1. Introduction

Ch’ol (Mayan) does not have a single word that translates to ‘yes’ (Coon 2017). Instead, the language make use of two second-position clitics =ÄCH and =KU. Pragmatically, both affirm the content of a proposition. However, this paper argues they arrive to this meaning by using two distinct, semantic devices: epistemic modality and operation of Questions Under Discussion (QUDs).

1.1 Background

Wilbur & de Aulie (1978), Warkentin & Scott (1980), and Vázquez Álvarez (2002a, 200b, 2011) describe =ÄCH and =KU in Ch’ol as affirmative markers but do not give a clear distinction of their uses. Coon (2004), on the other hand, calls =ÄCH an affirmative and =KU an assertive. In this paper, I provide further evidence supporting this distinction made in Coon (2004).

As mentioned above, =ÄCH and =KU are second-position clitics. Second-position clitics in Ch’ol attach to the first word of the first syntactic phrase, which in this verb-initial language is the aspect marker. The clitics attach only to hosts that are at minimum CVC in form. This excludes the reduced aspect forms that are CV. In such cases, the clitics appear on the VP. Focused and topicalized items precede the VP, but these second-position clitics only attach to focused arguments and not topics. The clitics have a strict relative order as shown in Table 1 below. The clitics in the last two columns are not necessarily in complementary distribution.

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Second position clitics in Ch’ol

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1.2 Distribution

A polar-question (2a) may have the felicitous answers (2b) and (2c), with the affirmative =ÄCH and the assertive =KU, respectively. Note that the question makes use of the second-position interrogative clitic =BA. Using this clitic is optional, as polar questions may be formed by shifting the stress from the final position, to a phrase-initial position (Coon 2010). In the answer, the predicate ‘red’ is repeated with the clitic attached to it.

(2) Polar Question

a. Chächäk=ba\(^1\) jiñi ixim?
   red=INT DET corn
   ‘Is this corn red?’

b. Chächäk=äch (jiñi ixim).
   Red=AFF DET corn
   ‘Yes. (The corn indeed is red)’

c. Chächäk=ku\(^2\) (jiñi ixim).
   Red=ASV DET corn
   ‘Yes. (The corn indeed is red)’

However, it is misleading to assume that =ÄCH and =KU have the same semantic contributions. In fact, they are not inter-changeable. While the affirmative =ÄCH may co-occur with the dubitative =KA, the co-occurrence of the dubitative =KA with the assertive =KU is infelicitous (3b).

(3) With Dubitative

a. Ñoj-chächäk=äch=ka jiñi ixim?
   very-red=AFF=DUB DET corn?
   ‘Is it that this corn very red?’

b. #Ñoj-chächäk=ku=ka jiñi ixim?
   very-red=ASV=DUB DET corn?

---

\(^1\) Abbreviations: 1 = first person; 2 = second person; 3 = third person; A = Set A markers (ergative/possessive); AFF = affirmative clitic; ALR = already; ANIM = animate; APPL = applicative; ASV=assertive clitic; B = Set B markers (absolutive); COMP = complementizer; DET = determiner; DIM = diminutive; DIR = directional; DUB = dubitative clitic; FOC = focus; NEG = negative; IMPV = imperfective; INT = interrogative clitic; IV = intransitive verb; NCL = noun classifier; PERF = perfective; PREP = preposition; PROG = progressive; REL = relational; REP = reportative clitic; STAT = stative; TV = transitive verb. Ch’ol uses a Spanish-based orthography: ’ = [ʔ]; a = [ɨ]; b = [ɓ]; ch = [ʧ]; j = [h]; ñ = [ɲ]; ty = [tʃ]; x = [ʃ]; y = [j]; C’ = ejective consonant. Third person absolute agreement is null, and thus not included in glosses.

\(^2\) Geminate consonant is realized as a single [k].
Intended: ‘Is this corn very red?’

A similar non-interchangeability is evident in (4a-b). In this example, the reportative clitic =BI co-occurs with the assertive =KA (4a), but the affirmative =ÄCH with the reportative =BI is judged infelicitous.

