Jessica Coon

# McGill University

# 1. Introduction

This paper examines predication data from two unrelated languages: Chol, a Mayan language spoken in southern Mexico, and Tagalog, an Austronesian language of the Philippines. Though not genetically related, these languages (along with many members of their respective families) share the characteristics listed in (1).

- (1) SHARED PROPERTIES
  - a. lack of an overt copula
  - b. tenselessness
  - c. subjects of non-verbal predicates pattern with unaccusative subjects

In this paper I explore the possibility that this is not an accident, but that all three properties connect to a single source: the structure of predication and the absence of a lexical/functional distinction among predicates (Bowers 1993, Baker 2003). I suggest that "verbs" in Chol and Tagalog differ from verbs in languages like English in that they do not form lexical categories via "conflation" of a property-denoting root into a null predicative head, Pred<sup>0</sup> (Hale and Keyser 1993, Baker 2003), as illustrated in (2). Instead, developing the proposal in Sabbagh (2011) for Tagalog, I suggest that the property-denoting root enters directly into a predication relationship with the internal argument, as in (3).

<sup>\*</sup>For Chol data I am grateful to Nicolás Arcos López, Matilde Vázquez Vázquez and Virginia Martínez Vázquez. Thanks to Alan Bale, Henry Davis, Marcel den Dikken, Heidi Harley, David Pesetsky, Omer Preminger, Norvin Richards, Joey Sabbagh, Lisa Travis and audiences at NELS and McGill's Syntax-Semantics Reading Group for helpful discussion of this work. Any errors in data or analysis are of course my own. This work was supported with a SSHRC Banting Postdoctoral Research Fellowship.



According to Bowers (1993), Baker (2003), and others, the structure in (2) underlies all predication. For Baker, verbal predicates (e.g. *The vase broke*) differ from nominal and adjectival predicates (e.g. *The vase is broken*) in that the property-denoting root conflates into the Pred<sup>0</sup> head, creating a lexical category; non-verbal predicates do not involve conflation and the projection remains functional. In Chol and Tagalog, I propose that verbal predicates are instead built on top of the same functional PredP projections involved in non-verbal predication (e.g. via the addition of an eventive vP projection). This distinction is shown to cover a range of facts below.

This proposal connects to a fourth shared trait between these languages: the questionable status of grammatical categories, in particular, the proposed absence of a noun/verb distinction in languages of the Mayan and Austronesian families. At least since Charencey 1884, Mayanists have questioned the division between verbs and nouns (Seler 1887, Tozzer 1921, Bruce 1968). The noun/verb distinction has likewise been called into question in languages of the Austronesian family; see for example Lopez 1928, Seiter 1975, Capell 1964, and more recently, Kaufman 2009. I follow a range of recent work argues that at some level a distinction *must* be maintained between nominal and verbal categories (see e.g. Lois and Vapnarsky 2006 on Mayan; Richards 2009a and Sabbagh 2009 on Tagalog). Nonetheless, the abundance of work on this topic suggests a further point of comparison which may connect to the proposal here.

### 2. Shared properties

#### 2.1 No copula

Chol and Tagalog verbal, adjectival, and nominal predicates are shown in (4) and (5). As these examples illustrate, both Chol and Tagalog are not just verb-initial, but predicate initial. Neither Chol nor Tagalog exhibits a copula in the non-verbal predicates (NVPs) in (4b–c) and (5b–c). Instead, the most obvious difference between verbal and non-verbal

predicates lies in the appearance of aspect marking: aspect is required on verbal predicates in (4a) and (5a), but absent on the NVPs in (4b–c) and (5b–c).<sup>1</sup>

(4)	Chol	(5)	TAGALOG			
	a. Tyi majl-i jiñi wiñik.		a. Nag-aaral ako.			
	PRFV go-ITV DET man		IMPF.NOM-study 1SUBJ			
	'The man went.'		'I'm studying.'			
	b. Chañ jiñi wiñik.		b. Maganda ako.			
	tall DET man		beautiful 1SUBJ			
	'The man is tall.'		'I'm beautiful.'			
	c. Maystraj jiñi wiñik.		c. Doktor ako.			
	teacher DET man		doctor 1SUBJ			
	'The man is a teacher.'		'I'm a doctor.' (Richards 2009b)			

