NON-VERBAL PREDICATES IN K'ICHEE' MAYAN
AN LFG APPROACH

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Although the most important types of non-verbal predicates (NVP) are outlined in the descriptive grammars of the K'ichee'an languages, no encompassing typology let alone a formal analysis of NVPs has ever been published. This paper is an attempt to remedy this using K'ichee' Mayan as the data source with original data. The core types of NVPs are presented and constituent structures are proposed. The grammatical function, function theta, is proposed to account for the complements of monovalent, intransitive NVPs.

1 Introduction

Although the most important types of non-verbal predicates (NVP) are outlined in the descriptive grammars of the K'ichee'an languages (cf. Dayley 1985, Larsen 1988, Mondloch 1978), no encompassing typology let alone a formal analysis of NVPs has ever been published.[1,2] My paper attempts, in part, to remedy this by using K'ichee' Mayan as a primary data source. NVPs in the K'ichee'an languages are the equivalent of copula ('to be') constructions in English. So a K'ichee' NVP such as *nim lee jaa* is the equivalent of 'The house is big,' while *ee tz'ib'anelaab'* is the equivalent of 'They are writers.'

The organizing generalization argued for in this paper is that K'ichee' finite verbs and K'ichee' finite NVPs each correlate with their own distinct syntactic configurations. Whereas the K'ichee' verb consists, in general, of a single agglutinated constituent (1)–(2), the NVP consists at a minimum of an absolutive agreement marker (AM), which instantiates the intransitive subject, along with the predicate variable, either a noun or gerund, (participial) adjective, or adverb. I contend that it is not morphology that ultimately differentiates K'ichee' verbs and NVPs from each other. Rather it is syntax. Accordingly it is this contention that motivates a robust syntactic analysis of K'ichee'an NVPs.

It is assumed that finiteness in K'ichee' verbs involves the inflection of prefixed aspect markers and subject/ergative and object/absolutive AM. Finiteness in

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[1] Orthographic x = [−voi] alveopalatal fricative, j = [−voi] velar fricative, and ' = glottalized occlusive / glottal stop; Interlinear gloss: first / second / third person = 1 / 2 / 3, absolutive / ergative agreement marker = ABS/ERG, antipassive = AP, attributive = ATT, clefting particle = CLEFT, completive aspect = COM, determiner = D/DET, emphatic = EMPH, enclitic = ENC, focus = FOC/FOCUS, gerund = GER, grammatical function = GF, incompletive aspect = INC, independent pronoun = PRO, interrogative = INT, irrealis = IRR, negative = NEG, nominalizer = NOML, participle = PART, genitive possessor = POSS, positional = POSN, independant pronoun = PRO, transitive/intransitive phrase final marker = TPF/IPF, plural = PL, preposition = P/PREP, singular = S/SG, status suffix = SS, thematic = THEM

[2] Aissen (1999) using generic Government & Binding Theory (Chomsky 1981) is an exception.

NVPs, on the other hand, involves only the hosting of non-bound absolutive/subject AMs. Crucially there is no prefixed inflectional aspect marking on NVPs, which, with regards to morphology, is the feature that principally differentiates K'ichee' NVPs from verbs (cf. Larsen 1988:152). If and when NVPs host subjects, however, remains a complex matter and will be addressed in detail. Following Larsen (1988:105, 135, cf. 152), I contend that K'ichee' does not have a verbal copula.[3] It is argued in this paper that a 'non-verbal copula' (Falk 2004, Nordlinger and Sadler 2007) is employed instead. I suggest that the K'ichee' non-verbal copula is the stative positional participle *k'oolik* 'existing.'

It is argued that adjectival predicates are similar to verbs in that both categories select for subjects.[4] Nominal predicates, however, are more nuanced than adjectives in terms of if and when they host subjects. The most important feature that bears on this is the definiteness quotient of the nominal, with the determining factor being how the nominal is realized grammatically. That is, is the nominal a DP or not a DP?[5] This differentiation based on definiteness is fundamental in determining if nominals are predicative or not. The determination rests primarily on the contention that there is little if any interpretative or semantic difference and no grammatical or syntactic difference between the so-called indefinite determiner *jun* 'a' and the cardinal *juun* 'one.' The indefinite determiner is thus understood to be simply a short form of the cardinal. I argue that the short root vowel of indefinite *jun* represents an unstressed morphophonemic alternation of the long root vowel of cardinal *juun*.

As a result, I argue that a nominal marked with indefinite *jun* should be syntactically recategorized as numeral phrase (NumP), and not DP. Importantly only nominals marked with the definite determiner are considered DPs in the analysis advanced in this paper. It is assumed that prehead demonstratives are also determiners. Demonstratives are proposed to be a higher projection of DP such that DP is the complement of demonstrative phrase (DemP). Similarly NP is the complement of DP or of NumP. Consequently it is shown that nominals that are not DPs may select for subjects. But nominals that are DPs are not permitted to select for subjects.

K'ichee' NVPs are inflected only with intransitive absolutive AMs, never with transitive ergative AMs. Thus NVPs are morphologically monovalent, single value intransitive constructions. Consequently only the soletary token SUBJ is allowed in the semantic form of the f-structure of the K'ichee' NVP. This suggests that the PREDLINK analysis is not tenable for K'ichee' NVPs. To account for the complement of the intransitive NVP, I propose a grammatical function called function theta (FN_{Θ}). Function theta is a hybrid argument-adjunct grammatical function that is not syntactically-selected for but is thematically selected for.

For presentation and analysis of data, the architecture of Lexical Functional Grammar (LFG) is used. The projection of constituent structure, based on the standard LFG realization of X-bar Theory, illustrates the K'ichee' data.

[3] The standard argument is that *prefixed* inflectional TAM morphology does not occur on NVPs.

[4] Recall that K'ichee'an verbs do not project a VP, but a non-endocentric S(entence).

[5] Based on an idea from Laczkó (p. c.).

The paper is organized in the following manner. Basic typology is introduced in section 2, followed in section 3 by a presentation of K'ichee' data and their proposed constituent structures. An extended discussion on nominal predicates and on function theta follows in section 4. The paper concludes in section 5.