(4) With Reportative

a. Tsa’=ku=bi puts’-i jiĩ mula.
   PERF=ASV=REP escape-IV DET mule
   ‘Allegedly, that the mule ran away’

b. #Tsa’=äch=bi puts’-i jiĩ mula.
   PERF =AFF=REP escape-IV DET mule
   Intended: ‘Allegedly, that the mule ran away.’

Below, I propose this asymmetry is due to the fact that the affirmative =ÄCH is a positive epistemic modal. The assertive =KU, on the other hand, is an operator of Questions Under Discussion (QUDs), marking that the at-issue information of a proposition had been previously resolved.

2. Affirmative =ÄCH

2.1 Epistemic Modality

According to Palmer (2001:23), epistemic modals are propositional operators that demonstrate the speaker’s “judgment about the factual status of a proposition.” They measure speakers’ certainty over the truthfulness of the proposition. The affirmative =ÄCH is an epistemic modal that creates a commitment to the truthfulness of the speaker’s proposition. The clitic may be paraphrased as an “it is true that p.” With the clitic =ÄCH in (5), the speaker is sure of the act of knowing something. In this case, that which is known is the event of the girl having fallen.

(5) Epistemic Modality

K-ujil=äch che’ jiĩ alã-x-ch’ok tyi yajl-i.
A1-know=AFF COMP DET DIM-NC-girl PERF fall-IV
‘[It’s true that] I know that the girl fell.’

The scope of the clitic is sensitive to which clause it attaches to. In (6), the clitic appears in the embedded clause [CP the girl fell]. In this case, the speaker is sure that the girl has fallen, but the force of that certainty does not scope over the act of knowing.

(6) Embedded

K-ujil che’ jĩñ=äch alã-x-ch’ok tyi yajl-i.
A1-know COMP DET=AFF DIM-NCL-girl PERF fall-IV
‘I know [it’s true that] the girl fell.’
The sensitivity to embeddedness is more evident in the infelicity of (7). Infelicity arises because the proposition that the clitic modifies is embedded within a matrix sentence that introduces uncertainty \([_{CP} \text{I don’t know} \ldots]\). The commitment to the proposition of the girl having fallen is thus impossible.

(7) Embedded in Negation
\[
\begin{align*}
\text{NEG} & \quad \text{A1-know if DET=}\text{AFF} \quad \text{DIM-NC-girl PERF fall-IV} \\
\text{Intended: ‘I don’t know if [it’s true that] the girl fell.’}
\end{align*}
\]

It might be tempting to argue that (7) is infelicitous because the affirmation of \(=\text{ÄCH}\) cannot co-occur with negation. However, in (8) the presence of the negation and the affirmative in the same clause is felicitous. In fact, the epistemic modal scopes over the negation. In (8), the speaker ensures the proposition \(p\) of not knowing \(E\), where \(E\) is the event of the girl having fallen. \(E\) may or may not be true, unlike in (6), where \(E\) must be true.

(8) Affirmation and Negation
\[
\begin{align*}
\text{NEG=}\text{AFF} & \quad \text{A1-know if DET DIM-NC-girl PERF fall-IV} \\
\text{‘[It’s true that] I don’t know if the girl fell.’}
\end{align*}
\]

The commitment to a proposition is also evident in example (9). The clitic cannot appear with the adverb \(\text{ma’tyika ‘maybe.’}\)

(9) Affirmation and ‘Maybe’
\[
\begin{align*}
\text{Maybe=}\text{AFF} & \quad \text{IMPV A3-can A3-letsel PREP tree} \\
\text{Intended: ‘[It’s true that] maybe, she can climb that tree.’}
\end{align*}
\]

Introducing the adverb ‘maybe,’ on which the affirmative clitic attaches, creates a possibility that the fact that the girl can climb the tree is not true. As such, a commitment to this information cannot be logically reached and (9) is infelicitous. This is similar to (7), where a commitment to a proposition cannot happen unless the event described by the proposition is known for sure to have taken place. This requirement is not to be confused with a realis marking. The affirmative \(=\text{ÄCH}\) is concerned with the speaker being certain about a proposition, which in these cases describe an event’s occurrence.