The (b) and (c) forms above illustrate that these languages have copula-less predicative constructions. But lacking a phonologically-realized copula in some environments is not rare. In Russian and Maltese, for example, a copula is absent in the present tense, but must appear in the past tense; in other languages, person features of the subject play a role in the appearance of a copula (Stassen 2011). In Chol and Tagalog, however, no copulas are *ever* present, regardless of the temporal interpretation of the clause or person of the subject.<sup>2</sup> Chol and Tagalog clauses with past tense interpretations are shown in (6) and (7).

(6)	Wajali	loktoraj-oñ.	(7)	Doktor ako	noon.	
	back.then doctor-1ABS			doctor 1SUBJ then		
'I was a doctor.'		loctor.'		'I was a docto	or.'	

# 2.2 Tenselessness

As the examples in (6)–(7) illustrate, temporal distinctions in NVPs are not grammatically encoded, but may be introduced via the addition of adverbial or adjunct material, or inferred from the context. In fact, in both languages NVPs do not grammatically encode either temporal or aspectual information.

<sup>&</sup>lt;sup>1</sup>Abbreviations in glosses are as follows: ABS – absolutive; AGR – agreement; DET – determiner; EP – epenthesis; ERG – ergative; IMPF – imperfective aspect; INCH – inchoative; ITV – intransitive verb; NC – numeral classifier; NEG – negation; NS – non-subject; POSS – possessive; PRED – predicate; PREP – preposition; PRON – pronoun; PRFV – perfective aspect; SUBJ – subject; TV – transitive verb.

<sup>&</sup>lt;sup>2</sup>Richards (2009b) argues for a phonologically null copula in Tagalog, based on the appearance of a verb *maging* in non-finite non-verbal predicate constructions. *Maging*, however, is also glossed as an inchoative 'become,' which may suggest it is not simply a copula but also carries additional information.

In the domain of verbal predicates, both Tagalog and Chol are languages which grammatically encode *aspect*, rather than tense (see Schachter and Otanes 1972 on Tagalog; Vázquez Álvarez 2011 on Chol). A Chol example is shown in (8). The imperfective in (8a) can receive a present, past, or future interpretation, depending on context or the presence of adverbial material, such as *wajali*. A perfective example is shown in (8b).

- (8) a. Mi i-k'ux kabäl chäy (wajali).
   IMPF 3ERG-eat lot fish back.then
   'I eat/used to eat a lot of fish.'
  - b. **Tyi** i-k'ux-u kabäl chäy. PRFV 3ERG-eat-TV lot fish 'I ate a lot of fish (e.g. yesterday).'

# 2.3 Unaccusative NVPs

Sabbagh (2011) provides evidence—which I will not review here—that the subjects of adjectival passives (a class of NVP) in Tagalog behave as *unaccusative* subjects. As in many languages, adjectival passives in Tagalog form a paradigm with transitive verbs. The subject of the adjectival passive—'bottle' in (9a)—corresponds to the object of the transitive in (9b).

- (9) TAGALOG
  - a. Baság **ang bote**. broken SUBJ bottle 'The bottle is broken.'
  - b. N-agbasag si Juan **ng bote**. AGR.PRFV-break SUBJ Juan NS bottle 'Juan broke the bottle.'

(Sabbagh 2011, 1428)

Adjectival and nominal predicates in Chol also behave as unaccusatives, according to language-internal diagnostics. Possessors may extract *out of* unaccusative subjects (10a) and transitive objects (10b) (also noted for related Tzotzil by Aissen 1996, see Coon 2009).

