

Reflexive Functional Head, Verbal and Nominal Predicates

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1. Introduction

This paper investigates reflexives in the Mayan language Kaqchikel. As shown in (1), reflexives are formed morphologically by the *-i'* exponent and a person-number agreement marker corresponding to the antecedent.

- (1) a. Rije x-a-ki-tz'ët rat b. Rije x-ki-tz'ët k-i'¹
3PL PST-ABS.2SG-ERG.3PL-see 2SG 3PL PST-ERG.3PL-see 3PL-REFL
'They saw you.' 'They saw themselves (in a mirror).'

The paper will demonstrate that, although reflexivized predicates in Kaqchikel remain syntactically and semantically transitive, Kaqchikel reflexives such as *ki'* in (1) are not DPs in argument positions but rather clitics. I argue that Kaqchikel reflexives are best analyzed in terms of the functional head approach, initially developed by Labelle (2008). There is a special reflexive Voice-type head that introduces an external argument and establishes co-reference between the object and the subject. I further elaborate the original analysis to account for the specific properties of Kaqchikel reflexives, including their incompatibility with an absolutive marker, and for one puzzle in particular – a peculiar behavior of relational nominal predicates (similar to English *friend*, *enemy*) with respect to reflexives that contrasts with properties of non-relational nominal predicates.

The rest of the paper is structured as follows. Section 2 describes semantic and syntactic properties of Kaqchikel reflexives and reflexivized predicates. Section 3 presents the proposed analysis. Section 4 provides an account for the nominal predicate puzzle drawing a parallel between transitive verbs and relational nouns.

2. Kaqchikel syntax and reflexivity

2.1. Reflexive marking and transitivity

Kaqchikel is a Mayan language belonging to the K'ichean branch. Typically for all Mayan languages, it uses head marking, has rich verbal morphology and exhibits ergative alignment. Nominal arguments cannot be overtly marked for case and, as illustrated in (2), pronominal arguments can be easily dropped. According to the literature, the standard word order in Kaqchikel is VOS; however, it varies across different dialects (Patal Majzul 2000) and many speakers from Patzún prefer VSO sentences instead. Another common option is SVO word order. In Kaqchikel various voice-like transformations are available, including passive, antipassive and Agent Focus.²

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1 All the examples discussed in this paper have been collected during my field work in Patzún, Guatemala, under the auspices of the UMD Guatemala Field Station.

2 Agent Focus, also known as focus antipassive and agentive voice, is described in details in Section 3 of this paper.

- (2) a. (Rĭn) y-i-b'ixan
1SG PRS-ABS.1SG-sing
'I am singing.'
- b. (Rĭn) y-at-inw-oyoj
1SG PRS-ABS.2SG-ERG.1SG-call
'I am calling you.'
- c. (Rĭn) y-in-ok
1SG PRS-ABS.1SG-enter
'I am entering.'
- (rat) d. (Rat) y-in-aw-oyoj
2SG 2SG PRS-ABS.1SG-ERG.2SG-call
'You are calling me.'
- (rĭn)

The paradigms of Kaqchikel ergative and absolutive markers are given in (3). Following Preminger (2014), a.o., I assume that absolutive markers are clitics while ergative markers are true agreement morphemes. The same set of agreement prefixes is used as possessive markers.

Morphologically, Kaqchikel reflexives are formed by the *-i'* exponent and a person-number prefix.

(3) *Agreements markers, clitics and pronouns*

	ERG / POSS		REFL	ABS	Free pronouns
	before C	before V			
1SG	nu/in/n	w/inw/nw	w-i'	in	rĭn
2SG	a	aw	aw-i'	at	rat
3SG	ru/u	r	r-i'	∅	rija'
1PL	qa	q	q-i'	oj	röj
2PL	i	iw	iw-i'	ix	rĭx
3PL	ki	k	k-i'	e	rije'

I argue that reflexivized predicates in Kaqchikel remain syntactically and semantically transitive. First, an ergative marker corresponding to the subject must be present (4).

