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An argument analysis of cognate objects in Dschang (Yemba)

Zhuo Chen & Blake Lehman*

Abstract. Focusing on the Foto dialect of Dschang (Yemba), an understudied Grassfields Bantu language spoken in Cameroon, this paper offers a cross-linguistic perspective on Cognate Objects (CO). An argument analysis of Dschang COs is supported by both cross-linguistic comparison, e.g. forms of corresponding wh-questions, the compatibility with strong determiners, quantifiers and possessors, and the ability to be pronominalized and relativized, and Dschang-internal evidence including word order variations and tonal marking in object position.

Keywords. cognate objects; argument; verbal tone; object concord

1. Introduction. Descriptively speaking, in a cognate object (CO) construction, a typically intransitive verb takes an object where the head noun is morphologically or semantically cognate to the verb (Kuno & Takami 2004, Sailer 2010, a.o.). (1) illustrates some examples of cognate object constructions in English:

(1) English (Kuno & Takami 2004: 105)
   a. Mary *laughed* a sad *laugh* at the meeting.
   b. The wolf *howled* a long *howl*.
   c. Sue *slept* a sound *sleep*.

Within the generative literature, the syntactic status of COs has attracted much attention, yet no consensus has been reached. COs in languages including English, French and Japanese have been analyzed as arguments (Massam 1990, Macfarland 1995, Matsumoto 1996). Meanwhile, an adjunct approach has also been proposed for COs in English, German and Sason Arabic (Jones 1988, Moltmann 1990, Akkuş & Öztürk 2017). Furthermore, COs in Russian, Hebrew and English have been argued to show both argumental and adverbial properties (Pereltsvaig 1999, 2002, Nakajima 2006). In addition, Hebrew COs have been analyzed as overt realizations of Davidsonian event arguments (Mittwoch 1998).

Despite the research interest in COs in these languages, not much attention has been paid to COs in African languages. This paper focuses on the Foto dialect of Dschang (ISO code: ybb), an understudied Grassfields Bantu language spoken in Cameroon that has productive CO constructions (2b).[1] Based on a detailed description of Dschang COs, we offer a cross-linguistic perspective on COs and support an argument analysis of Dschang COs.

(2) a. à lè ˡkhʉ́ˡʉ́
   3SG DST.PST run
   'S/he ran.'

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[1] We use a modified version of the General Alphabet of Cameroonian Languages (Tadadjeu & Sadembouo 1979, 1984) to represent the sounds of Dschang: <e> = [ə], <c> = [tʃ], <j> = [dʒ], <Ch> = [C^h], <'> = [ʔ]. Some allophonic alternations (in particular, spirantization and devoicing of stops) are not represented.

b. à lè ˡ*khʉ́-ʉ̀* ***lè-khʉ̀***
3SG DST.PST run-OM5 5-run
'S/he ran a run.'

The rest of the paper is organized as follows. Section 2 presents an overview of Dschang. In particular, we will introduce patterns of object concord and verbal tone in Dschang. Section 3 gives an overview of verb ~ noun alternation in Dschang. Argument properties of Dschang COs are laid out in section 4, where we look at both cross-linguistic comparisons and Dschang-internal evidence. Section 5 concludes the paper.

2. Background of Dschang. This section will provide some basic background information about Dschang. The language has basic SVO word order, as shown in (3).

(3) nìŋ lè lá-à m̀-bàp
man DST.PST cook-OM9 9-meat
'The man cooked the meat.'

2.1. TONE. Like all Grassfields languages, Dschang is a tone language. In pre-pausal position, there are four contrastive tones: High, Low Level, Low Falling, Downstep High. The four surface contrasts derive from two phonological tones, High and Low (Hyman & Tadadjeu 1976, Hyman 1985, a.o.). For simplicity, in this paper, we mark both types of low tone in the same way, as the contrast between low level and low falling tones does not play a role in the analysis of cognate objects.

lè-tɔ́ŋ	*feather*	HIGH
lè-ˡtɔ́ŋ	*reading*	!HIGH
lè-tɔ̀ŋ̊	*navel*	LOW
lè-tɔ̀ŋ	*paying back*	LOW FALL

Table 1. Dschang tone contrasts (Harro & Haynes 1991)

2.2. NOUN CLASSES. Dschang has a subset of the noun classes found in Bantu. Since there is some amount of homophony of noun class prefixes, the class of many nouns in Dschang can only be determined by the form of concord elements, in addition to the class prefix. Nouns from other classes pair with one of class 2, 6, or 8 to form a number of genders. The noun classes are presented in Table 2, along with examples of a member of that class.