(10)	a.	Maxki <sub>i</sub> [ <sub>IP</sub>	tyi	chäm-i [	i-waka	ax 1	$[i_i]]?$	
		who	PRFV	die-ITV	3poss	-cow		
		'Whose co	ow die	d?'				
	b.	Maxki <sub>i</sub> [ <sub>IP</sub>	tyi	aw-il-ä	[ j	i-chich	l	t <sub>i</sub> ]]?
		who	PRFV	2ERG-se	e-TV	3poss	-older.sister	
		'Whose ol	der sis	ster did yo	ou see?	,		

Extraction is *impossible* out of transitive subjects (11a) and unergative subjects (11b).

(11)	a.	* Maxki <sub>i</sub> [ <sub>IP</sub> tyi i-jats'-ä-yety [i-chich t <sub>i</sub> ]]? who PRFV 3ERG-hit-TV-2ABS 3POSS-older.sister							
	'Whose older sister hit you?'								
	b.	* Maxki <sub>i</sub> [ <sub>IP</sub> tyi i-cha'l-e soñ [i-chich t <sub>i</sub> ]]? who PRFV 3ERG-do-DTV dance 3POSS-older.sister							
'Whose older sister danced?'									

Extraction is fine, however, from the subjects of adjectival and nominal predicates.

- (12) a. Maxki<sub>i</sub> [<sub>IP</sub> chañ [ i-chich t<sub>i</sub> ] ]? who tall 3POSS-older.sister
  'Whose older sister is tall?
  b. Maxki<sub>i</sub> [<sub>IP</sub> maystraj [ i-chich t<sub>i</sub> ] ]?
  - who teacher 3POSS-older.sister 'Whose older sister is a teacher?

# 3. Lexical categories and PredP

As Sabbagh notes, the claim that adjectival passives are unaccusative may initially seem rather mundane. Given the Uniformity of Theta Assignment Hypothesis (UTAH, Baker 1988), we expect that the THEME argument should occupy the same syntactic position in both clauses in (9) above. However, subjects of adjectival predicates have been shown to pattern with subjects of *unergatives*, for example in Russian (Pesetsky 1982), Hebrew (Borer 1984), English (Levin and Rappaport-Hovav 1986), and Italian (Belletti and Rizzi 1981). The unergative behavior of adjectival predicates has in turn been used to argue *against* the UTAH (cf. Borer 2005).

# 3.1 Baker 2003 on predication

Baker (2003) aims to reconcile the unergative behavior of NVPs with the UTAH. He proposes that THEMES are universally generated in the specifier of a PredP projection, regardless of whether they are themes of non-verbal predicates (13) or verbal predicates (14). Pred<sup>0</sup> takes a property-denoting element as its complement (here represented as  $\sqrt{}$ ) and merges the THEME in its specifier.



However, we still need to account for at least two differences between verbal and non-verbal predicates: (i) NVP subjects behave as unergative subjects, rather than as unaccusatives; and (ii) NVPs require a copula; verbal predicates do not, as shown in (15).

- (15) a. Chris arrives.
  - b. Chris \*(is) tall/a skier.

To account for these differences Baker proposes that in verbal predicates like (15a), the property-denoting complement incorporates into Pred *prior to lexical insertion*, likened to Hale and Keyser's (1993) "conflation," resulting in a lexical category. Pred<sup>0</sup> is a functional category because it lacks encyclopedic content: "If, however, it acquires encyclopedic content by a process of conflation, it automatically becomes a lexical category" (Baker 2003, 87), as in (17). NVPs, like the ones in (15b), remain functional PredPs as in (13) above.



Baker uses the lexical/functional distinction to account for the obligatory appearance of the copula in the non-verbal predicates in (15b). He proposes that an affixal tense morpheme must attract a lexical head (cf. the requirement that only verbs directly inflect for tense in English). In an unaccusative like (15a), the lexical head V<sup>0</sup> is attracted to T<sup>0</sup>. In (15b), however, the functional PredP projection intervenes between tense and the root. A *lexical* auxiliary verb—the copula *be*—is therefore inserted and successfully attracted to affixal T<sup>0</sup>. Like all other lexical verbs, the copula is formed via conflation.

