The interpretation of bare nouns and argument formation in Ch'ol (Mayan)

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This paper investigates the interpretation of bare nouns in Ch'ol (Mayan). A definite interpretation is possible for bare nouns in subject or object position. Indefinite interpretations of bare nouns, however, are more restricted. (Kind/generic interpretations are discussed in the full paper.) Building off Coon & Preminger (2011), I argue that this follows from the Mapping Hypothesis (Diesing 1992) and standard assumptions of type shifters in languages that allow definite bare nouns (Chierchia 1998; Dayal 2004). Finally, I will discuss implications of the empirical pattern in Ch'ol for type shifters that are available in natural language.

Background. Ch'ol is a Mayan language of the Ch'olan-Tseltalan subfamily spoken in Southern Mexico by about 222,000 people. There are three main dialects: Tumbalá, Tila and Sabanilla. The data in this paper comes from the author's fieldwork with the Tumbalá dialect. Ch'ol is a predicate-initial, ergative-absolutive language. Example (1a) is an intransitive verb with an obligatory aspect marker. Subjects of transitive verbs are ergative (marked by *i-* in (1b)) whereas absolutive marking for third person is null and therefore not included in glosses like in (1a).

(1) a. Intransitive

    Ta' majl-i aj-Rosa.
    PRF go-IV NC-Rosa

    'Rosa left.'

    b. Transitive

    Ta' i-k'ux-u waj aj-Rosa.
    PRF ERG.3-eat-TV tortilla NC-Rosa

    'Rosa ate a tortilla.'

Subjects of intransitive verbs and objects of transitive verbs are internal arguments in Ch'ol whereas subjects of transitive verbs are external arguments (Coon 2013). The data in (1) is important for this paper because, as shown below, there is a difference in the possible interpretations of bare nouns as external arguments (i.e., subjects of transitive verbs) versus bare nouns as internal arguments (i.e., subjects of intransitive verbs (1a) and objects of transitive verbs (1b)).

Bare nouns as internal arguments. As has been shown previously (Coon 2010, 2013; Clemens & Coon 2018), word order patterns in Ch'ol are sensitive to the bareness of the internal argument. Namely, bare objects of transitive verbs must appear next to the verb. As seen in (2a), the verb and bare object must be adjacent. The adverb *ak'bi* may not appear between a verb and a bare object as per the ungrammaticality of (2b). For intransitive verbs and bare subjects, adverbs can come after the verb-noun complex (3a) or intervene as in (3b). However, as the translations allude to, an indefinite interpretation is available for the subject in (3a) but not for (3b).

(2) a. *Ta' j-k'ux-u waj **ak'bi**.*
    PRF A1-eat-TV tortilla **yesterday**

    'I ate a tortilla yesterday.'

    b. ** Ta' j-k'ux-u **ak'bi** waj.*
    PRF A1-eat-TV **yesterday** tortilla

    Intended: 'I ate a tortilla yesterday.'

(3) a. *Ta' jul-i wiñik **ak'bi**.*
    PRF arrive-IV man **yesterday**

    'A man arrived yesterday.'

    b. *Ta' jul-i **ak'bi** wiñik.*
    PRF arrive-IV **yesterday** man

    'The man arrived yesterday.'

While the word order distributions in (2) have been reported in the literature (Coon 2010; Clemens & Coon 2018), this paper focuses on novel data concerning definiteness and the interpretation of bare arguments and their status as subjects or objects.

The example in (4) below provides evidence that internal bare arguments can get an indefinite interpretation. The mention of *wiñik* 'man' in (4) is the first mention of a man in the story *Xiba*. *Wiñik* 'man' is the subject of the intransitive verb *chämi* 'die'.

(4) *Ta'=bi   chäm-i **wiñik**.*
     PRF=REP die-IV **man**

     'A man had died.'   *Xiba*

Bare internal arguments, however, may also be definite as evidenced by the following sentence. In (5), the corn has been mentioned before and the bare noun *ixim* 'corn' after the verb refers back to the previously mentioned corn.

(5) Previous sentence in story 'The guys entered to where some corn was.'

     *Ta'=bi   i-jok'-o-yob   **ixim** a'   wiñik-ob.*
     PRF=REP ERG.3-take-TV-PL **corn** DET man-PL

     'The men took out the corn (by hand).'   *Xiba*

Bare subjects of intransitive verbs (i.e., internal arguments) may also be definite. In (6), the woman is an established protagonist in the story where this example comes from. Thus *x'ixik* is definite as the sentence in (6) is uttered at the end of the story. (Note that *lok'el* is a directional and not an adverb, following Aissen (2009) I treat this as a serial verb construction.)

(6) *Ta' puts'-i lok'el   **x'ixik**.*
     PRF flee-IV DIR:away **woman**

     'The woman fled away.'   *Bajlum*

In sum, bare nouns that are internal arguments can be definite or indefinite in Ch'ol.

Bare nouns as external arguments.   Bare nouns may also appear as external arguments, i.e., the subject *x'ixik* 'woman' of the transitive verbs in (7).

(7) *Tyi y-il-ä   wiñik **x'ixik**.*
     PRF ERG.3-see-TV man **woman**

     'The woman saw the man.'   Vázquez Álvarez (2011: 21)

However, the interpretation of bare nouns as external arguments is more restricted. Bare nouns as external arguments must always be interpreted as definite. The bare noun subject in (8) must be interpreted as definite. Speakers reject (ii) as a translation of (8) and instead provide (9) as the Ch'ol version for (ii) where *juñtyikil* 'one' is used to force an indefinite reading of the subject.

