verb focus constructions.

(42)   a.   X-Ø-in-löq   **wi** ri   äk'.
                 CPL-A3s-E1s-see **wi** DEM chicken
                 I BOUGHT the chicken (I didn't steal it).

         b.   X-i-samäj   **wi**.
                 CPL-E1s-work **wi**
                 I WORKED (not anything else).

We should probably treat *wi* in cases like (42) as the morphological realization of a [+foc] feature on the predicate, which is exactly what we want for the adjunct extraction case. We have made the argument that the class of adjuncts that triggers *wi* are predicates of events, and we know from (42) that, at least in some cases, *wi* is the morphological realization of a focus feature on predicates. Although there is still a lot of work to do, a plausible way to implement Ayres's insight would be to analyze *wi* as the morphological realization of a focus feature on the extracted adjunct that requires its movement to the projection that houses focus.

      The major theoretical plus of such an analysis is that it allows us to unite what we have uncovered about *wi*, while assimilating the construction to agent focus. Because they are necessary in the same contexts, agent focus, like adjunct-indexing, should also be focus driven movement. The reason the two pattern together is clear now that we have narrowed down the adjuncts that trigger *wi* to those that correspond to the high applicatives. In Kratzer (1994), and most work after it, the external argument is related the event denoted by the verb by a functional head. Similarly, the adjuncts that trigger *wi* are those that add both a thematic relation and the entity that holds that relation to the event. So while the ergative argument would sit in the agent relation to the event, instrumentals, for example, would require that the appropriate entity is an instrument of the event. Even without technical implementation, the semantic similarities between these two elements suggests ways that we can try to develop a uniform analysis of the two constructions, which Ayres (1983) calls for.

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[5]Stiebels (2007) notes that while there are clear connections between focus and constituent questions, the other contexts that require agent focus morphology are not easily assimilated to focus. She goes ahead and argues that agent focus is driven by the feature [+foc], suggesting that the other instances, relative clause construction for example, are formed on analogy. Another possibility is that clefting unites the phenomena. Focus, negation, and polarity questions are all cleft-like in Kaqchikel, although the work has not yet been done to show that they are truly biclausal. Relative clauses still pose a problem, but it might prove hopeful that relative clauses and clefts have many similarities.

6. Conclusions

The *wi* clitic and its relationship to adjunct fronting is an enticing object of study because it lies at the intersection of many outstanding problems in Kaqchikel, as well as natural language syntax in general. The scope of my analysis shows that a complete account of adjunct-indexing in Kaqchikel would require a deep understanding of A'-movement, adverbial syntax, focus, agreement, and clitic ordering[6] in the language, each of which is a hotly contested and complex area of research. Although this work does not present a complete account of the *wi* clitic, I believe it reveals the general form that complete understanding will take, while commenting on each of the areas it touches.

The analysis first makes contributions to the question of which adjuncts actually trigger *wi*. The list of adjuncts is well known, but I show that they actually have a uniform behavior that is syntactically distinct from canonically preverbal adjuncts, as well as other postverbal adjuncts, like benefactives. I then show that when the relevant class of adjuncts appear preverbally with *wi*, they reach this position by A'-movement. Movement is important because it confirms that the adjuncts have a base position, which rules out analyses of *wi* that take the clitic to be a resumptive element, and suggests that *wi* is the realization of a morphological feature. The final section, working in the tradition of Ayres (1983), proposes that focus is the relevant feature and tries to connect adjunct-indexing to agent-focus, which is made possible by the similarities between external arguments and the core adjuncts that trigger *wi*.

What is clear is that an account of adjunct-indexing will need to unite the behavior of adjunct movement, focus, and a clitic that is primarily verbal morphology. Although this work makes a first pass at such an analysis, there are still unanswered questions and theoretical connections that need to be drawn. The most pressing problem is to find the unifying feature behind interrogation, negation, focus, and relative clauses. I've shown that, at least in the adjunct-indexing case, A'-movement is necessary, but the feature that drives this movement is still not clear. I would also like to better know the syntax of the adjuncts that trigger *wi*, and what that syntax means for their compositional semantics. For example, assuming that subjects of transitive verbs and applied arguments sit in specifiers of abstract verbal heads, do the adjuncts as well? If so, maybe these heads are registering the morphological features of extraction.

Finally, it is important to test the hypotheses put forth in this work by looking at other Mayan languages. A language with equivalent adjunct-indexing, but a different class of relevant adjuncts, would be ideal. If such a language required indexing of the benefactive, for example, I would predicate that the benefactive would be grammatical with intransitives. The data look too similar in K'ichee', but a nice test case would be Ixil, where Ayres did his work. Ixil has a collection of adjunct-indexing morphology that affects a larger class of adjuncts (Ayres, 1983, appendix A). There would be many opportunities to falsify and refine the ideas presented here, which should be done.

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[6] To understand better the way that the wi clitic is ordered in the clause, it would be interesting to do a comparative study on Sipakapense. Barrett (1999, p.233-235) shows that in this language the cognate *wi*' has a different position in the clause. A close study could help show the relation between the extracted adjunct an the morphological realization of this extraction.

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