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

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.

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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=beneactive, CLF=classifier, COM=comitative, COMP=complementizer, CONJ=conjunction, CPL=completive, DAT=dative DEM=deemonstrative, DET=determiner, DIM=diminutive, E=ergative, FOC=focus, FUT=future, NCPL=incompletive, INS=instrumental, INDF=infinite 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
have particular positions in the specifiers of a universal hierarchy of functional heads (Cinque, 1999), circumstantial are allowed to permute freely (p.15, 28-9). The fact that adjunct-indexing does not apply uniformly across circumstantial in Kaqchikel suggests that there are structural distinctions within the class. Moreover, analyses that allow circumstantial 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 \textit{wi}.
   here CPL-A3s-come \textit{wi}
   Here he came.

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

(4) a. N-Ø-a-bän \textit{wi} ri qa-wäy \textit{pa toq’a}.
   NCPL-A3s-E2p-make DEM E1p-food P night
   You make our food at night.

   P night NCPL-A3s-E2p-make \textit{wi} DEM E1p-food
   At night you make our food.

Temporal adjuncts behave differently with respect to \textit{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 \textit{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 \textit{wi} when preposed (5). The benefactive, on the other hand, is grouped with the circumstantials, but it cannot be preposed with \textit{wi} (6), even though it has a postverbal base position.
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.  

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*).
(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 quickly 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, Garcia Matzar and Rodriguez 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.

\[(14)\]
\[a. \quad V + O + S + \text{OBL/ADV}\]
\[b. \quad X-Ø-u-\text{löq}' \quad \text{ri} \quad \text{äk'} \quad \text{ri} \quad \text{nu-te'} \quad \text{pa} \quad \text{k'ayb'al.} \]
CPL-A3s-E3s-buy DEM chicken DEM E1s-mother P market
My mother bought the chicken in the market.
\[c. \quad X-Ø-u-\text{bän} \quad \text{ri} \quad \text{qa-wäy} \quad \text{ri} \quad \text{nu-te'} \quad \text{pa} \quad \text{toq'a}.\]
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 \(wi\).

\[(15)\]
\[a. \quad X-Ø-u-sipaj \quad \text{chi} \quad \text{r-e} \quad \text{nu-te'} \quad \text{iwir}. \]
CPL-A3s-E3s-give P E3s-DAT E1s-mother yesterday
He gave it to my mother yesterday.
\[b. \quad ?X-Ø-u-sipaj \quad \text{iwir} \quad \text{chi} \quad \text{r-e} \quad \text{nu-te'}. \]
CPL-A3s-E3s-give yesterday P E3s-DAT E1s-mother
He gave it yesterday to my mother.'

\[(16)\]
\[a. \quad Xi-Ø-xajon \quad \text{r-ik’in} \quad \text{w-ana’} \quad \text{iwir}. \]
CPL-A3s-dance E3s-COM E1s-sister yesterday
He danced with my sister yesterday.
\[b. \quad ?Xi-Ø-xajon \quad \text{iwir} \quad \text{r-ik'in} \quad \text{w-ana'}.\]
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’ê-. 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’ê- (García Matzar and Rodríguez Guaján, 1997, p.384-385).

(18) a. X-Ø-u-pal-b’ê-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’ê-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 ixōq.
   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 Pylkkānen’s semantic diagnostics for high and low applied arguments to the adjunct cases.

Pylkkānen (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. *Nīm r-aqān rija’. pa ch’at.
    Big A3s-leg PRN.3s PREP bed
    He is tall in bed.

    b. *Nīm r-aqān 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. Nīm r-aqān 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 (Pylkkän 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 benefactive 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.

Further 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.
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. 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?
    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 x-Ø-xajon wi?
   Q COM NCPL-A3s-E2s-know COMP NCPL-A3s-dance wi
   With whom did 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 NCLP-A3s-E3s-know COMP CPL-A3p-leave wi
With whom does he know they left?
(*who is such that he thinks they left with him?)

(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, mother thinks they left with him,)

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).
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
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
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. 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-lōq wi ri wäk'.
   CPL-A3s-E1s-see wi DEM chicken
   I BOUGHT the chicken (I didn’t steal it).

b. X-i-samāj 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.

5Stiebels (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 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'iche', 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 and the morphological realization of this extraction.
7. References


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