(8) *Ta' i-kuch-u   si' **wiñik**.*   (9) *Ta' i-kuch-u   si' **juñ-tyikil** wiñik.*
     PRF ERG.3-carry-TV wood **man**   PRF ERG.3-carry wood **one-CL**   man

     (i) 'The man carried wood.'   'A man carried wood.'
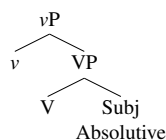   (ii) NOT 'A man carried wood.'

To sum, external bare nouns are always interpreted as definite. To receive an indefinite interpretation the numeral 'one' is needed as in (9). For internal arguments (both marked as absolutive), objects of transitive verbs and subjects of unaccusative verbs pattern slightly differently. Bare objects must remain next to the verb and can be interpreted as definite or indefinite. Bare absolutive subjects may remain next to the verb or other material may intervene. However, as shown by the differences in (3), the bare absolutive subject is interpreted differently given its position.

Analysis.   My analysis consists of two parts: (i) I argue that the empirical facts are predicted by Diesing (1992)'s Mapping Hypothesis, and (ii) I additionally propose that Ch'ol has a freely available ι type shifter. Since Kratzer (1996) inter alia, it has been standard to assume the Split VP Hypothesis where external arguments are base-generated outside of the VP and in the specifier of *v*P (or VoiceP). Given the structures of transitive and intransitive clauses in (10) adopted for many languages and argued for Ch'ol in Coon & Preminger (2011), the only material to originate inside the VP is the object of transitive verbs and subjects of intransitive verbs (i.e., internal arguments).

(10) a. Transitive verb

```
        vP
       /  \
   Subj    v'
 Ergative / \
         v   VP
            / \
           V   Obj
          Absolutive
```
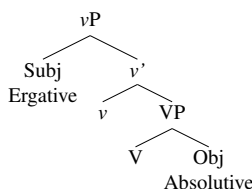
b. Intransitive verb

```
        vP
       /  \
      v    VP
          /  \
         V    Subj
          Absolutive
```

Given the empirical implications, the only bare nouns that can be interpreted as indefinite are objects of transitive verbs and subjects of intransitive verbs. The facts presented in Ch'ol are predicted by Diesing (1992)'s Mapping Hypothesis in (11). Nouns that are within the VP and have not moved out receive nuclear scope (i.e., can be existentially closed/be indefinite).

(11) Mapping Hypothesis   Diesing (1992)

    a. Material from VP is mapped into the nuclear scope.

    b. Material from IP (above VP) is mapped into a restrictive clause.

Assuming that adjuncts like the adverbs in (2) and (3) act as sign posts for the *v*P, they can also provide evidence of a shifted internal argument. For intransitive verbs, when the subject has shifted it receives a presuppositional interpretation (3b). However, unshifted internal arguments can receive a definite interpretation (3a). Bare object nouns must always remain close to the verb. I argue that this is due to the structural differences of transitive and intransitive verbs (discussed fully in the complete paper). I additionally propose that the definite interpretation of bare internal arguments is achieved via an ι type shifting operator.

External arguments, on the other hand, never originate inside the VP. Given (11) they should not be able to receive an indefinite interpretation. Indeed, bare external arguments may not receive an indefinite interpretation. Rather, other overt morphemes like the numeral 'one' must be used to force an indefinite interpretation. This pattern follows from standard assumptions of languages that allow bare nouns to be definite (Chierchia 1998; Dayal 2004). As Ch'ol does not have a definite article in the standard sense (though see Vázquez Álvarez (2011); Little & Vázquez Martínez (2018) for discussion), bare nouns may be type shifted via the ι operator.

Further considerations and implications. I will also consider other constructions in Ch'ol that license bare nouns. Specifically, I will discuss the distinction between (12a) and (12b). In (12a), *x'ixik* 'woman' is in theme position of the existential predicate *añ* and *x'ixik* is obligatorily indefinite. However, when the prepositional phrase intervenes between *añ* and *x'ixik* in (12b), *x'ixik* is interpreted as definite.

(12) a. *Añ **x'ixik** tyi   cholel.*   b. *Añ tyi   cholel **x'ixik**.*
       EXT **woman** PREP field   EXT PREP field   **woman**

       'A woman is in the field.'   'The woman is in the field.'

I argue that the data in (12) can be captured by assuming *x'ixik* moves from the theme position of *añ* to a higher projection in order to escape existential closure.

This data has implications for theories of type shifters in natural language. Dayal (2013) proposes that $\exists$ is not an available type shifter in natural language. The Ch'ol data supports this: the structure position of the noun or other overt operators like the numeral 'one' in (9) or the existential predicate *añ* in (12a) are needed for an indefinite interpretation. That is, indefiniteness is a product of syntactic position or overt indefinite markers and not a freely available $\exists$ operator.

Selected references. COON, J., and O. PREMINGER. 2011. Transitivity in Chol: A new argument for the split VP hypothesis. *Proceedings of NELS 41* ● DIESING, M. 1992. *Indefinites*. Cambridge: MIT Press ● VÁZQUEZ ÁLVAREZ, J.J. 2011. *A grammar of Chol, a Mayan language.* Austin, TX: UT Austin dissertation.