This distinction between lexical (i.e. verbal) and functional (i.e. non-verbal) predicates is also employed to account for the fact that subjects of NVPs behave as *unergative* subjects. Claiming that it is more difficult to move something out of a functional projection than out of a lexical one (e.g. the Empty Category Principle, Chomsky 1981), Baker accounts for the failure of unaccusativity diagnostics in NVPs in languages like Italian. In the

remainder of this paper, I take Baker's claims at face value for languages such as English and Italian, and evaluate them with respect to empirical data from Chol and Tagalog.

### 4. Proposal

#### 4.1 Three properties

For Baker, the difference between unaccusative and NVP subjects in languages like English and Italian fall out from the presence or absence of the operation of *conflation* (i.e. pre lexical-insertion head-movement which creates lexical items like *verbs*). Though for Baker this distinction is proposed to be universal, a language which empirically fails to distinguish between verbal and non-verbal predicate subjects might be suspected to either consistently have, or consistently lack, conflation.

In his discussion of the unaccusative behaviour of NVP subjects, Sabbagh (2011, 1446) suggests that in Tagalog, *all* subjects are internal subjects. This is consistent with an approach in which conflation is mandatory across categories. Under this proposal, the UTAH is still satisfied, and the unaccusative behaviour of NVP subjects—property (1c) above—is explained. Another possibility, which I explore here, is that conflation *never* occurs in languages like Chol and Tagalog. Rather than serving as complements to a light  $Pred^0/BE$  head, property-denoting roots have the ability predicate directly, selecting for the THEME as their complement, as in (18)–(19).



As in Sabbagh's account, THEME arguments are in the same structural position in both unaccusative and non-verbal predicates, accounting for their uniform treatment.<sup>3</sup> Unlike in Sabbagh's approach, here we are left with no lexical categories, only PredPs, a distinction which will be important below. As Sabbagh (2011, 1447) notes, structures like the ones in (18)–(19) are not necessarily simpler than the ones in (13) and (17) above: Baker's structures above involve more abstract syntax but simpler lexical representations. The structures in (18)–(19) involve a simpler syntax but arguably more complex lexical representations: Pred<sup>0</sup> heads are directly instantiated by property-denoting roots.

<sup>&</sup>lt;sup>3</sup>Note that just as unaccusativity diagnostics vary from language to language, we do not predict exactly how the subjects will be treated, i.e. whether they will be able to sub-extract. We simply predict that they will be treated uniformly across different kinds of predicates.

The parallel structures in (18)–(19) raise the question of what the difference is between verbal and non-verbal predicates in a language like Chol. Chol versions of (18) and (19) are given in (20) and (21). We find two differences: (i) an aspectual marker, here perfective *tyi*, is obligatory in verbal predicates but impossible in NVPs (§2.2); and (ii) a "status suffix", which varies with transitivity and aspect, appears on verbal predicates but not NVPs.

(20)	K'am jiñi x'ixik.	(21)	Tyi	jul- <b>i</b>	jiñi x'ixik.	
	sick DET woman		PRFV	arrive-ITV	DET woman	
'The woman is sick.'		'The woma			in arrived.'	

I have proposed elsewhere that the status suffix represents an eventive  $v^0$  which introduces an event variable; this event variable must be bound by aspect (Coon 2013). While other differences may exist, what is crucial is that the "verbal" predicate, represented in (23), does not involve lexical material, but rather is built on top of the same functional structure as the non-verbal predicate in (22).



Indeed, state-denoting predicates like *k'am* 'sick' in (20) above can appear in unaccusative constructions via the addition of the inchoative suffix -*ä*, as shown in (24). Some event-denoting predicates may also appear, in limited contexts, with no aspect morphology or status suffix, as in (25a). Though individual roots come with some information about what types of predicates they form (i.e. what kind of  $v^0$  suffix is required to form unaccusatives), the basic structures for forming stative and eventive predicates appear to be identical. More work is needed to understand the immediacy reading in the NVP construction in (25b).

(24)	a.	K'am-oñ.
		sick-1ABS
		( <b>T</b>

'I am sick.'

b. Tyi k'am-ä-y-oñ.
 PRFV sick-INCH-EP-1ABS
 'I became sick.'