Class	*Prefix*	*Concord*	*Examples*
1	∅-	g ̀	séŋ 'bird'
2	mè-	p ́	mè-gʉ̀e 'strangers'
3	Ǹ-	g ́	ŋ̀-ˡká 'field'
4	è-	g ́	è-kó 'bed'
5	lè-	ts ́	lè-wì 'laugh'
6	mè-	m ́	mè-mˡbhʉ́ 'dogs'
6	Ǹ-	m ́	ŋ̀-ˡgwáŋ 'oil'[2]
7	à-	z ́	à-tò 'drum'
8	è-	ts ́	è-pù' 'slaves'
9	Ǹ-	z ̀	m̀-ˡbhʉ́ 'dog'

Table 2. Dschang noun classes

[2] Class 6 contains both plurals and mass nouns – mass nouns follow the pattern of 'oil'.

2.3. TENSE. Dschang breaks up past and future time into up to five tenses each (Tadadjeu 1975, Hyman 1980). The morphological structure of some of these tenses appears to derive from earlier auxiliary constructions, but they are synchronically treated as tenses. Examples of some of the tenses are given in (4). There is a large variety in the segmental and tonal realizations of tense in Dschang. For clarity, most of the examples presented in this paper use what we call the 'distant past' (Hyman's P_4), since this tense involves relatively little tonal complexity compared to other tenses.

(4) a. à lè tɔ́ŋ-ɔ́ ꜜséŋ
3SG DST.PST call-OM1 1.bird
'He called the bird (some time ago).'
b. à á tɔ́ŋ-ɔ́ séŋ
3SG REC.PST call-OM1 1.bird
'He called the bird (just now).
c. à lùú ꜜtɔ́ŋ-ɔ́ séŋ
3SG TMW.FUT call-OM1 1.bird
'He will call the bird (tomorrow).'

2.4. OBJECT CONCORD. In addition to noun class prefixes and deictic concord elements (found in possessives and demonstratives), there is a set of object concord markers that appear between the verb and object. The form of the concord element depends on the noun class of the object, and can be either segmental and tonal, or only tonal. These two possibilities are demonstrated in (5):

(5) a. à lè tɔ́ŋ-**ɔ́** ꜜséŋ
3SG DST.PST call-**OM1** 1.bird
'He called the bird (some time ago).'
b. à lè tɔ́ŋ-̀ m̀-ꜜbhʉ́
3SG DST.PST call-**OM9** 9-dog
'He called the dog (some time ago).'

When the object of 'call' is the class 1 noun *séŋ* 'bird', a high-toned vowel with the same quality as the vowel in verb root appears between the verb and object. When the object of the verb is a class 9 noun like *m̀ꜜbhʉ́* 'dog', a low tone, and no vowel, occur instead. In this case, the verb is pronounced as a single syllable with a falling tone. Object concord in the Foto dialect has not yet been systematically studied, but for the Bafou dialect, Harro and Haynes (1991) provide the following inventory of object concord elements:

Segment	*Tone*	*Noun class*
a	H	1
a	L	7
e	L	2, 3, 5, 6, 8

Table 3. Inventory of object concord elements (Harro & Haynes 1991)

Harro and Haynes discuss some processes of assimilation that determine the surface form of the object concord vowels. For our speaker, the segmental portion of the object concord marker, other than that for class 1, is nearly always absent. For class 1 objects, the vowel typically appears as additional length on root-final vowel, or as a copy of the root vowel, for consonant-final roots.