- (4) a. Rĭn x-at-in-tz'ët
1SG PST-ABS.2SG-ERG.1SG-see
'I saw you.'
- rat b. Rĭn x-in-tz'ët w-i'
1SG PST-ERG.1SG-see 1SG-REFL
'I saw myself (in a mirror).'

Second, from the semantic point of view, the two arguments – the reflexive and its antecedent – do not have to be strictly coreferential. First, sentences with plural reflexives can get a reciprocal interpretation (5); in order to resolve potential ambiguity an adjunct can be used.

- (5) Röj x-qa-tz'ët q-i' (chi qa-kojöl)
2PL PST-ERG.1PL-see 1PL-REFL between POSS.1PL-REL
(a) 'We saw ourselves.' (b) 'We saw each other.'

Second, reflexives can receive the so-called proxy reading. For example, in (6a) and (6b) the subject referent is not identical to the object referent, although the two are clearly related.

- (6) a. Ri político x-u-nĭm r-i' pa museo
DET politician PST-ERG.3SG-drop 3SG-REFL at museum
(about a sculpture) 'The politician dropped himself in a museum.'
- b. A Xwan x-u-q'ejela' r-i'
DET Juan PST-ERG.3SG-approach 3SG-REFL
(about a dream) 'Juan approached himself.'

2.2. Reflexives and referential DPs

It might be tempting to assume that reflexives in Kaqchikel are merely DPs in argumental positions similar to, for example, English *-self* reflexives (see Déchaine and Wiltschko (2017) for a universal typology of reflexives in respect to their structural size). In this subsection I compare the syntactic behavior of reflexives and referential DPs in Kaqchikel to demonstrate that they do not belong to the same category.

First, unlike referential DPs, reflexives resist any kind of A or A-bar movement. They cannot be individually focused or negated; likewise, they cannot be separated from the main predicate in sentences with ellipsis (compare the ungrammatical (a) examples in (7) and (8) with their grammatical (b) counterparts).

(7) Focus

- a. *Ja r-i' x-u-ch'äy ri Pedro
 FOC 3SG-REFL PST-ERG.3SG-hit DET Pedro
 {Who did Pedro hit?} 'Pedro hit HIMSELF.'
- b. Ja ri Juan x-Ø-u-ch'äy ri Pedro
 FOC DET Juan PST-ABS.3SG-ERG.3SG-hit DET Pedro
 {Who did Pedro hit?} 'Pedro hit JUAN.'

(8) Ellipsis

- a. *Rin x-in-ch'äy w-i' y ri Pedro r i'
 1SG PST-ERG.1SG-hit 1SG-REFL and DET Pedro 3SG-REFL
 Intended: 'I hit myself and Pedro hit himself.'
- b. Rat x-Ø-a-tz'ët ri Maria y rin ri Ana
 2SG PST-ABS.3SG-ERG.2SG-see DET Maria and 1SG DET Anna
 'You saw Maria and I saw Anna.'

Second, reflexives are restricted to the direct object position. Unlike referential DPs, they cannot be used within PPs (9) or in equative constructions (10).³

(9) Complements of PPs

- a. *Achike x-Ø-loq-ö ri q'anatz'ub' chi (r-e) r-i'?'
 who PST-ABS.3SG-buy-AF DET mango for POSS.3SG-REL 3SG-REFL
 'Who bought himself a mango?'
- b. Achike x-Ø-loq-ö ri q'anatz'ub' chi r-e rija'?'
 who PST-ABS.3SG-buy-AF DET mango for POSS.3SG-REL 3SG
 'Who bought him a mango?'

(10) Equative constructions

- *Rin in-w-i'
 1SG ABS.1SG-1SG-REFL
 Intended: 'I am myself.' (= I am what I am)

Third, reflexives prohibit coordination with referential DPs (11), although normally two phrases of the same type are expected to be able to be combined.