2 Typology

Excluding periphrastic modals, finite verbs are composed of a single agglutinating constituent. Verbs inflect with obligatory prefixed aspect markers, person- and number-marking absolutive (ABS) and ergative (ERG) AMs, and, when required, suffixed tense-aspect-mood (TAM) and valency-sensitive phrase-final morphology:

(1) x-ee-w-il-o Transitive verb
COM-3PLABS-1SERG-see-TPF
'I saw them.'

(2) k-ix-biin-ik Intransitive verb
INC-2PLABS-walk-IPF
'You all walk.'

Structurally NVPs configure differently from verbs in that they use minimally a non-bound absolutive AM, the non-verbal copula *k'oolik* (if required), and a predicate variable. Let us examine each of the elements of the NVP in turn. The absolutive AM, I argue, is a free morpheme, completely non-bound syntactically, and references the intransitive subject *exclusively*. The predicate variable is either a (possessed) noun or gerund, (participial) adjective, or a locative adverb.[6]

Typologically NVPs fall into two broad groupings. The first is the zero copula group, which includes both adjectival and nominal NVPs.[7] The second is the non-verbal copula group, which—in addition to the obligatory use of the non-verbal copula *k'oolik*—includes the existential, possessive, and locational NVPs.

Zero copula adjectival and nominal predicates Let us consider the first group, the zero copula adjectival and nominal predicates.

Adjectival predicates use non–pre-head, non-attributive adjectives for property attribution (3), (4). Because K'ichee' is structurally a predicate-initial language, predicative adjectives are in clause-initial position when in canonical word order. Many but not all adjectives and some participles require an inflectional suffix when used attributively (cf. Larsen 1988:134–6). Non-attributive, predicative adjectives (3) are not permitted to use the inflectional attributive suffix (ATT) (cf. (6)). The AdvP *sib'alaj* 'very much' in (4) cannot directly modify the predicate adjective *jeb'al*. In fact, no constituent is permitted between the absolutive AM and the predicate adjective. The DP *lee laj jaa* 'the small house' in (3) is the lexical subject of the adjectival predicate. Absolutive AMs are obligatorily to the left of the predicate

[6] Locative adverbs additionally require the non-verbal copula *k'oolik* 'existing, being.'

[7] Although I argue that the perfect tense-aspect and the *-tal* completive passives are also members of the zero copula group, they are not considered in this paper.

variable (4). The absolutive AM does not surface phonetically in (3) because the third person singular absolutive AM is null:

(3) saq-(*a) lee laj jaa
white-ATT DET small house
'The small house is white.'

(4) sib'alaj ee (*sib'alaj) jeb'al
very.much 3PLABS very.much pretty
'They are very pretty.'

Let us consider the second member of the the zero copula group, the nominal predicates. As their name suggests, nominal predicates are formed with nouns or gerunds – but not pronouns. Predicate nominals enable nominals to encode notions of identity (5), and classification (6):

(5) at w-achi'l at
2SABS 1SPOSS-friend 2SPRO
'You are my friend.'

(6) ee utz-*(alaj) tiko-n-el-aab'
3PLABS good-ATT farm-AP-NOML-PL
'They are very good farmers.'

Independent pronouns can also be used with nominal predicates, primarily for emphasis. The clause-final pronoun *at* in (5) is the lexical subject and triggers agreement with the absolutive AM *at*. The predicate nominal in (5) is possessed. The attributive adjective *utzalaj* in (6) directly modifies the predicate nominal.

Stative positional participial adjectives Let us consider the second NVP group, the group that requires the stative positional participle adjective *k'oolik*.

The positionals are a combination verbal and adjectival class that indicate the positions, shapes, or qualities of words. They are unique in the K'ichee'an languages in that they represent a class of lexical roots that have no underived forms, and are associated with no major word class (Dayley 1985, Larsen 1988). K'ichee' has two types of intransitive verbs: the simple (2) and the stative (Mondloch 1978). The stative intransitives, or the positionals, have an active and a stative root. The active root derives verbs, while the stative root derives stative adjectives, which is the stative root's primary derivational stem. The latter – the irregular stative positional participial adjective – is formed by suffixing *-vl* ∼ *-vn* to the monosyllabic CVC root. Only the stative root and its derivations are of concern to us here.

The positional participial adjectives are highly unusual in that they exhibit multiple verb-like properties. They are clause-initial and thus predicative in canonical word order. They use the intransitive verb's phrase-final (IPF) suffix *-ik*. They also derive imperatives, the perfect tense-aspect, and some even derive infinitives. For us, the most important stative positional participial adjective is *k'oolik* 'existing, being,' which, I contend, is both a participal and the non-verbal copula in K'ichee'.

NVPs that use the participial adjective *k'oolik* of group two encode three elements of stage-level predicates: existence (7), possession (8), and location (9). The existential predicate in (7) places a constraint on the subject that it must not be a DP, that is, not marked with the definite determiner. The subject must be either an

NP, or a NumP (an NP marked with indefinite *jun*), and must not be possessed. The only constraint on the possessive predicate in (8) is that its subject be possessed. The subjects of locational predicates are unrestricted in definiteness or possession:

(7) ojeer k'oo jun q'eq-a sia u-bii' Miix Miix Miix
past existing NUM black-ATT cat 3SPOSS-name M.
'Once upon a time there was a black cat, its name was Meesh Meesh Meesh.'

(8) k'oo jun niitz' w-ochoch pa Chuwimeq'ana'
existing NUM small 1SPOSS-house PREP T.
'I have a small house in Totonicapán.' (lit. 'It existing, my small house in T.')

(9) lee nu-wuj k'oo p-u-wi' lee tz'alam je le'
DET 1SPOSS-book existing PREP-3SPOSS-top DET table over.there
'My books are on the table over there.'

3 C-structure

Let us consider the constituent structure of the NVP in this section. We begin with the core components, the absolutive AM and the predicate nominal, and then discuss negation, the interrogatives, and the left periphery.

Sentence (S) The AdvP *iwiir* 'yesterday' can be used either sentence-initially (10a) or sentence-finally (10b). The AdvP *iwiir* in (10a) cannot directly modify the predicate nominal *q'ab'arelab'*. The AdvP *iwiir* in (10b) cannot be used between the predicate nominal *q'ab'arelab'* and the pronominal subject *oj*:

(10) a. iwiir uj (*iwiir) q'ab'ar-el-ab' oj
yesterday 1PLABS yesterday drunk-NOML-PL 1PLPRO
'Yesterday we were all drunk.'

b. uj q'ab'ar-el-ab' (*iwiir) oj iwiir
1PLABS drunk-NOML-PL yesterday 1PLPRO yesterday
'We were all drunk yesterday.'