(25) a. Tyal ja'al. come rain'Rain comes (imminently).'

b. Tyi tyäl-i ja'al.
PRFV come-ITV rain
'It rained.' (lit. 'Rain came.')

We now turn to property (1b): the absence of a copula. Recall that for Baker, a copula is a lexical element which is inserted in order to host inflectional morphology (i.e. to satisfy the requirement that Tense must attract a lexical category). In NVP constructions like those in (15b) above, no lexical category is created, and a copula must therefore be inserted between PredP and Tense, as in (26).



However, a language without conflation does not have the means to create lexical verbs, so no copulas exist. Assuming the requirement that overt morphology in  $T^0$  requires a *lexical* category as its host, and adopting the proposal here that Chol and Tagalog do not have the means to form lexical categories, we are now left with the question of how temporal information gets realized in these languages. I suggest that it is not an accident that both Chol and Tagalog are languages which lack overt tense morphology (property (1a) above).

Matthewson (2006) proposes that apparently-tenseless languages actually require a null Tense head for semantic reasons. Indeed, in Chol there is evidence from so-called "fake past" in conditional antecedents that the perfective aspect morpheme may be bundled with a phonologically null Tense head (Bjorkman and Halpert to appear, Coon 2013). If this analysis is on the right track, the absence of grammatical tense marking in these languages stems from a morphological problem:  $T^0$  is unable to attract an appropriate lexical host and must therefore be phonologically null.

This idea is not new, but is developed by Massam (2005), who proposes that the absence of inflectional morphology on Niuean (Austronesian) predicates is due to the fact that "verbs" do not enter into a head relationship with Tense. "[T]he lack of inflection in Niuean is related to the fact that, at the level of morphosyntax, where featural properties are relevant, there is no category verb in the language to trigger Agree or Move relations

with Infl" (Massam 2005, 228).<sup>4</sup> According to the proposal above, there is no means to create lexical verbs. The somewhat-functional nature of verbs in Mayan is also noted by Haviland (1994, 699) for Tzotzil, and points to the long-standing debates about grammatical categories in these languages, cited above. I turn to the question of the categories of "noun" and "verb" in the remaining sections.

# 4.2 Verbs and nouns

Baker (2003) proposes that the distinguishing characteristic of *verbs* is that they are the only lexical category able to merge specifiers (i.e. the THEME). Verbs, in turn, are the result of conflation of a property-denoting root into a light verb  $\text{Pred}^0/BE$ . If the proposal above is on the right track, we lose lexical verbs in Chol and Tagalog, but maintain the idea that what it means to be a predicate is to combine with an internal argument. This distinction is strikingly easy to observe in Chol: only elements which combine with DP internal arguments behave as predicates (e.g. may surface with aspectual or person morphology).

This can be seen in the behaviour of roots like k'ay 'song'. As discussed in detail in Coon 2013, when these roots combine with an internal argument, they inflect directly as predicates (27a). If no internal argument is present (e.g. in unergatives and antipassives), they must surface as nouns (27b). In the unergative construction in (27b), the root k'ay serves as the internal argument to the transitive verb *cha'le*.

- (27) a. Tyi j-**k'ay**-i jiñi imno. PRFV 1ERG-song-TV DET hymn 'I sang the hymn.'
  - b. Tyi k-cha'le k'ay.
     PRFV 1ERG-do song
     'I sang.'

In Chol, when a root/stem combines with an internal argument, it must be interpreted as predicative. Roots like *wiñik* 'man' and *säsäk* 'white' may appear directly either in nominal or adjectival stems, as in (28), or in predicative stems, as in (29). In (29) we observe that when combining with a DP complement they receive a predicative interpretation.

<sup>&</sup>lt;sup>4</sup>Massam further connects this to the more general phenomena of predicate fronting in these languages, a topic which I do not explore further here. While Chol appears to bear inflectional morphology on its predicates, the absolutive markers have been argued elsewhere to be pronominal clitics. Ergative prefixes seem to reflect an agreement relationship lower in the tree, between  $v^0$  and the external argument, consistent with proposals in which ergative is an inherent case—and perhaps connected to a further shared property, namely the appearance of ergativity in both Mayan and Austronesian families. See Wiltschko 2006 on  $v^0$  agreement in Halkomelem Salish.