- (11) a. *Rat x-Ø-a-ch'äy aw-i' y ri Pedro
 2SG PST-ABS.3SG-ERG.2SG-hit 2SG-REFL and DET Pedro
 *Rat x-ix-a-ch'äy aw-i' y ri Pedro
 2SG PST-ABS.2PL-ERG.2SG-hit 2SG-REFL and DET Pedro
 'You hit yourself and Pedro.'

3 There are no ditransitive predicates in Kaqchikel and I could not find proper small clause constructions similar to English *consider [him smart]*.

- b. Rat x-Ø-a-ch'äy ri Juan y ri Pedro
 2SG PST-ABS.3SG-ERG.2SG-hit DET Juan and DET Pedro
 'You hit Juan and Pedro.'

Fourth, a reflexive cannot be linearly separated from the reflexivized predicate (12). As mentioned earlier, VSO word order is normally accepted by speakers, however when a reflexive is present, it is no longer an option. Similarly, no adverb can intervene between a reflexive and the predicate.

- (12) a. *X-u-chop Pedro r-i'
 PSR-ERG.3SG-touch Pedro 3SG-REFL
 'Pedro touched himself (on his arm).'
- b. X-Ø-u-chop Pedro ri Juan
 PSR-ABS.3SG-ERG.3SG-touch Pedro DET Juan
 'Pedro touched Juan (on his arm).'
- c. Rat x-Ø-a-tz'ët (iwir) ri Pedro (iwir)
 2SG PST-ABS.3SG-ERG.2SG-see yesterday DET Pedro yesterday
 'You saw Pedro yesterday.'
- d. Rat x-a-tz'ët (*iwir) aw-i' (iwir)
 2SG PST-ERG.2SG-see yesterday 2SG-REFL yesterday
 'You saw yourself (in the mirror) yesterday.'

Finally, reflexive objects are not indexed a predicate by an absolutive clitic. An absolutive marker corresponding to the direct object is obligatory in (13b), but is prohibited in (13a).

- (13) a. Rïn x-(*n-)in-tz'ët w-i' b. Rïn x-at-in-tz'ët rat
 1S PST-ABS.1SG-ERG.1SG-see 1SG-REFL 1SG PST-ABS.2SG-ERG.1SG-see 2SG
 'I saw myself (in a mirror).'

One might suggest that all Kaqchikel reflexives are morphologically third person singular and that in (13a) a silent absolutive marker is present (Coon and Henderson, 2011, a.o.). However, this assumption leads to a wrong prediction. As illustrated in (14), reflexives with a 'proxy' interpretation can be modified independently from their antecedents. In this case the modifier obligatorily agrees with the reflexive and the agreement marker is not necessarily third person singular.

- (14) a. (Chpan re wachib'äl) rat x-a-tz'ët aw-i' y-a-kikot.
 in the picture 2SG PST-ERG.2SG-see 2SG-REFL PRS-ABS.2SG-happy
 b. *(Chpan re wachib'äl) rat x-a-tz'ët aw-i' ni-Ø-kikot.
 in the picture 2SG PST-ERG.2SG-see 2SG-REFL PRS-ABS.3SG-happy
 'In the picture you saw yourself happy.' (*You were happy in that picture.*)

Taking into account all these properties, I argue that reflexivized predicates in Kaqchikel remain transitive and that reflexives differ from referential DPs in argument positions and resemble clitics. In the next section I present an analysis that can capture all relevant properties of Kaqchikel reflexives.

3. Reflexive Voice analysis

3.1. Introducing a Reflexive Voice head

Before proceeding with the analysis, a few words need to be said about the adopted background assumptions. First, I assume that the basic V1 word order results from the V head movement (see Clemens and Coon (in press) for a detailed discussion). Second, I follow Coon and Henderson (2011) in that in Kaqchikel vP is generated above VoiceP. Finally, I adopt the analysis proposed by Coon et al. (2014) to describe the agreement mechanism in transitive clauses. In Kaqchikel clauses I⁰ agrees with the object, raised to the Spec,vP, while v⁰ agrees with the subject, base-generated in Spec,VoiceP. This results in derivation of an absolutive clitic and an ergative agreement morpheme, respectively.