It could be inferred from (10a) and (10b) that the absolutive AM, the predicate nominal, and the subject are all located in non-endocentric S. Note however that the attributive adjective in (6) directly modifies the predicate nominal. This suggests that the absolutive AM is probably not an integral part of the predicate constituent.

NVPs normally require absolutive AM inflection to form predicates. Consider, however, the two conjoined 'and' clauses in (11). The absolutive AM of the second conjunct has been gapped, yet it is still interpreted as a first person AM:

(11) in chaaku-n-el in chi'l ø tiko-n-el in
1SABS work-AP-NOML 1SPRO CONJ 1SABS farm-AP-NOML 1SPRO
'I am a worker and (I am a) farmer.'

The sentence-initial absolutive AM *in* 'I' thus takes scope over both predicates. This suggests the inflectional absolutive AM is most likely located in I^0, not S.

The data in (11) is accounted for by the constituent structure shown in Fig. 1.

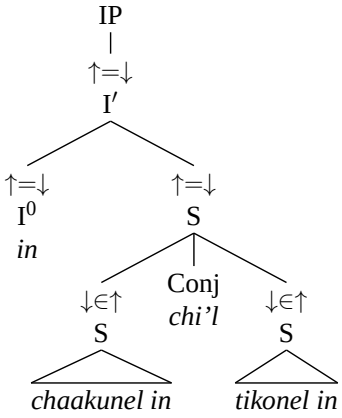

Figure 1 Coordinated nominal NVP

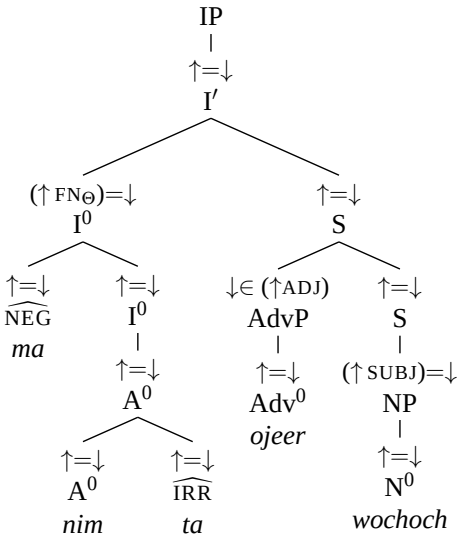

Figure 2 Standard negation

Negation Two types of negation occur in NVPs, standard negation and negative focus (NEGFOC). The negation of the adjective *nim* 'big' in (12) demonstrates standard or sentential negation. Note that the negated adjective *nim* is clearly predicative because the attributive suffix *–a* is not permitted. The AdvP *ojeer* 'in the past' in (12) can be used between the negated predicate adjective and its subject *wochoch*:[8]

(12) ma nim-(*a) taj ojeer w-ochoch
NEG big-ATT IRR past 1SPOSS-house
'My house was not large in the past.'

The subject, I argue, remains in its default location in S because the AdvP *ojeer* adjoins to S. Consequently the negated adjective *nim* must base-generate in I^0, not S. The behaviour of the negated predicate that base-generates in I^0 is the same as in the negation of verbs. I propose the c-structure in Fig. 2 for the data in (12).

The stative participial adjective *k'oolik* may itself undergo negation (13):

[8] The phrase-final suffix *-j* of irrealis (IRR) *taj* is only used when irrealis is phrase-final.

(13) ma k'o ta lee sia waraal
NEG exist IRR DET cat here
'The cat is not here.' (lit. 'It not existing the cat here.')

The subject of a locational *k'oolik* NVP can be negated (14), (15):

(14) man aree ta lee sia k'oo waraal
NEG 3SP IRR DET cat exist here
'It is not the cat that is here.'

(15) ma jun sia taj k'oo waraal
NEG NUM cat IRR exist here
'It is not a cat that is here.'

The subject of a possessive *k'oolik* NVP can be negated. The subject *uleej* in (16) is negated, and the subject's possessor *lee aa Xwaan* is extracted to sentence-initial position. The sentence-initial *lee aa Xwaan* preceeds and is also separated from the negated subject *uleej* by the AdvP *iwiir*. Data (14), (15), and (16) show that negative focus (NEGFOC) can occur in NVPs in addition to standard negation:

(16) lee aa Xwaan iwiir man u-leej taj k'oo-l-ik
DET CL J. today NEG 3SPOSS-tortilla IRR exist-POSL-IPF
'Juan today has no tortillas.' (lit. 'As for Juan, today no his tortilla existing.')

It is ungrammatical, however, to contrastively focus the subject's possessor:

(17) *aree lee aa Xwaan man u-leej taj k'oo-l-ik
3SPRO DET CL J. NEG 3SPOSS-tortilla IRR exist-POSL-IPF
('It is Juan that has no tortillas.' (lit. 'It is Juan no his tortilla it existing.'))

Unlike verbs and zero copula NVPs, the non-verbal copula *k'oolik* does not permit contrastive focus (CONFOC) to cooccur with negative focus (NEGFOC) (17). Zero copula NVPs place no cooccurence restrictions on contrastive and negative focus. I suggest that contrastive fcous and negative focus are located in the specifier of IP.

Interrogatives NVPs can be questioned by interrogative operators, such as *wh*-interrogatives and the *yes-no* interrogative *laa*.

The *wh*-interrogative *jas* 'what' in (18) questions the possessed predicate nominal *aachaak* 'your work.' To begin with, an AdvP can optionally be used sentence-initially. The AdvP *ojeer* 'in the past' in (18) can be used between the clause-initial DP *rii at* 'you' and the interrogative operator *jas* 'what,' and also in (19) between the interrogative operator *jas* and the predicate nominal *aachaak* 'your work':

(18) rii at jas ojeer aa-chaak?
DET 2PRO INT past 2SP-work
'As for you, what was your work?'