Additionally, the affirmative is not sensitive to counterfactuals or the periphrastic future in Ch’ol. In (10), the affirmative is felicitous with the periphrastic future, and thus does not contribute a realis marking.

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3 Possible alternative explanations preventing the affirmative in (9) include: 1) A semantic restriction where \(\text{Ma’tyika ‘maybe.’}\) is a compound word with the dubitative clitic \(=\text{KA,}\) which cannot precede the affirmative \(=\text{ÄCH;}\) and 2) A ponological restriction where vowel hiatus of \(a\) and \(ä\) does not allow for the affirmative to attach.
(10) **Affirmation and Future Event (Irrealis)**

Mi kaj i-kuch=äch tyilel jum-tyejm si’.
[vp IMPV begin A3-carry] =AFF come.DIR one-CL.NUM wood

‘[It is true that] He will bring one bunch of wood.’

The data in (11) provides evidence that the affirmative =ÄCH is an epistemic modal which contributes not-at-issue information. The commitment of a speaker to a proposition is not directly negotiable, similar to evidentials and appositives. In (5), repeated here as (11a), a felicitous continuation to the contestation “That’s not true…” in (11b) can be (11c), but not (11d).

(11) **Non-Negotiable**

a. K-ujil=äch che’ jiñ alä-x-ch’ok tyi yajl-i.
   A1-know=AFF that DET DIM-NC-girl PERF fall-IV
   ‘[It’s true that] I know that the girl fell.

b. Mach i-sujm=ik
   NEG A3-true=IRR
   ‘It’s not true…

c. …che’ tyi yajl-i.
   COMP PERF fall-IV
   …that she fell.’

d. #…che’ mach aw-ujil=ik.
   COMP NEG A2-know=IRR
   #…that you know.’

Continuing the response in (11b) with (11d) would constitute a reply against the commitment to the proposition’s factual status. Example (11d) provides evidence that the affirmative clitic must be contributing not-at-issue information.

2.2 **Not an Evidential**

Example (4b), where the affirmative =ÄCH is not felicitous with the reportative =BI, should not be taken as arising from two contradicting evidential types. In fact, =ÄCH is not an evidential because it is insensitive to different kinds of evidential values. The reportative =BI consistently has an indirect evidential meaning and it does not form part of a larger evidential paradigm (AnderBois 2014). Moreover, independent evidence shows the affirmative =ÄCH is not an evidential.

First, =ÄCH is not a direct evidential because the speaker does not have to have witnessed an event happening in any capacity (auditory, visual, sensory, and so on). In (12), a speaker is sure that Juan arrived to the village without having seen Juan.

(12) **Not a Direct Evidential**

Tsa’=äch jul-i aj-Wan pero mach=tyo j-k’el-e.
PERF=AFF return-IV NCL-Juan but NEG=still A1-see-TV

‘[It is true that] Juan came back, but I have not seen him yet.’
Moreover, =ÄCH is not an inferential evidential. In (13), the event or information that the speaker is happy is not inferred based on physical evidence, general knowledge or the speaker’s past experiences. Instead, happiness is simply felt by the speaker and the speaker wishes to express their commitment or certainty of their happiness.

(13) **Not an Inferential Evidential**
Ñoj-tyijikña-yoñ=äch.
very-happy-B1=AFF
‘[It is true that] I am very happy.’

Lastly, though there is no exhaustive study of the reportative =BI, the affirmative =ÄCH can be concluded not to clash on the evidential meaning of =BI because the affirmative is not infelicitous with reported information. In (14), the fact that Juan has returned was from a source that was not the speaker, but this does not impede the speaker from committing to the proposition or being certain that Juan is back. If the affirmative were a direct evidential, then (14) should have been infelicitous because the direct evidence of the evidential would conflict with the (indirect) reported evidence in the matrix clause.

(14) **Felicitous with reported information**
Ts’a’ i-su ‘b-oñ=la che’ ts’a’=äch=ix jul-i aj-Wan.
PERFA3-tell- B1=PL COMP PERF=AFF =ALR arrive-IV NCL-Juan
‘They told me that [it’s true that] Juan has already arrived.’

