Nominal predication in periphrastic perfect

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1. The paper examines perfect constructions in the Patzún variety of Kaqchikel (PK; Mayan, Guatemala; ergative, VOS). Perfect is mentioned in grammars (García Matzar and Rodríguez Guaján 1997) but so far has received no formal analysis despite the peculiar syntactic properties that distinguish it from the better-known examples of verbal predication. I propose that perfect in Kaqchikel is periphrastic: these constructions should be analyzed as nominal predication and can be literally translated as 'x is [y's result of V-ing]'. The perfect form is a result noun derived when a verbal root combines with a nominalizer whose function is to existentially close the event(uality) argument (Moulton 2014). The derived object nominal, which may contain a possessor introduced above the n head, is predicated of the subject DP, which binds the internal argument variable. Analyzing perfect forms as nominal allows us **1)** to account for a variety of constructions in Kaqchikel, **2)** to draw a parallel between perfect and progressive in Mayan languages; see Laka (2006), Coon (2013), and Imanishi (2020) on progressive in Mayan involving eventive nominal predicates, and **3)** to expand the discussion of periphrastic perfect in the world's languages, that so far has mostly been informed by data from Indo-European languages of Europe; cf. Drinka (2003) and references therein.

2. Perfect is derived from transitive verbs using the suffix -V*n*. Perfect interpretation is obligatory in (1a/a'): unlike (1b), they can be combined with *already*-type modifiers and cannot be continued with '… but we didn't finish' or '… and we are still doing that'. Similarly to finite transitive verbs, perfect encodes Agent as ergative and Theme as absolutive. However, perfect also exhibits properties exclusive of non-verbal predicates (1c). First, (in)completive tense/aspect marking is prohibited. Second, Agent/Possessor is optional (1a'), while in finite clauses Agent can only be dropped under passivization; note that ERG and POSS markers in Kaqchikel share the paradigm.

(1) a. (röj) (*x-)e-qa-loq'-**on** rije'. a'. (rije') (*x-)e-loq'-**on**.
      we CMP-ABS3P-ERG1P-buy-ON they   they CMP-ABS3P-buy-ON
      'We have bought them.'   'They have been bought.'

     b. (röj) x-e-qa-loq' (rije'). c. (rije') (*y-)e-(q-)aq'omanela (röj).
        we CMP-ABS3P-ERG1P-buy they   they ICMP-ABS3P-ERG1P-doctors we
        'We bought/were buying them.'   'They are (our) doctors.'

I propose that (1a/a') is structurally parallel to (1c) with *-(qa)loq'on* being a (possessed) result nominal predicate (2); thus, (1a/a') are literally translated as 'they are [(our) result of buying]'.

(2)   [$_{PredP}$ *rije'* [$_{Pred'}$ Pred^0 [$_{nP}$ n -**V***n* [$_{VP}$ *loq'*]]]]

3. <u>Background assumptions</u> behind (2). (i) Subjects of non-verbal predicates are projected as external arguments, in Spec,PredP (Levin et al. 2021). (ii) Non-verbal predication is stative and incompatible with (in)completive aspect morphology (Coon and Preminger 2009). (iii) ABS is uniformly assigned by Infl (Coon et al. 2014), while ERG is assigned downwards by transitive Voice to an external argument in Spec,vP or by Poss to a possessor in Spec,nP. (iv) There is no overt copula in Kaqchikel (Patal Majtzul et al. 2000).

4. Additional support for the nominalization analysis comes from the distribution of ergative marking. Ergative and possessive markers are homophonous with one exception: 1sg *nu-* cross-references a possessor within an NP but not an external argument in a clause (Patal Majzul 2007). Crucially, *nu-* is used in perfectives: *e-nu-loq'-on* ABS3P-ERG1S-buy-ON 'I have bought them.'

5. Considering the internal structure of -V*n* nominals, I argue that *-loq'on* in (1a) is a result noun derived from the root *loq'*, which requires an internal argument (IntA) and an event argument, combined syntactically with a nominalizer -V*n*, adhering to the Distributed Morphology framework. Adapting Moulton's (2014) analysis for result nominals in English, I propose that the main function of the nominalizer -V*n* is to existentially close the event argument, giving rise to the interpretation 'x such as there was an event of (buy)ing it.' The derived nP is then predicated of the DP merged in Spec,PredP; it can serve as a predicate due to the presence of the unbound internal argument variable; for the sake of simplicity I mark the root projection in (3) as VP.

(3)   a.   Existential closure of an event argument (Moulton 2014)
            $[\![[n\ \exists]\!]] = \lambda P_{<e<s,t>>}.\lambda x.\exists e[P(x)(e)]$

b. $[_{nP} \, n \, \text{-V}n \, [_{vP} \, \text{Root IntA.variable}]]$

Importantly, result -V*n* nominals are also available as arguments (4). The argumental -V*n* nominals normally appear with a determiner; in contrast, -V*n* nominals used predicatively must be determiner-less. I assume that the addition of a determiner renders the nominal type *e*.

(4) x-Ø-qa-tz'ët   ri   (oxi')   ru-loq'-on   ri   Maria.
     CMP-ABS3S-ERG1P-see   DET   three   ERG3S-buy-ON   DET   Maria
     'We saw the (three) thing(s) that Maria had bought.'