(19) rii at ojeer jas aa-chaak?
DET 2PRO past INT 2SPOSS-work
'As for you, what was your work?'

It can be inferred that the possessed predicate nominal is located in its default position in S, because the AdvP *ojeer* in (18) adjoins to S, and the AdvP in (19) adjoins to IP. Thus *wh*-interrogatives are most likely located in the specifier of IP.

Positive polarity (20) and negated predicate adjectives (21) can be questioned:

(20) ee jachin q'enom?
3PLABS INT rich
'Who are rich?'

(21) ee jachin ma q'enom taj?
3PLABS INT NEG rich IRR
'Who are not rich?'

Interrogatives always preceed their predicates (20). The subject of the negated predicate adjective in (22) is contrasted. The contrasted obligatorily preceeds the negated. Interrogative focus and contrastive focus are in complementary distribution:

(22) aree lee winaq-ib' man ee q'enom taj
3SPRO DET person-PL NEG 3PLABS rich IRR
'It is the people who are not rich.'

Non-verbal predicates can also be questioned by the *yes-no* interrogative *laa*. The NVP *at tikoneel* 'You are a farmer' in (23) is questioned by the *yes-no* interrogative *laa*. The AdvP *chanim* 'now' in (23a) can be used between the clause-initial DP *rii at* and the *yes-no* interrogative *laa*. An AdvP can also be used between the *yes-no* interrogative *laa* and the absolutive AM *at* 'you' (23b):

(23) a. rii at chanim laa at tiko-n-eel?
DET 2SPRO now INT 2SABS farm-AP-NOML
'As for you, now are you a farmer?'

b. rii at laa chanim at tiko-n-eel?
DET 2SPRO INT now 2SABS farm-AP-NOML
'As for you, are you now a farmer?'

Because the absolutive AM is in I^0, it is proposed that the AdvP *chanim* adjoins to IP, and that the *yes-no* interrogative *laa* is a complementizer in the head of CP.[9]

The left periphery and external topics Let us now consider the left periphery. The AdvP *chanim* 'now' in (24) is situated to the left of the absolutive AM, which is in Infl (see Figs. 1, 2). So the AdvP *chanim* must adjoin to IP. Because the DP *lee tijonelab'* in (24) is leftwards of the AdvP, the DP is, I argue, an external topic:

(24) lee tijo-n-el-ab' chanim ee k'oo pa w-ochoch
DET teach-AP-NOML-PL now 3PLABS existing PREP 1SPOSS-house
'As for the teachers, they are at my place right now.'

[9] According to Aissen (1992:52, 73), Tz'utujiil's *yes-no* interrogative *la* is located in the head of CP, as is K'ichee's (Duncan 2010).

This proposal gains support in (25), (26). The sentence-initial DP *rii at* 'you' in (25) coindexes the absolutive AM. The sentence-initial DP *rii in* 'I' in (26) binds the possessor of the predicate nominal *w-achi'l* 'my friend':

(25) rii at at w-achi'l
DET 2SPRO 2SA 1SPOSS-friend
'As for you, you are my friend.'

(26) rii in at w-achi'l
DET 1SPRO 2SA 1SPOSS-friend
'As for me, you are my friend.'

It is claimed in Aissen (1999:178 figs.5–6) that the 'external possessor' (EPR) construction is an internal topic located in the specifier of CP.[10] I argue that the analysis above shows Aissen's proposal to be incorrect. Contra Aissen (1999), I suggest that topics in NVPs, including Aissen's EPR construction, are exclusively external topics, and that external topics adjoin to CP. What is noteworthy here is that internal topics are not licensed in K'ichee' NVPs.[11]

The constituent structure in Fig. 3 represents the data in (24).

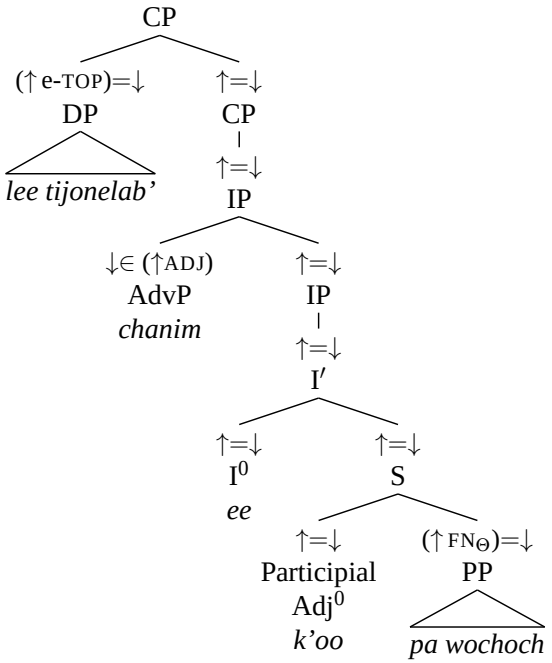

Figure 3 The left periphery and external topics (*lee tijonelab'*)

[10] 'Topic' in Aissen (1992) or 'logical subject' in Aissen (1999).

[11] Aissen's (1992:fn. 39 (iii)) prediction about the cooccurence of external and internal topics in Tz'utujiil is not supported in K'ichee' NVPs.

4 On nominal predicates

In this section, nominal predicates will be considered in greater detail. The morphosyntax of predicate nominals is more complex than that of predicate adjectives, or at least the predicate adjectives examined in this paper.

Cross-linguistic definiteness constraints that operate on the preverbal focus position will be reviewed in this section. It will then be shown how this issue impacts predicate nominals. The negation of nominals will then be discussed, as will the phrase-initial pronominal *are'* as a predicator rather than a 'clefting/focusing particle' as it is often described in the Mayanist literature.

Preverbal focus in Mayan languages Several researchers have noted that the preverbal / pre-predicate focus position imposes constraints on the use of nominals. Specifically, the use of definite nominals is not permitted unmediated in the preverbal focus position. Let us briefly review some relevant literature.

In Tzotzil Mayan, preverbal focus phrases, like *chobtik* 'corn' in (27)[12], may not begin with a definite determiner (Aissen 1992:49–50).