These object concord elements disappear (or the distinction between them, either tonal, segmentally, or both) under negation. A low-tone object concord in an affirmative sentence (6a) fails to appear when that sentence is negated (6b):

(6) a. à lè tɔ́ŋ-̀ m̀-ˡbhú́
3SG DST.PST call-**OM9** 9-dog
'He called the dog (some time ago).'
b. à lè tè **tɔ́ŋ** ḿ-ˡbhú́ ú́
3SG DST.PST NEG1 call 9-dog NEG2
'He did not call the dog (some time ago).'

The relation of both object concord and negation to the status of cognate objects in Dschang will be discussed in greater detail below.

3. Overview of verb~noun alternation. There is a productive verb ~ noun alternation in Dschang. Nouns derived from verbs consist of the verb root, plus a noun class prefix. Noun class prefixes on cognate nouns are drawn from the same set used to mark other nouns. There are a number of different types of nominal derivation in Dschang, with each type taking a different noun class prefix (see Harro & Haynes 1991: 13-15 for more detail).[3] Some examples of cognate nouns are given in Table 4.[4]

Infinitive	*Noun*	*Gloss*
ŋ́ˡkhú́	lè-khù	run
ŋ́ˡgwí	lè-wì	laugh
ńzíg	à-ˡzíg	yawn
ŋ́kwhí	à-ˡkwhí	cough
éˡshú'	lè-shù'	arrive

Table 4. Cognate nouns

3.1. BASIC DISTRIBUTION OF COGNATE NOUNS. Cognate nouns of the type in question can appear in the same positions as other nouns. They can appear in object position:

(7) a. à lè ˡkwhíˡí
3SG DST.PST cough
'S/he coughed.'
b. à lè kwhí-ì ***à-ˡkwhí***
3SG DST.PST cough-OM7 7-cough
'S/he coughed a cough.'

(8) a. è-fò lè líˡí
1-chief DST.PST sleep
'The chief slept.'
b. è-fò lè lí-ì ***lè-ˡlí***
1-chief DST.PST sleep-OM5 5-sleep
'The chief slept a sleep.

[3] It is possible that there is variation in which noun class a given cognate noun may fall into. It is not clear if this variation is due to dialect, individual speakers, or some other factor or combination of factors.

[4] There is a restriction in Dschang on sequences of the form nasal-voiceless fricative. Such sequences trigger allophony of the nasal with schwa, <e>. This is why the form of the infinitive for 'arrive' differs from the other verbs presented here.

Cognate nouns may also appear in subject position:

(9) a. lè-shʉ̀’ è fò lè ꜜpɔ́ŋ-ɔ́ ꜜgá
5-arrival ASSC chief DST.PST be.good 1.OBJ
‘The chief’s arrival made me happy.’
b. lè-wǐ ńꜜnɛ́ fòtò
5-smile:COP inside photo
‘There is a smile in the photo (*lit.* a smile is in the photo).’

3.2. RESTRICTIONS ON COGNATE OBJECT CONSTRUCTION. One well-known crosslinguistic restriction on the distribution of cognate objects concerns the type of verb that may occur in the cognate object construction. Kuno and Takami (2004) propose the *unergative restriction* on the cognate object construction. As demonstrated for English in (10), only unergative verbs may appear in the cognate object construction, and no unaccusative verbs may.

(10) English (Kuno & Takami 2004: 106)
a. * She *arrived* a glamorous *arrival*.
b. * The apples *fell* a smooth *fall*.
c. * The glass *broke* a crooked *break*.

Dschang shows a similar restriction on the type of verb that may occur in the cognate object construction. The unaccusative verb *éꜜshʉ́’* ‘arrive’, may not occur in a cognate object construction:

(11) a. à lè ꜜshʉ́’ʉ̀
3SG DST.PST arrive
‘S/he arrived.’
b. * à lè ꜜshʉ́’-ʉ̀ lè-shʉ̀’
3SG DST.PST arrive-OM5 5-arrival
Intended: ‘S/he arrived an arrival.’