Predication,	tenselessness,	and what	it takes to	) be a veri	b
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- (28) a. Tyi chäm-i jiñi säsäk muty. (29) a. Sa PRFV die-ITV DET white chicken with the white chicken died.'
  b. Tyi majl-i jiñi wiñik.
  b. Watawa watawa
  - PRFV go-ITV DET man 'The man left.'
- a. Säsäk jiñi muty. white DET chicken 'The chicken is white.'
  b. Wiñik-ety. man-2ABS

'You are a man.'

Likewise, referential nominal stems do not take complements in Chol, PP or otherwise (also noted for Tzotzil in Aissen 1996), as illustrated by the forms in (30). The intended interpretations could instead be expressed by (potentially ambiguous) possessive structures, for example, 'a man's story' or 'the girl's picture.' This contrast is in line with the noun/verb distinction made in Baker 2003; see also work by Kayne (2008).

- (30) a. \* jum-p'ej kwento (tyi) wiñik one-NC story PREP man intended: 'a story about a man'
  - b. \* jiñi foto (tyi) x-k'aläl
     DET photo PREP girl
     intended: 'a photo of a girl'

It is clear that Chol *does* make a distinction between verbs and nouns at the level of stem morphology. However, a given root may surface as either predicative or referential depending on whether or not it combines with an internal argument. Roots may enter directly into a  $\text{Pred}^0$  head, forming stative predicates which require internal arguments. Stative predicates may go on to form eventive predicates through the addition of the appropriate eventive  $v^0$  suffix, which then requires the further addition of aspect morphology. Referential expressions, on the other hand, do not appear with complements (including PPs). Chol—perhaps due in part to a lack of conflation—appears to provide a nice window into the structure of predication.

# 5. Conclusion

Mayan and Austronesian languages share an interesting range of cross-linguistically unusual properties. In addition to the three properties in (1)—tenselessness, unaccusativebehaving NVP subjects, and the absence of a copula—these languages have been argued to lack a noun/verb distinction (see §1), involve predicate fronting (Mercado 2002, Coon 2010), and show ergativity (Aldridge 2012). While it is possible that this is simply an accident, I have explored here the idea that at least some of these properties can be unified under a single difference: the absence of an operation of *conflation* and the ability for

property-denoting roots to directly instantiate Pred<sup>0</sup>. More generally, this amounts to the absence of a distinction between *lexical* and *functional* predicates.

Baker (2003) argues that overt Tense<sup>0</sup> morphology requires a lexical host, and that copulas are lexical elements inserted into the derivation when the predicate itself is not lexical. Languages which lack conflation—and thus the ability to form lexical categories—are predicted to lack copulas, and as a result, must also lack tense morphology (though Tense heads may be nonetheless be present).<sup>5</sup> In the last section of this paper, I discussed the remaining differences between nouns and verbs, focusing on Chol.

If this analysis is on the right track, we might expect to find other languages with the cluster of properties discussed here. The Salishan languages of the Pacific NW may fall into this group. As with Mayan and Austronesian, these languages have also been claimed to lack noun/verb distinctions, dating at least back at least to the work of Sapir (1911). Jelinek and Demers (1994) specifically argue against the existence of a null copula in Straits Salish, and Matthewson's above-cited work on tenseless is based on Stát'imcets (Lilooet) Salish. Some initial evidence from modification suggests that subjects of non-verbal predicates in Salish may also behave as unaccusative subjects (Henry Davis, p.c.), though further work is needed to establish whether this connection is on the right track.

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<sup>&</sup>lt;sup>5</sup>Note that this is not a bidirectional prediction. A language might fail to have tense morphology, but still have an overt copula. If, however, no copula is available, Tense cannot be realized.

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McGill University Department of Linguistics 1085 Ave Dr. Penfield, #221 Montreal, QC H4C 1M7, Canada

jessica.coon@mcgill.ca