A focused transitive subject or object in Jakaltek Mayan is optionally preceeded by the clefting particle *ha'*. If the focused preverbal argument is a personal pronoun, like *naj* 'he' (28)[13], then the clefting particle *ha'* is obligatory (Aissen 1992:62–3):

(27) pero chobtik tztz'un un
but corn he.plants ENC
'But it was corn he was planting.'

(28) ha' naj x-maq-ni ix
CLEFT he ASP-hit-FOC she
'It's he that hit her.'

The preverbal focus position in Tz'utujiil Mayan is occupied either by an indefinite, a *wh*-interrogative, or a focus (Dayley 1985). Contrastive focus in K'ichee' may not include a definite nominal without using a focussing particle, like *are'* or *xow*, or equivalent, according to Can Pixabaj & England (2011:21, 23) (29)[14,15]:

(29) are ri achi x-ø-war kan-oq
EMPH DET man COM-3SABS-sleep remaining-SS
'It was the man who stayed sleeping (Can Pixabaj & England 2011:21).'

Can Pixabaj and England's (2011:18) domain of definiteness, which includes possessed nouns and proper names, is in principle uncontroversial. I argue, however, that their conventional definition of definiteness is not supported empirically for K'ichee'. For example, the data in (5) include an entirely acceptable possessed predicate nominal. Possessives like 'my' or 'their' are typically categorized in English

[12] Aissen's gloss: Aissen (1992:49) citing Laughlin (1977:334).
[13] Aissen's gloss: Aissen (1992:67) citing Craig (1977:11).
[14] Can Pixabaj and England's (2011) gloss.
[15] The constituent *xow*, its cognates *xuw(i)*, *xew(i)*, and *xaq* 'just, only' are focus adverbs. Consequently, they have no bearing on the specific issue at hand, which is the pronoun *are'*.

grammar as possessive determiners. But in K'ichee', possession is never indicated with determiners but normally with nominal prefixes (e.g. 3sPoss-).

Pronoun *are'* in non-focus contexts Here we consider data that highlights a different use of the pronoun *are'* but one that is without a distinction. In (31), the demonstrative *la'* 'that (one)' and *are'* are used declaratively as an NVP. Their word order cannot be reversed (32). The demonstrative *la'* cannot be an isolate (30). This is because *la'* is a non-projecting word that requires a host, the pronoun *are'*. I suggest that the demonstrative *la'* is the subject of the NVP *aree la'*:

(30) *la'
DEM
('That one')

(31) (*rii) aree la'
DET 3sP DEM
'That one (is it).'

(32) *la' are'
DEM 3sPro
('That one (is it).')

Consider the data in (33), (34). The pronoun *are'* is clause-initial, the nominal *nutz'i'* is a possessed noun, and the demonstrative *la'* head-adjoins either to the pronoun or the possessed nominal. There is no focusing or clefting in these data. The expletive argument *are'* merely provides a placeholder or host for the non-projecting word *la'* 'that' in (33). Nonetheless I argue that the placeholder is predicative, and present crucial evidence for this proposal later in 'Negation of predicate nominals.'

In (33), (34), *aree la'* represents the demonstrative NVP and *nutz'i'* is its subject. Both are daughters of S. The demonstrative *la'* head-adjoins to its host:

(33) aree la' nu-tz'i'
3sPro DEM 1sPoss-dog
'My dog is that one.'

(34) aree nu-tz'i' la'
3sPro 1sPoss-dog DEM
'My dog is that one.'

For comparative purposes, let us consider the adjectives *nim* 'big' (35) and *utz* 'good' (36). They are clearly predicative not attributive adjectives, and thus *in toto* represent adjectival NVPs. The demonstrative *la'* 'that (one)' is the subject of the NVPs. The demonstrative can also be used with the focus adverb *xewi* 'only' (37):

(35) nim-(*a) la'
big DEM
'That one is big.'

(36) utz-(*alaj) la'
good DEM
'That one is good.'

(37) xe(wi) la'
ADV DEM
'Only that, enough.'

In sum, several Mayan languages utilize an identical strategy to bypass the ungrammaticality of definite predicate nominals. That strategy involves the insertion of the third person pronoun *are'* into the clause as a predicate that can host subjects. The subject of the pronominal predicate is the nominal marked with the definite determiner. Let us pursue this analysis as it applies to K'ichee' NVPs.

Definite predicate nominals Possessed nouns in K'ichee' generally use a definite determiner, according to Larsen (1988:fn. 3, 145–146). A possessed noun that is marked as definite would not ordinarily be interpreted as an NVP.

Nevertheless, the (predicate) nominals *ri b'anow sii'* and *ri elaq'anik* in (38) are clearly definite:[16]

(38) a. ri nu-chaak, aree ri b'an-ow sii'
the 1SABS-work FOCUS the do-FOCUS firewood
'My work, it is firewood making (Larsen 1988:412).'

b. ri nu-maak, aree ri elaq'-a-n-ik
the 1SABS-sin FOCUS the steal-THEMATIC-AP-NOML
'My sin, it is stealing (Larsen 1988:412).'

To better understand the structure of Larsen's NVPs in (38), let us review the data in (38b) that I have tested in detail.

The third person pronoun *are'* almost always takes the definite determiner *rii* in clause-initial topic position (*rii are'* 'it') (see (23)). But *are'* is not permitted with *rii* in (39) following the topic *rii numaak*, or clause-initially in (40). The use of the definite determiner *rii* is ungrammatical in these examples because a predicate is not permitted to be marked with a determiner:

(39) rii nu-maak, ojeer (*rii) aree rii elaq'anik
DET 1SPOSS-sin in.the.past DET 3SPRO DET stealing
'As for my sin, in the past it was stealing.'

The AdvP *ojeer* 'in the past' in (39) can be used between *rii numaak* in clause-initial position and the pronoun *are'*. In addition, the AdvP *ojeer* in (40) can be used between the constituents *rii elaq'anik* and *rii numaak*. The DP *rii numaak* in (40) can also be used clause-finally in default subject position. Thus pronominal *are'* heads the focus structure because the (definite) DP *rii elaq'anik* cannot predicate:

(40) (*rii) *(aree) rii elaq'anik ojeer rii nu-maak
(DET) 3SPRO DET stealing past DET 1SPOSS-sin
'It was stealing that was my sin in the past. /My sin in the past was stealing.'