6. Unlike IntA, external argument (ExtA) is projected by a separate head, v (Chomsky 1995, Kratzer 1996). I propose that in Kaqchikel, similarly to English and ther languages, the same nominalizer can combine with structures of different sizes: VP (as in (3b)) or vP. Due to the lack of case within the verbal part (no Infl or Voice$_{TV}$), ExtA cannot be a referential DP; thus, adding -V*n* on top of a vP leaves us with two variables. First, the ExtA variable (PRO) can be controlled by a possessor merged above the n head; see Imanishi (2020), Burukina (2021) for control approaches to nominalization in Kaqchikel. I argue that this is what happens in perfective contstructions of the type (1a) (5).

(5) $[_{nP} \, \text{DP}_i \, [_{n'} \, n \, \text{-V}n \, [_{vP} \, \text{PRO}_i \, [_{vP} \, \text{Root IntA.variable}]]]$

Second, the IntA variable can be existentially closed. I propose that in Kaqchikel the nominalizer -V*y/j*, which is used to create simple event nouns (Grimshaw 1990) out of transitive verbs, does exactly that; cf. a similar analysis proposed for agentive nominals in Chuj by Coon and Royer (2020). Following Moulton (2014), I argue that the role of -V*y/j* is to existentially close the IntA variable; the denotation of -V*y/j* is given in (6).

(6) Existential closure of an internal argument (Moulton 2014)
     $\llbracket [n \, \exists] \rrbracket = \lambda P_{<e<s,t>>}.\lambda e.\exists x[P(x)(e)]$

Similarly to -V*n*, -V*y/j* is merged either immediately with a VP or a vP: *-loq'* → *loq'oj* 'act of buying', **nu*loq'oj* 'my act of buying'; in the latter case the ExtA variable in Spec,vP is controlled by the possessor (7a). Such simple event nouns can be used as arguments when a DP layer is added on top of the nP (7b).

(7) a. $[_{nP} \, \text{DP}_i \, [_{n'} \, n \, \text{-V}y/j \, [_{vP} \, \text{PRO}_i \, [_{vP} \, \text{Root IntA.variable}]]]$
     b. n-Ø-qa-rayi-j   ri   loq'-oj   pa   ka'i'   ramaj.
         ICMP-ABS3S-ERG1P-desire-DTV   DET   buy-NMZ   in   two   time
         'We want to buy something at two o'clock.'

Alternatively, a -V*y/j* nP can be used predicatively in periphrastic perfective constructions: first, -V*y/j* combines with a vP, closing the IntA varible, second, -V*n* nominalizer is added to existentially close the event argument (8b). The result gets the reading 'y such as there was an event of (buy)ing something buy them'; this nominal is then predicated of a DP argument, in parallel to (2).

(8) a. (röj)   oj-loq'-oy-on.
         we   ABS1P-buy-NMZ-ON
         'We have bought something.' (Lit.: 'We are buyers of something.')
     b. $[_{nP} \, n \, \text{-V}n \, [_{nP} \, n \, \text{-V}y/j \, [_{vP} \, \text{ExtA.variable} \, [_{vP} \, \text{Root IntA.variable}]]]]$

7. The proposed analysis for perfect in terms of nominal predication brings it close to progressive (9a) and offers an opportunity to provide a uniform account for periphrastic aspectual constructions; see Laka (2006), Coon (2013), Imanishi (2020) analyzing progressive as involving an event nominal (9b).

(9) a. (röj)   y-oj-ajin   (che)   q-atin-ik.
         we   ICMP-ABS1P-PROG   PREP   ERG1P-bathe-NMZ
         'We are bathing.' (Lit.: 'We are engaged in bathing.')
     b. $[_{VP} \, ajin \, [_{PP} \, che \, [_{DP} \, qatinik]]]$

Selected references: **Coon, J. 2013**. *Aspects of split ergativity*. OUP. **Coon, J., P. Mateo Pedro, and O. Preminger. 2014**. The role of case in A-bar extraction asymmetries: Evidence from Mayan. *Linguistic Variation* 14(2): 179–242. **Coon, J., and J. Royer**. **2020**. Nominalization and selection in two Mayan languages. *Nominalization: 50 Years on from Chomsky's Remarks.* OUP. **García Matzar, L. P., and J. O. Rodríguez Guaján. 1997**. *Rukemik ri Kaqchikel Chi': Gramática Kaqchikel*. Cholsamaj. **Imanishi, Y. 2020**. Parameterizing split ergativity in Mayan. *NLLT* 38: 151–

200. **Moulton, K**. **2014**. Simple event nominalization. *Cross-linguistic investigations of nominalization patterns.* **Patal Majtzul, F. 2007**. *Rusoltzil ri Kaqchikel: Diccionario bilingüe estándar Kaqchikel illustrado*. OKMA. **Patal Majzul, F., L. P. García Matzar, and C. I. Espantzay Serech. 2000**. *Rujunamaxik Ri Kaqchikel Chi': Variación Dialectal En Kaqchikel*. Editorial Cholsamaj.