4. Argument properties of Dschang COs. In this section, we lay out the argument properties of Dschang COs. On the one hand, we compare COs in Dschang and their counterparts in several other languages. In particular, we look at their compatibility with determiners, whether they can be pronominalized (in the object position), whether they can undergo relativization and topicalization, and how they can be questioned. On the other hand, we also present language-internal evidence for the argument status of Dschang COs. More specifically, we argue that COs and regular noun objects show parallel distributions in Dschang regarding tonal object concord and word order variations.

4.1. CROSS-LINGUISTIC COMPARISONS. To address the question whether COs are arguments or adjuncts in a given language, previous studies have adopted various syntactic diagnostics (Massam 1990, Moltmann 1990, Pereltsvaig 1999, 2002, Akkuş & Öztürk 2017, a.o.). In this section, using these diagnostics, we argue that Dschang COs systematically show properties of arguments compared to COs in languages including Russian, Hebrew, Sason Arabic and English. To begin with an obvious fact, as we have already seen in (7) and (8), Dschang CO constructions do not require obligatory modification, unlike their English counterparts:

(12) English (Kuno & Takami 2004: 121)
a. * Mary laughed a laugh at the meeting.

b. * Bob grinned a grin.
c. * Bill sighed a sigh.

Next, we will illustrate the argument properties of Dschang COs using five cross-linguistically adopted diagnostics. The first one concerns whether they are compatible with determiners. Pereltsvaig (1999, 2002) argues that Russian and Hebrew have both argumental and adverbial COs, and one difference between these two types of COs is related to their compatibility with determiners. For instance, in Russian, some COs are marked with accusative case whereas others are marked with instrumental case, and it is proposed that accusative-marked COs behave like arguments whereas instrumental-marked ones are adjuncts. One piece of evidence comes from the fact that only the former (13a) but not the latter ones (13b) are compatible with demonstratives and quantifiers:

(13) Russian (Pereltsvaig 1999: 13b, 15b)
a. Oni stancevali {etot tanec /kaidyj tanec}.
they.NOM danced [this dance].ACC [every dance].ACC
'They danced this dance/every dance.'
b. * Ulybnis' {etoj ulybkoj /kazdoj ulybkoj}.
smile.IMPER [this smile].INSTR [every smile].INSTR
Intended 'Smile this smile/every smile.'

Meanwhile, COs in Sason Arabic are claimed to be adverbial and one piece of evidence is that they do not allow any type of determiners including quantifiers and possessors:

(14) Sason Arabic (Akkuş & Öztürk 2017: 15a-b, 17a)
a. * sabiyad {zak-ten zayo /zakad kəllen zayu-en}.
boys laugh-two laughed.3PL laughs all laughed.3PL-them
Intended 'The boys laughed two laughs/all the laughs.'
b. * faqzu fə xams daqqa faqaz.
running-his in five minutes ran.3M
Intended 'He ran his run in five minutes.'

In contrast, examples in (15) suggest that none of these constraints apply to COs in Dschang: they can co-occur with demonstratives, possessors and quantifiers.

(15) a. à lè ˡkhú-ù̀ lè-khù̀ tsi'i
3SG DST.PST run-OM5 5-run that
'S/he ran that run.'
b. John lè khwí-ì mè-khwìì mhì /tsì
John DST.PST cough-OM6 6-cough those 3SG.POSS
'John coughed those/his coughs.'
c. John lè khwíì ŋ̀kwa mè-ˡkhwí
John DST.PST cough every 6-cough
'John coughed every cough.'

The second diagnostic concerns pronominalization. Another contrast between the two types of COs in Russian concerns whether they can be pronominalized: only the accusative-marked COs (16) but not instrumental-marked ones (17) can undergo pronominalization.

(16) Russian (Pereltsvaig 1999: 18)
a. **Tanec** malen'kix lebedej tancujut molodye tancory.
dance.ACC [small swans].GEN dance.3PL [young dancers].NOM
'Young dancers dance the Small Swans' Dance.'
b. **Ego** tancujut molodye tancory.
it.MASC.ACC dance.3PL [young dancers].NOM
'Young dancers dance it.'