The c-structure in Fig. 4 represents the sentence in (40).[17]

In sum, the fundamental components of the NVP are the predicate and its subject. To state the obvious, the predicate of a NVP cannot be a verb. The NVP's subject is unrestricted: either bare, marked with indefinite *jun*, with the definite determiner, with demonstratives, etc. The nominal predicate, however, is constrained in its level of definiteness. It can be either bare or marked with indefinite *jun*. However the predicate nominal cannot be marked with a definite determiner, cannot

[16] Larsen's gloss. These are the only two examples of definite (predicate) nominals in Dayley (1985), Larsen (1988), or Mondloch (1978, 1981).

[17] Functional categories do not require heads (Bresnan 2001).

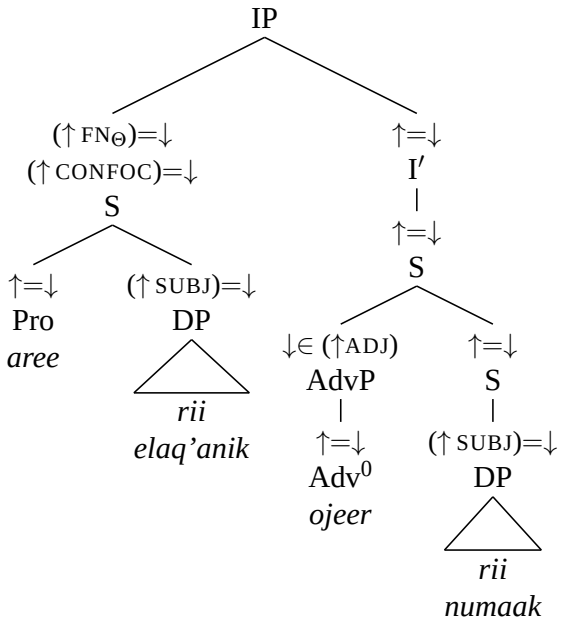

Figure 4 Definite (predicate) nominal in NVP focus phrase

be grammatically definite. The ungrammaticality can be resolved by inserting the third person independant pronoun *are'*, which functions as a dummy element. The pronoun *are'* is licensed to be a predicate that hosts a subject.

Certain data counter the proposal argued for here. In addition to the word categories already discussed, there are word categories, like interrogative adverbs (41) and cardinals (42), that host absolutive AMs:

(41) uj janipa'
1PLABS how.many
'How many are we altogether?'

(42) rii oj uj jo'ob'
DET 1PLPRO 1PLABS five
'As for us, we are five.'

However the behaviour of the proposed default predicate, the independent pronoun *are'*, differs from the above data in that independent pronouns in general appear not to be able to host absolutive AMs (43), (44):

(43) *uj ix
1PLABS 2PLPRO
('We are you all.')

(44) *at are'
2SABS 3SPRO
('You are him.')

It is entirely possible that it is not a syntactic but a semantic reason for the ungrammaticality of the data in (43), (44). The fact remains, however, that these data represent an unaccounted-for counter-argument to our proposal.

Bare, indefinite, and definite predicate nominals An NVP usually consists of a bare predicate nominal (45). Predicate nominals can also be marked with indefinite *jun* (46), although that is ambiguous because *jun* can also translate as a cardinal:

(45) in ajchaak
1SABS worker
‘ I am a worker.’

(46) in jun ajchaak
1SABS NUM worker
‘ I am a/one worker.’

A predicate nominal marked with a definite determiner as in (47), however, is not permitted. How, then, is a predicate nominal marked with the definite determiner expressed in K’ichee’?

(47) *in lee ajchaak
1SABS DET worker
(‘I am the worker.’)

Negation of predicate nominals Although the grammar of definite predicate nominals discussed above might seem an outlier, it nonetheless can be reproduced with the negation of definite nouns. The negation of definite NVPs follows directly from my analysis of nominal predicates. The difference grammatically between nominals marked with a definite determiner and without a definite determiner can be captured by a generalization that distinguishes DPs from non-DPs.

The bare nominal *tz’i’* ‘dog’ in (48) can be negated using standard methods of negation. The same applies in (49) to *tz’i’* marked with indefinite *jun*:

(48) ma tz’i’ taj
NEG dog IRR
‘(It is) not a dog/not dogs.’

(49) ma jun tz’i’ taj
NEG NUM dog IRR
‘(It is) not a/one dog’

However a nominal marked with the definite determiner as in (50) cannot be negated in the same way as non-definite nominals are negated. To resolve this, the third person pronoun *are’* is inserted into the clause and undergoes negation itself (51). The nominal marked with the definite determiner is not negated:

(50) *man lee achii’ taj
NEG DET man IRR
(‘He is not the man.’)

(51) man aree ta lee achii’
NEG 3SPRO IRR DET man
‘He is not the man.’

In sum, nominals marked with the definite determiner cannot be negated. If negation is the desired outcome, the clause requires the insertion of the pronoun *are’*. Bare nominals and nominals marked with indefinite *jun* do not require the pronoun *are’*.

The importance of the negation data is that it mirrors exactly, only in negative polarity, what occurs to predicate nominals marked with definite determiners. Fur-

ther the negation data in its totality crucially demonstrate that the nominal marked with the definite determiner is not a predicate. Instead it is the inserted pronoun that is the predicate. This is why I have analysed the pronoun *are'* as a predicator.

Indefinite determiner *jun* reconsidered It has been shown above that the grammar responds to nominals marked with the definite determiner differently than to nominals not so marked. The question remains how to account for these different responses by the grammar. I suggest that these can be accounted for quite straightforwardly with a reevaluation of the status of the indefinite determiner *jun* 'a.'

Dayley (1985:159, 254) claims that in Tz'utujiil the indefinite determiner *jun* 'a' is just a short form of the indefinite pronoun and number *juun* 'one.' Pursuing Dayley's suggestion, I propose that the indefinite determiner *jun* 'a' is a morphophonemic alternation of the cardinal *juun* 'one.'[18] I suggest, following Dryer (2011:38), that the alternation is a function of stress, with indefinite *jun* unstressed and cardinal *juun* stressed.[19]

There are a number of empirical facts that support this proposal. Verbs in Tz'utujiil that are in phrase- or clause-final position or that are followed by nominals marked with the definite determiner require the verb's phrase-final suffix (Dayley 1985:82). Elsewhere the phrase-final suffix is never required on verbs. NVPs with a bare predicate nominal, or else, marked with indefinite *jun* are usually interpreted as indefinite. This suggests that indefinite *jun* is considered optional, unlike determiners, which are usually obligatory. Almost all topics in K'ichee' use the definite determiner, even possessed nominals, personal pronouns, and proper names, even though it is generally accepted that they are already definite, albeit inherently.