(19) Reflexives in causative constructions

Rije' x-ki-kam-isa-j k-i'
 3PL PST-ERG.3PL-die-CAUS-DTV 3PL:-REFL
 'They killed themselves / each other.'

Another kind of verbal transformations common to Mayan languages is Agent Focus, also known in the literature as focus antipassive and agentive voice (Stiebels 2006). Many Mayan languages exhibit syntactic ergativity: in contrast with the direct object and the subject of an intransitive predicate, the subject of a transitive predicate cannot be A-bar extracted (see Polinsky (2016) for a detailed discussion of syntactic ergativity in world languages). In order to A-bar extract an ergative subject, the predicate needs to be detransitivized first; in Mayan languages Agent Focus is often used to do so (20).

- (20) a. Achike x-i-ch'ey-o? who PST-ABS.1SG-hit-AF 'Who hit me?'
 b. Achike x-Ø-in-ch'äy? who PST-ABS.3SG-ERG.1SG-hit 'Who did I hit?'
 c. Rïn x-Ø-in-ch'äy ri Juan 1SG PST-ABS.3SG-ERG.1SG-hit DET Juan 'I hit Juan.'

To describe the structure of Agent Focus constructions I adopt an analysis developed by Coon et al. (2014). In Mayan languages that exhibit syntactic ergativity A-bar extraction of the subject is blocked by the previous object raising to the Spec,vP; the direct object obligatorily moves in order to agree with I⁰ and the subject is trapped in its initial Spec,Voice position. Agent Focus is a Voice head that assigns a structural case to the direct object so that the latter stays in the lower position and the subject is free to move.

The only constructions that apparently do not comply with the syntactic ergativity restriction are those with a reflexivized predicate. Although these sentences are transitive, a subject can be freely extracted. Agent Focus transformation is not needed if the direct object is a reflexive; most importantly, reflexives in Kaqchikel cannot co-occur with agent focus (21).

- (21) a. Achike x-u-ch'äy r-i'? who PST-ERG.3SG-hit 3SG-REFL 'Who hit himself?'
 b. *Achike x-Ø-ch'ey-o r-i'? who PST-ABS.3SG-hit-AF 3SG-REFL 'Who hit himself?'

The analysis for reflexives proposed in this paper easily accounts for this restriction. Reflexive arguments do not agree with I⁰ and do not move; therefore, the subject is free to be extracted. Furthermore, since reflexive is a Voice-type head it is in principle incompatible with the AF-Voice head.

4. Reflexives and nominal predicates

This section presents an additional puzzle that can be accounted for by the proposed reflexive voice analysis. In Kaqchikel both relational nouns (similar to English *friend*) and non-relational ones (similar to English *doctor*, *dog*, *house*) can be used as predicates. Relational nouns have to have a possessor, while for non-relational nouns the possessor is optional (22). In Kaqchikel, there is no overt copula; however, an absolutive marker corresponding to the subject of predication is normally required (23).

- (22) a. ri *(aw-)achib'il DET POSS.2SG-friend 'your friend'
 b. ri (a-)jay DET POSS.2SG-house 'your house'

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Proceedings of the 36th West Coast Conference on Formal Linguistics

edited by Richard Stockwell, Maura O’Leary,
Zhongshi Xu, and Z.L. Zhou

Cascadilla Proceedings Project Somerville, MA 2019

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ISBN 978-1-57473-474-4 hardback

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Burukina, Irina. 2019. Reflexive Functional Head, Verbal and Nominal Predicates. In *Proceedings of the 36th West Coast Conference on Formal Linguistics*, ed. Richard Stockwell et al., 91-98. Somerville, MA: Cascadilla Proceedings Project. www.lingref.com, document #3450.