### 2.3 Connection to Yucatec Maya míin

The semantics of epistemic modality in Mayan languages is not broadly explored, but Ch’ol’s affirmative =ÄCH and Yucatec Maya (YM) MÍIN may be paralleled in their syntactic and scopal properties. AnderBois (2013) concludes MÍIN is a conjectural evidential, which is not an evidential at all. Instead, MÍIN marks epistemic possibility or uncertainty, and in some cases might have evidential readings. Both readings are available in (15).

(15) **YM: Conjectural evidential míin** (AnderBois 2013:1)
Míin yan u-k’aaxal ja’.
MÍIN FUT A3-fall water
Epistemic: ‘It might rain.’
Evidential: ‘I think/believe/infer that it will rain.’

The first similarity between =ÄCH and MÍIN is a syntactic. As mentioned above, second-position clitics in Ch’ol cannot attach to topics but may attach to focused arguments. MÍIN may have a similar distribution due to scope, but its position looks different because it is not a clitic like =ÄCH. Specifically, MÍIN may precede focused arguments, but may only follow topicalized elements as in (16a-b). This parallel may be a syntactic coincidence, but it leaves questions open about the nature of epistemic modality and topicalization.
(16) **YM: Distribution of MÍIN** (AnderBois 2013:2)

MÍIN one CL.ANIM cornfield PROG A3-go PREP-A3 work
‘I think he’s someone who goes early to the cornfield.’

b. [TOP Tech-e] míin t-a ch’uy-aj ch’o’ t-u nej-e’
You-TOP MÍIN PERF-A2 hang-STAT mouse PREP-A3 tail-REL
‘I think you held rats by their tail when you were a child.’

A more striking semantic-syntactic parallel is the change in scope that both MÍIN and =ÄCH share. Hanks (1984) holds that MÍIN occurs only in main clauses, thus is not embedded. But AnderBois (2013) remarks that there’s an exception to this rule when quantities are being modified, as in (17).

(17) **Embedded MÍIN** (AnderBois 2013:4)

T-in bis-aj míin [QNP jum-p’eel tambor ja’].
PERF-A1 bring-STAT MÍIN one-CL.INAM jug water
‘I think I brought about a jug of water’

The conjectural evidential in (17) precedes a quantified NP. AnderBois (2013) writes the uncertainty of MÍIN is over the quantity of water. Whether water has been brought is not at stake, rather the amount, showing that MÍIN has now a narrow scope. The narrowing of the scope happens with the certainty of =ÄCH when it is attached to a quantified NP. Compare (18a) with (18b-c).

(18) **Scope changes of =ÄCH**

a. [VP Mi kaj i-kuch]=äch tylel jum-tyejm si’.
IMPV begin A3-carry=AFF come.DIR one-CL.NUM wood
‘[It is true that] He will bring one bunch of wood.’

b. [jum-tyejm si’]=äch mi kaj i-kuch tylel.
one-CL.NUM wood=AFF IMPV begin A3-carry come
‘He will bring precisely one bunch of wood.’

c. [jum-tyejm]=äch mi kaj i-kuch tylel [NP t si’].
one-CL.NUM=AFF IMPV begin A3-carry come wood
‘He will bring precisely one bunch of wood.’

In (18a), the affirmative clitic attaches to the periphrastic future. The commitment to the proposition is about someone bringing wood. However, in (18b) the quantified NP has been extraposed to the left. The reading is about exactly how much wood will be brought. If someone brought at least two bunches or piles of wood, (18b) is infelicitous. Example (18b) is felicitous only if exactly one bunch of wood will be brought. The same reading is achieved in (18c). In (18c) only the numeral with its classifier are extraposed. The syntactic reasons for why this seemingly discontinuous constituent is possible is beyond the scope of this paper, but the similarity to YM MÍIN in having a narrow scope reading still stands for the epistemic modal =ÄCH.
3. **Assertive =KU**

In the previous section, I have established that the assertive clitic is an epistemic modal that contributes not-at-issue information about a speaker’s certainty over a proposition. However, the assertive clitic =KU specifically deals with at-issue information as a QUD operator. A Question Under Discussion (QUD) refers to the at-issue information of a proposition that is being negotiated. A QUD operator controls how information is re-accommodated in the context, by adjusting, adding to, and recalling from the common ground.