In addition, nominals in K'ichee'an allow definite and indefinite determiners to co-occur. The definite determiner *lee* in (52) can preceed indefinite *jun*, but not the reverse (53). Nor can the noun be marked or interpreted as a plural (54):

(52) lee jun ak'al
DET NUM child
'The child.'

(53) *jun lee ak'al
NUM DET child
('The child.')

(54) *lee jun ak'al-aab'
DET NUM child-PL
('The children.')

There has yet to be a convincing explanation for or even any agreement about the double-determiner construction and its meaning in the literature (cf. Dayley 1985:255, Larsen 1988:312–3). I suggest that the construction can be accounted for grammatically, even semantically, if the so-called indefinite determiner *jun* is reinterpreted as a cardinal. Determiners are used to fix a nominal's reference in a particular context. There is no reason why indefinite *jun* cannot fulfil the same function but not as a member of the determiner category. The indefinite determiner *jun* could then be reconfigured as a distinct projection called number phrase (NumP).

[18] Tibor Laczkó (p. c.) suggests reanalyzing indefinite determiners as numbers and then assume that they are NPs, thus differentiating them explicitly from DPs. I adopt this approach in this paper.

[19] Although vowel length is phonemic in Tz'utujiil and K'ichee', their vocalic morphophonemics are notoriously complex with sentential and phrasal stress playing an important role.

Numbers are formally nouns in K'ichee'an because they can be possessed to form ordinals (Dayley 1985:159, Larsen 1988:148 fn. 10), yet classifying a nominal as an adjective seems misguided. Adjectives are assumed to adjoin to the nominal phrase as adjective phrases (AP). Whatever the nomenclature the phrase would not be interpreted as a phrase marked with a determiner, that is, not as a DP. The DP's structure assumes the definite determiner as the DP's head. The demonstrative (demonstrative phrase, DemP) forms a higher projection of DP, which is its co-head. I assume that demonstratives are determiners in K'ichee'.

I propose the c-structure in Fig. 5 for the DP *lee jun saqa ch'iich'* 'the white car.' I propose in Fig. 6 a generic nominal c-structure.

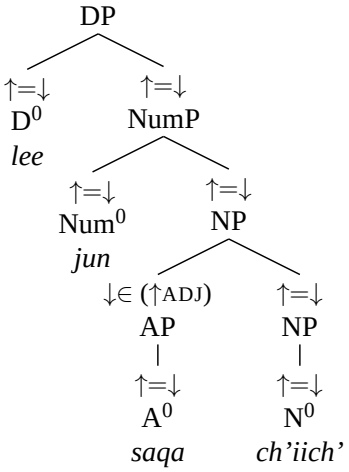

Figure 5 Determiner & number phrases

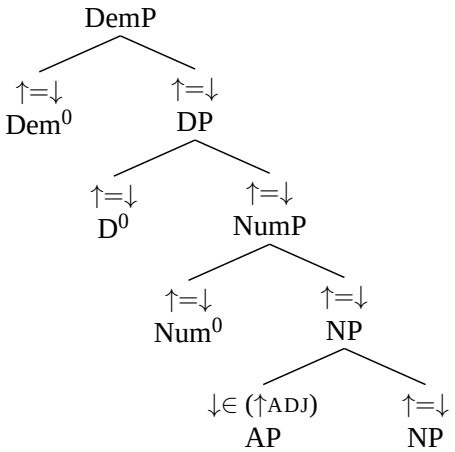

Figure 6 DemP, DP > NumP, AP, NP

Analysis In review, what is crucial for the obligatory epenthesis of the pronoun *are'* is that the definite determiner must be present. It is not the inherent definiteness of the predicate nominal itself that requires the use of the pronoun *are'* or equivalent. Rather it is the presence of the definite determiner that obligates the deployment of the pronoun *are'*. It is the very fact that the determiner node is filled that triggers the insertion of the pronoun *are'* as predicate.

I argue against the often reported interpretation of the pronoun *are'* as a 'focussing/clefting particle.' The constituent *are'* is the third person independent pronoun, which inflects only for number. The pronoun bears no causal relationship whatsoever to focusing or clefting. The grammatical functions of the pronoun are derived from its clausal, syntactic, or discourse configurational status, not from any inherent lexical qualities that it might possibly have. It is the inherent minimization or bleaching of properties that allow the third person singular pronominal to act as a form of impersonal or quasi-argument. Recall that the third person singular absolutive AM is null. The function of the phrase-initial pronoun *are'* in the data structures examined in this paper is, I suggest, predicative. This predicative property is the result of its specific location in the clause, licensed by phrase-structure rules.

The pronoun itself is simply a 'dummy' or an expletive element like the 'it' subjects in English weather verbs.[20] The pronoun's insertion into various clausal structures represents a grammatical strategy that the language resorts to whenever necessary, sometimes for stylistic reasons, or when all else has failed.

Consider that the pronoun *are'* can also be used in nominal predicates in the absence of a nominal marked with the definite determiner. But in these cases the insertion of the pronoun *are'* is not obligatory.

In the end, nominals marked with definite determiners are not permitted to be predicates. To resolve the ungrammatically, the grammar epenthesizes an expletive pronominal element so that the clause has a legitimate, licensed predicate that can be operated on, by negation for example. And the nominal marked with the definite determiner is selected for as the subject of the inserted (predicate) pronoun *are'*.