(17) Russian (Pereltsvaig 1999: 17)
a. Ivan ulybnulsja Scastlivoj **ulybkoj**.
Ivan.NOM smiled [happy smile].INSTR
'Ivan smiled a happy smile.'
b. * Ivan ulybnulsja **eto** / **etim**.
Ivan.NOM smiled it.NOM / it.INSTR
'Ivan smiled it [= a happy smile].'

Notice that in (16b), the pronoun *ego* remains in the same (object) position as the CO *tanec* in (16a), a pattern that is claimed to be impossible in English, where a subject-object asymmetry is found: COs can be antecedents of subject pronouns but not object pronouns (Matsumoto 1996).

(18) English (Matsumoto 1996: 26a, 32a)
a. Mary smiled a mysterious smile and **it** was attractive.
b. * Mary smiled a beautiful smile and Jane smiled **it**, too.

Sason Arabic is claimed to have clitic left dislocation, where regular noun objects like *mase* 'table' may surface in a left peripheral position and a pronominal clitic *a* occurs within the clause (19a). However, this is not possible for COs (19b).[6]

(19) Sason Arabic (Akkuş & Öztürk 2017: 16)
a. mase, cab-**a** ali ams.
table brought.3M-it ali yesterday
'The table, Ali brought it yesterday.'
b. * ay zake qəddam, zay-**a** bəlqasti
that laughing early laughed.3M-it on purpose
'That early laugh, he laughed it on purpose.'

COs in Dschang behave similarly to accusative-marked COs in Russian: they can be pronominalized in the object position. (20a) illustrates a case where a regular noun object like *ŋgap* 'chicken' is interpreted as the antecedent of an object pronoun *yi* in the second sentence, and this is equally available for COs as well (20b-c).

(20) a. Mary lè lá-à **ǹ-ˈgáp**$_i$, John láà **yi**$_i$ sɛ.
Mary DST.PST cook-OM9 9-chicken John cook 3SG too
'Mary cooked the chicken, (and) John cooked it too.'

[6] It is worth mentioning that the ungrammaticality of (19b) is not related to the issue whether COs in Sason Arabic can occur in the left periphery. As mentioned in (Akkuş & Öztürk 2017), Sasan Arabic COs can be topicalized:
qaru, ali ams kitab **qaro-u**.
reading ali yesterday book read.3M-it
'As for reading, Ali read the book yesterday.'

b. Mary lè zíŋ-è **lè-ˡziŋ**$_i$, John zíŋè **yi**$_i$ sɛ.
Mary DST.PST dance-OM5 5-dance John dance 3SG too
'Mary danced a dance, (and) John danced it too.'

c. John lè ˡwí-ì [**mè-wì** mè lekuă]$_i$, Mary lè ˡwîì **wə̀p**$_i$ sɛ.
John DST.PST laugh-OM6 6-laugh four Mary DST.PST laugh 3PL too
'John laughed four laughs, and Mary laughed them too.'

The third property is related to relativization. One piece of evidence for an argument analysis of English COs is that they can be relativized with a gap in a non-predicate position within the relative clause (Massam 1990):

(21) English (Massam 1990: 16)
a. Mona smiled a sarcastic **smile**, which John photographed ___.
b. Elsie prayed a **prayer**, which my father wrote ___.

Similarly, (22) shows that COs in Dschang can also undergo relativization:

(22) John lè khwí-ì à-ˡkʰwí [sɛ Mary lè zhú'u ___].
John DST.PST cough-OM7 7-cough REL Mary DST.PST hear
'John coughed the cough that Mary heard.

Furthermore, as mentioned earlier, existing literature are still debating about the syntactic status of English COs: Despite cases like (21), other properties of English COs have led to the conclusion that they are adverbial. One such property is that they cannot be topicalized:

(23) English (Moltmann 1990: 9)
a. * A shrill **scream**, John screamed.
b. * A painful **death**, John died.

This is, however, not an issue for Dschang COs: like a regular noun object *niŋ* 'man' (24), they can also undergo topicalization and occur in a left peripheral position (25).