The assertive =KU is an operator that marks when the QUD had been previously resolved in the common ground. It can be used to recall propositions from the common ground into the context. It may be paraphrased as ‘as said,’ or ‘as I was saying.’ Uttering $KU(p)$ marks that $p$ is shared knowledge between the speaker and the addressee.

Revisiting the examples in (2a&2c), repeated here as (19a&19b), it is noteworthy there are a few contexts where (19b) is a felicitous response. It is felicitous if the speakers had previously discussed that the corn is red or if the red corn is visible to both speakers, such that establishing its color was not up for debate. However, (19b) is in felicitous if the speaker in (19a) does not share the knowledge of (19b) or if (19b) is said out of the blue.

(19) **Polar Question**

a. Chächä=ba jiñi ixim?
   red=INT DET corn
   ‘Is this corn red?’
   Context: The red corn is visible to both speakers.
   Context: The speakers had previously discussed the corn’s color.
   #Context: Out of the blue, someone says (21b).
   #Context: Speaker in (21a) does not believe the corn is red.

b. Chächä=ku (jiñi ixim).
   red=ASV DET corn
   ‘Yes. (The corn indeed is red)’

The assertive =KU is felicitous as well in commands only if the command has been previously said. As such, the assertion that =KU provides comes from re-asserting shared information (including information in requests) as in the contexts available in (20). The assertive =KU thus marks that at-issue information had been resolved, which in commands works to remind the addressee that the speaker’s request should be met.

(20) **Imperatives with =KU**

Context: Out of the blue, someone utters (21a).

a. Jak’-beñ-oñ!
   Obey-APPL-B1
   ‘Obey me!’

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4 The assertive =KU works similarly to unfocused doch (see Rojas-Espopnda 2013 for a discussion on unfocused doch).
The assertive $=KU$ is not concerned with propositional contrast, but marks the QUD as closed or resolved. However, delving further into the resolution of QUDs in non-declarative sentences remains to be discussed. I have not found felicitous interrogative sentence that employ the assertive $=KU$, which may be due to the fact interrogatives inherently open QUDs while $=KU$ marks them as closed. The semantics of the dubitative $=KA$, as such, may not be the only reason for the infelicity of (3b, repeated here as 21) with the dubitative $=KA$ and the assertive $=KU$.

(21) **QUD operator in interrogative**

\[
\text{#Ñ}{}j-oñ-chächäk}=ku=ka \quad \text{jixi jixim?}
\]

very-red=$ASV=DUB$ DET corn?

Intended: ‘[As I was saying/As said,] Is this corn very red?’

4. **Points of Departure**

Having established the interaction of $=ÄCH$ with not-at-issue information, why does this clitic precede all others as in Table 1. It unexpectedly precedes the aspectual clitics $=IX$ and $=TYO$, which detail the edges of an event or the continuation of an event, respectively (Vázquez Álvarez 2011) as in (22). Because these latter clitics have more telic meanings, they deal with the time frames of at-issue information and would intuitively be closer to their predicates.

(22) **Affirmation before Aspect**

\[
\text{Ñox-oñ}=äch=ix=ku
\]

Old-A3=$AFF=ALR=ASV$

‘[I’m telling you and it’s true that] I am already old.’

Speculations may point to the historical route for at least $=IX$, as it is related to the completive aspect in other Mayan languages. Potentially, epistemic modality had a different realization on aspects particles. However, developing a syntactic explanation to how this aspect and modal became enclitics in this order remains an open question.

5. **Conclusion**

Ch’ol circumvents the lexical gap for ‘yes’ with epistemic modality though the affirmative $=ÄCH$ and the operation of Questions Under Discussion though the assertive $=KU$. I have argued for this distinction with empirical evidence, thus supporting the affirmative/assertive distinction posited in Coon (2004). This research adds to explorations of epistemic modals independent from evidentially
in Mayan languages. Moreover, it may demonstrate the intricate ways in which managing QUDs in different speech acts interacts with various sentence types.

References


José Armando Fernández Guerrero
jferandezguerrero@ucsd.edu