Lexical entries of predicates The lexical entries of the predicates discussed above are outlined in this section. Predicate adjectives are zero copula and are not able to be directly modified. In this way, they are archetypal heads that select for subjects (55). Adjectives can also be attributive and thus obligatorily prehead. In that case, many adjectives require the inflectional attributive suffix *-a* (56):

(55) *nim* A, $(\uparrow \text{PRED}) = \text{'big}\langle\uparrow \text{SUBJ}\rangle\text{'}$ $(\uparrow \text{NUM})$

(56) *-a* Aff_{ATT} $(\uparrow \text{PRED}) = \text{'big'}$ $(\uparrow \text{NUM})$

Not all adjectives require an attributive suffix when used attributively:[21]

(57) *niitz'* A, $\{ (\uparrow \text{PRED}) = \text{'small}\langle\uparrow \text{SUBJ}\rangle\text{'} \mid (\uparrow \text{PRED}) = \text{'small'} \}$

Let us consider the stative positional participial adjective *k'oolik*, which, as an adjective, can select for a subject (58). The participial adjective *k'oolik* can also function attributively, and in doing so requires the attributive suffix *-ik* (59):

(58) *k'oolik* A, $(\uparrow \text{PRED}) = \text{'exist}\langle\uparrow \text{SUBJ}\rangle\text{'}$ $\neg(\uparrow \text{NUM})$

(59) *-ik* Aff_{ATT} $(\uparrow \text{PRED}) = \text{'exist'}$ $\neg(\uparrow \text{NUM})$

Let us now consider lexical entries for nominals and nominal predicates. The LE for non-definite nominals includes bare and adjective modified nominals (NP) and nominals marked with indefinite *jun* (NumP) (60). The LE for nominals marked with the definite determiner excludes predication (61):[22]

[20] The expletive pronominal 'it' (*are'*) is predicative in K'ichee', not English.

[21] Most K'ichee' adjectives do not show number agreement, either attributively or predicatively.

[22] K'ichee' nouns do not mark for number, except for human and a few non-human animates.

(60) *ajchaak* N, (↑ PRED) = 'writer⟨↑ SUBJ⟩'
¬(↑ DEF)
(↑ NUM)
@(CAT ↑ ¬DP)

(61) *ajchaak* N, (↑ PRED) = 'writer'
(↑ DEF)
(↑ NUM)
@(CAT ↑ DP)

Phrase-structure rules Dalrymple et al. (2004) provide phrase-structure rules with phrase-structure annotations and virtual copula ε to account for copula and NVPs. The phrase-structure rule is ammended accordingly in Fig. 7 for K'ichee':

S → DP ¬{AP | AdvP} {NumP | NP} ∨ (Part) A
(↑ SUBJ)=↓ (↑ FN$_\Theta$)=↓ ↑=↓ ↑=↓

∨ ε
(↑ PRED) = 'ø-be⟨↑ SUBJ⟩' {FN$_\Theta$}
(↑ ASP) = STATIVE
(↑ FN$_\Theta$ PRED) = '*are*'⟨↑ SUBJ⟩'
(↑ FN$_\Theta$ SUBJ) = DEF

Figure 7 Phrase-structure rules for K'ichee' NVPs

PREDLINK The copula's f-structure in Butt et al. (1999) subcategorizes for two grammatical functions, SUBJ and PREDLINK. Largely undefined, PREDLINK remains somewhat of a mystery. Nonetheless PREDLINK appears to be, in essence, a rebranded OBJect. The copula in Butt et al. (1999) thus represents, I argue, a bivalent transitive. Because K'ichee NVPs host absolutive AMs, K'ichee' NVPs are monovalent intransitives requiring a SUBJ-only argument list in the f-structure's semantic form. PREDLINK is thus not licensed in K'ichee' NVPs.

Function theta (FN$_\Theta$) I propose instead an intermediate argument–adjunct category called Function Theta (FN$_\Theta$). Function theta is not listed as a grammatical function in the semantic form of f-structure but is listed as a thematic role in a-structure. It represents a thematic role because it is obligatory, unlike a semantic role.[23] It thus represents a grammatical function that is thematically-selected for, but is not syntactically-selected for. Function theta thus identifies a previously unrecognized grammatical space that is revealed in a two-feature, four-way binary feature array. Because function theta is not included in the semantic form's specified argument list, it is not syntactically subcategorized for. Thus f-structure's completeness requirement is satisfied. Coherence is also satisfied because function theta is an adjunct, and thus does not show up in the semantic form's specified argument list. Function theta also satisfies the extended coherency condition (Bresnan and Mchombo 1987) because it is in an f-structure that contains PREDs. The properties of function theta thus follow from first principles.

[23] Function theta is completely distinct from Rákosi's (2006) optional Adjunct Theta (ADJ$_\Theta$).

Because the binary argument–non-argument distinction (Bresnan 1982) is axiomatic in the strategic design of LFG, expanding the inventory of grammatical functions should not be undertaken lightly. Notwithstanding this, I maintain that the grammatical function function theta is well-founded and empirically motivated.[24]

The binary feature array consists of the four listed grammatical functions:

- arguments: [+syntactic, +thematic]
- non-arguments: [−syntactic, −thematic]
- expletive subjects & objects of raising verbs: [+syntactic, −thematic]
- FN_Θ: [−syntactic, +thematic]

The binary feature array is presented schematically in Fig. 8.

		SYNTACTIC	
		+	−
T		RAISING GF	ADJUNCT
H	−	*Juan seems happy.*	*Maria laughed loudly.*
E		'seem⟨XCOMP⟩SUBJ'	PRED 'laugh⟨SUBJ⟩'
M			ADJ {'loudly'}
		$\lambda P.\text{seem}(P)$	$\lambda x.\text{laugh}(x)$
A		SUBCATEGORIZED GF	FUNCTION THETA (FN_Θ)
T		*Juan kissed Maria.*	*My sin, it is stealing.*
I	+	'kissed⟨SUBJ, OBJ⟩'	PRED 'ø-be⟨SUBJ⟩'
C			FN_Θ 'It is stealing.'
		$\lambda y.\lambda x.\text{kissed}(x,y)$	

Figure 8 Function theta (FN_Θ) in binary feature array

5 Conclusion

In this paper, the most important types of non-verbal predicates (NVP) of K'ichee' Mayan have been described. The core types of NVPs are presented and constituent structures are proposed. The grammatical function function theta (FN_Θ) has been introduced to account for complements of monovalent intransitive NVPs.

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[24]The notation {FN_Θ} right-adjacent to the f-structure's semantic form licenses function theta in that particular f-structure or phrase-structure rule.

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