(24) a. è-fò lè tém-é **nìŋ**.
1-chief DST.PST hit-OM1 1man
'The chief hit a/the man.'

b. **nìŋ**, è-fò lè témé
man 1-chief DST.PST hit
'The man, the chief hit.'

(25) a. a lè ˡkhú-ù **lè-khù**
3SG DST.PST run-OM5 5-run
'S/he ran a run.'

b. **lè-khù**, a lè ˡkhú-ù
5-run 3SG DST.PST run-OM5
'The run, s/he ran.

The last property concerns how a CO can be questioned. One argument for the analysis that Sason Arabic COs are adjuncts is that, unlike regular noun objects, they are questioned with *ışţaba* 'how', but not *şıne* 'what'.

(26) Sason Arabic (Akkuş & Öztürk 2017: 23a)
kemal faqız-ma **ışta**ba faqaz.
kemal running-a how ran.3M
'How a running did Kemal run?'

This pattern also contrasts with Dschang, where COs can answer *kə?* 'what' questions.

(27) a. John lè ˥wîì **kə?**?
John DST.PST laugh what
'What did John laugh?'
b. **lè-wì /Mary /gá**.
5-laugh Mary 1SG
'A laugh /(at) Mary /(at) me.'

To answer a 'what' question like (27a), both regular (noun) objects like 'Mary' or 'me' can be used and are interpreted as goal arguments, and more importantly, the CO *lɨ̀-wì* is also a possible answer. Another example of 'what' question-answer pairs involving only CO answers is shown in (28), where answers alternative to the unmodified CO *lɨ̀-khʉ̀* 'the/a run' consist of the same CO but with a (possessive) modifier.

(28) a. John lè ˥khʉ́ʉ̀ **kə?**?
John DST.PST run what
'What did John run?'
b. **lè-khʉ̀ /lè-khʉ̀ è-fò**.
5-laugh 5-laugh 1-chief
'A run / a run dedicated to the chief (*lit*. a run of the chief).'

Hence it is clear that the above cross-linguistic comparison demonstrates that, compared to their counterparts in English, Russian and Sason Arabic, Dschang COs consistently show properties of argument: they (i) can occur independently from modifiers, (ii) can co-occur with various types of determiners including demonstratives, quantifiers and possessors, (iii) can be the antecedents of object pronouns, (iv) can undergo topicalization and relativization, and (v) can be questioned with 'what'.

4.2. DSCHANG-INTERNAL EVIDENCE. In this section, we turn to language-internal evidence for the argument status of Dschang COs. More specifically, we show that there exists a strong parallel between regular noun objects and COs with respect to verbal tone and word order variations. In the first part of the section, we focus on evidence from tone and object marking. Tone on intransitive verbs in cognate object constructions is the same as verb tone in transitive sentences, but different from those with post-verbal adjuncts. More specifically, tonal object concord (see §2.4) in cognate object constructions is identical to that found with canonical direct objects in Dschang.

As shown Table 3, the object concord marker for class 5 nouns and class 6 nouns is identical. In our speaker's dialect, both are marked by a low tone intervening between the verb and the direct object. In (29a), we see that in the cognate object construction, a low tone occurs between the verb *˥wí* and the class 5 cognate object *lè-wì*. This is identical to how a class 6 object *mè-séŋ* is marked in (29b), when it is the object of the homophonous transitive verb 'laugh at'. The tonal object marking in the cognate object construction contrasts with the marking for a 1st person singular pronominal object (class 1), (29c).

(29) a. à lè ˥wí-**ì** *lè-wì*
3SG DST.PST laugh-**OM5** 5-laugh
'S/he laughed a laugh.'
b. à lè ˥wí-**ì** *mè-séŋ*
3SG DST.PST laugh-**OM6** 6-bird
'S/he laughed at the birds.'
c. à lè ˥wí-**í** *ˈgá*
3SG DST.PST laugh-**OM1** 1SG
'S/he laughed at me.'

As demonstrated in (6), object concord disappears (or neutralizes to a high tone) under negation. This pattern holds in the cognate object construction – the low tone object concord marking the cognate object disappears under negation (or becomes a high tone):[7]

(30) a. à lè ˥wí-**ì** lè-wì
3SG DST.PST laugh-**OM5** 5-laugh
'S/he laughed a laugh.'
b. à lè tè ˥wí**í** lé-wì í
3SG DST.PST NEG1 laugh 5-laugh NEG2
'S/he did not laugh a laugh.'

This is exactly the pattern observed for other class 5 objects in regular transitive constructions:

(31) a. Shúfò lè ˥wé-**è** lè-kʉ̀ŋ
Shufo DST.PST have-**OM5** 5-pot
'Shufo had a pot.'
b. Shúfò lè té ˥wé**é** lé-kʉ̀ŋ ʉ́
Shufo DST.PST NEG1 have-**OM5** 5-pot NEG2
'Shufo did not have a pot.'

In contrast, when followed by an adjunct, *wì* shows a different pattern. In both the affirmative) and negative), it has a level downstep high tone, and never triggers donwstep (in contrast with (29c)).[8] In (32), the verb *wì* 'laugh' is followed by a non-argument *mè tʉ̀ e* 'loudly (*lit.* with strength). The tone at the right edge of the verb does not change – it is a consistent downstep high tone. This is homophonous with the pattern for class 1 objects, but distinct from the pattern for non-class 1 objects, including cognate objects, as shown in (30).

(32) a. à lè ˥**wíí** mè tʉ̀e
3SG DST.PST laugh with strength
'S/he laughed loudly.'
b. à lè tè ˥**wíí** mè tʉ̀e
3SG DST.PST NEG laugh with strength
'S/he did not laugh loudly.'

[7] The high tone on the noun class prefix of *lè-wì* in this example derives from a productive process of high tone spread that occurs between the verb and noun class prefix of an object under negation in the distant past tense.

[8] Low tones can be downstepped post-verbally in Dschang (see Hyman & Tadadjeu 1976).

The second part of this section presents evidence from the perspective of word order variations. Although, as mentioned in section 2, the basic word order in Dschang is SVO, we do see some OV variations. One such context involves negation. To begin with, (33a) illustrates a typical indicative sentence in Dschang. In (33b), we see one strategy for negation. An invariant morpheme *tè* occurs preverbally and an additional negative morpheme is realized at the right edge of the clause, as a vowel and high tone after the post-verbal object.[9]

(33) a. John lè lá-à ŋ̀-gáp V-O
John DST.PST cook-OM9 9-chicken
'John cooked chicken.'

b. John lè **tè** láá ŋ́-ǃgáp **ə́** NEG1-V-O-NEG2
John DST.PST NEG1 cook 9-chicken NEG2
'John didn't cook chicken.'

c. John lè **té** ŋ́-ǃgáp lá NEG1-O-V
John DST.PST NEG1 9-chicken cook
'John didn't cook chicken.'

Notice that (33b) has the canonical VO order. In (33c), however, the object occurs in a preverbal position when the right edge negation is absent, only the invariant negation *tè* is used. Interestingly, COs in Dschang show a parallel VO~OV variation in negative indicative sentences: when bipartite negation is used (34b), COs occurs post-verbally and they become preverbal when the right edge negation is absent (34c).

(34) a. John lè ǃkhú-ù̀ lè-khù̀ V-CO
John DST.PST run-OM5 5-run
'John ran a run.'

b. John lè **tè** ǃkhúú lè-khù̀ **ú** NEG1-V-CO-NEG2
John DST.PST NEG1 run 5-run NEG2
'John didn't run a run.'

c. John lè **té** lé-khù̀ khù̀ NEG1-CO-V
John DST.PST NEG1 5-run run
'John didn't run a run.'

It is worth pointing out that such parallel between COs and regular noun object regarding word order is not always seen across other languages. For instance, one of the arguments for an adverbial analysis of Sason Arabic COs is their distributional differences compared to regular noun objects (Akkuş & Öztürk 2017). The default position for non-specific regular noun objects is post-verbal (35a). However, this is not possible for COs (35b).

(35) Sason Arabic (Akkuş & Öztürk 2017: 21, 22a)

a. zıxar ayalo dondurma V-O
kids ate.3PL ice cream
'The kids ate ice cream.'

b. * faqaztu faqız *V-CO
ran.1SG running
'I ran a running.'

[9] The form of this second negative morpheme varies according to the phonological properties of the element preceding it.

Another type of word order variation involves adjuncts: (temporal) adverbials can occur in either pre-VP or post-VP positions, but they cannot intervene between a verb and its complement.

(36) a. è-fò lè pfɛ́-è ŋ̀-ˡgáp **súndɛ̀ yi'ɛ** V-O-Adv
1-chief DST.PST eat-OM9 9-chicken week DIST
'The chief ate chicken last week.'
b. è-fò lè **súndɛ̀ yi'ɛ** m-pfɛ́ ŋ̀-ˡgáp Adv-mV-O
1-chief DST.PST week DIST N-eat 9-chicken
'The chief ate chicken last week.'
c. * è-fò lè pfɛ **sundɛ yi'ɛ** ŋ̀-ˡgáp *V-Adv-O

It is worth mentioning that in (36b), when *sundɛ yi'ɛ* precedes the VP, it triggers a nasal prefix on the verb. A similar pattern is found in CO constructions: *sundɛ yi'ɛ* can either precede or follow the entire VP *wíì lè-wì* 'laugh a laugh', and it cannot intervene between the verb and the CO; furthermore, when it is preverbal, it triggers the nasal prefix.

(37) a. è-fò lè wí-ì lè-wì **súndɛ̀ yi'ɛ** V-CO-Adv
1-chief DST.PST laugh-OM5 5-laugh week DIST
'The chief laughed a laugh last week.'
b. è-fò lè **súndɛ̀ yi'ɛ** ŋ-ˡgwíì lè-wì Adv-ŋV-CO
1-chief DST.PST week DIST N-laugh 5-laugh
'The chief laughed a laugh last week.'
c. * è-fò lè wíì **sundɛ yi'ɛ** lè-wì *V-Adv -CO

Therefore, an argument analysis of Dschang COs receives strong language-internal support: there exists a parallel between COs and regular noun objects with respect to tonal object concord and word order variations.

5. Conclusions and future directions. Based on cross-linguistic and language-internal evidence, we have shown that Dschang cognate objects show argument properties that are similar to regular noun objects, as opposed to adjuncts. The use of the Dschang-internal diagnostics could prove useful in studying related languages with similar phenomena.

Another property of cognate objects that was not fully explored in this paper, but that will prove useful for further study, is the fact that they 'demote' other postverbal arguments. In (38), we see that the verb 'laugh' behaving as a two-place predicate.

(38) a. John lè ˡwí-í (*ńˡnɛ́) Mary
John DST.PST laugh-OM1 on Mary
'John laughed at Mary.'
b. John lè ˡwí-ì lè-wì
John DST.PST laugh-OM5 5-laugh
'John laughed a laugh.'

The occurrence of a cognate object demotes other arguments like those in (38) into obliques, which must be introduced by a preposition *ńˡnɛ́*.

(39) a. John lè ˡwí-ì lè-wì *(ńˡnɛ́) Mary
John DST.PST laugh-OM5 5-laugh on Mary
'John laughed a laugh at Mary.'

b. John lè ˥wí-ì *(ń˥né) Mary lè-wì
John DST.PST laugh-OM5 on Mary 5-laugh
'John laughed a laugh at Mary.'

Making both the cognate noun and *Mary* objects either derives an unintended meaning, or changes the constituency.

(40) a. John lè ˥wíí Mary lè-wì
John DST.PST laugh Mary 5-laugh
'John laughed a laugh *for* Mary.'
b. John lè ˥wí-ì [[lè-wì] Mary]
John DST.PST laugh-OM5 5-laugh Mary
'John laughed *at the way Mary laughed* (*lit.* John laughed at Mary's laugh).'

This is one of a number of properties that should be further explored in the analysis of the Dschang cognate object construction. However, the evidence discussed throughout the paper shows that cognate objects have the properties of arguments, rather than adjuncts.

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