

Cognate objects of weather verbs in African languages of South Africa – from synchronic variation to a grammaticalization path

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Abstract

The authors argue that the synchronic variation of cognate objects of weather verbs exhibited in six African languages of South Africa (Sepedi, Sesotho, Tshivenda, isiXhosa, Xitsonga, and isiZulu) has a diachronic explanation, and may be represented as a grammaticalization path. This path gradually leads from prototypical cognate objects that disallow object agreement (pronominalization) and promotion to subjects in passive constructions to prototypical objects where both agreement (pronominalization) and promotion are grammatical. This provides further support for the modelling of cognate objects, adjuncts and arguments in terms of a continuum and for a gradient view of syntactic categories, in general.

Keywords: African languages; weather verbs; cognate objects; grammaticalization

1. Background

Since grammatical “changes are always manifested in synchronic variation” (Andersen 2001: 228), synchronic variation often allows for a diachronic interpretation. Accordingly, variations attested in a language or across languages have commonly been used to postulate tendencies in the development of constructions – the so-called grammaticalization paths (Croft 2003: 232, 272-279). This note deals with the synchronic variation of cognate objects (CO) of weather-verbs attested across six African languages of South Africa (Sepedi, Sesotho, Tshivenda, isiZulu, Xitsonga and isiXhosa), and its reinterpretation in terms of a diachronic development.

From a cross-linguistic perspective, weather verbs typically lack proper participants. They tend to be construed with no reference to external and/or internal arguments, i.e. subject and object. Where such participants are expressed as subjects or objects, these fail to be prototypical. Rather, they draw from the categories of cognate arguments, i.e. elements that are semantically

indistinguishable from (or similar to) a phenomenon expressed by the (weather) verb itself (Eriksen, Kittilä and Kolehmainen 2010, 2012, 2015).

Across languages, COs exhibit syntactic properties that both relate them to, and distinguish them from genuine objects. In African languages of South Africa, an element is usually classified as a true (or prototypical) object if it conforms to the following criteria: (a) in the canonical word order, it occupies an immediate post-verbal position; (b) it can be pronominalized through object pronominal clitics, or it can be co-indexed on the verb by means of object agreement markers;¹ (c) it can be promoted to the subject position in passive constructions – it appears in the preverbal subject position and is co-indexed with a subject agreement marker (or a pronominal clitic) on the verb (Du Plessis and Visser 1998: 48-50; Du Plessis 2010). Contrary to genuine objects, typologists view COs as (usually) incompatible with pronominalization and promotion in passive constructions (see Macfarland 1995; Höche 2002; Iwasaki 2007).

2. Data

The method adopted in this study consists of testing the COs of weather verbs in the six African languages of South Africa for the three syntactic object diagnostics: position, pronominalization / agreement, and promotion in passives. This will reveal to what extent the analyzed COs are prototypical objects (the three criteria are met) or prototypical COs (only the first criterion is met).²

2.1 Sesotho

In Sesotho, various weather verbs are complemented by COs – noun phrases that are indistinguishable from the weather phenomenon conveyed by the verb (or subject-verb complex). In the canonical word order, COs immediately follow the predicate, thus occupying the typical object position (Ramathe 1996: 78-82), as illustrated by (1).

- (1) *Pula e-na modupe*³ (ibid. 78)
 rain SA-rain steady.rain
 “Rain falls a steady rain.”

The pronominalization or the presence of object agreement markers is generally ungrammatical (ibid. 83-85):

¹ For a discussion of the status of clitic elements in Nguni as pronominal clitics or agreement markers consult Zeller (2012).

² The presented evidence draws from the following studies specifically dedicated to weather verbs in the six African languages of South Africa: Sesotho – Ramathe (1996); Sepedi – Mojapelo (1997); isiXhosa – Andrason and Visser (forthcoming); isiZulu – Mchunu (1996); Tshivenda – Nekhumbe (1995); Xitsonga – Mdumela (1996) and Du Plessis (2016). With the distinction of isiXhosa and, partly, isiZulu, the presented data is secondary.

³ Other examples of weather verbs occurring with COs are *tlopoletsa* ‘rain heavily’, *rotha* ‘drop’, *phukgama* ‘fall heavily’, *kgetheha* ‘snow’, *foka* ‘blow’, *puka* ‘blow hard’, *kirietsa* ‘thunder’, *thwathwaratsa* ‘thunder’, and *duma* ‘roar’. Further examples of possible COs are *matlopotlopo* ‘thick shower’, *motloporo* ‘strong rain’, *marothodi* ‘drops’, and *kgetheho* ‘fall of snow’, *lefokafoka* ‘wind’, *lepkupuku* ‘wind with dust’, *kirietsa* ‘thunder’, *medumo* ‘roars’, *lethwathwarathwara* ‘thunder’, and *majwana* ‘hailstones’ (Ramathe 1996: 78-80).

- (2) *Pula e-*a-na matlopotlopo* (ibid. 83)
 rain SA-OA-rain shower.rain
 Intended meaning: “Rain rains (it) a thick shower rain.”

In passive constructions, cognate objects of the weather verbs cannot be promoted to the subject position (ibid. 86-88). For example, in (3), the noun phrase *modupe* ‘steady rain’ cannot occupy the subject position and trigger subject agreement on the passive form of the verb *na* ‘rain’.

- (3) **Modupe o-a-ne-wa* (ibid. 86)
 rain SA-PRES-rain-PASS
 Intended meaning: “A steady rain is fallen.”

2.2 Sepedi

COs constitute a common feature of weather verbs in Sepedi (Mojapelo 1997: 79-80; Du Plessis 2010: 18). A representative case is provided in (4) where the nominal element *mono* ‘rain’ pleonastically complements the verb *na* ‘rain’. In the canonical word order, COs occupy a postverbal position typical of objects.

- (4) *Pula e-na mono*⁴ (Mojapelo 1997: 79)
 rain SA-rain rain
 “Rain rains the raining.”

Although the use of object agreement markers or pronominal clitics is usually ungrammatical (5.a), in a few exceptional cases, agreement/pronominalization is acceptable (Mojapelo 1997: 81-82; Du Plessis 2010). For examples, in (5.b), the element *pula* ‘rain’ is co-indexed with the object agreement marker *a* found in the verbal complex.⁵

- (5) a. **Morotho_i ya-o_i-rotha pula* (Du Plessis 2010: 19)
 dripping SA-OA-drip rain
 Intended meaning: “The dripping, rain dripped it / Rain dripped the dripping.”
 b. *Marotho_i ya-a_i-rotha pula* (Mojapelo 1997: 81)
 drops SA-OA-drip rain
 “Drops, rain dripped them / Rain dripped the drops.”

In most instances, COs of weather verbs cannot be promoted to the subject position in passive constructions (6.a). However, with a few verbs (namely *rotha* ‘drip’ and *duma* ‘thunder’) and CO (e.g. *marotho* ‘drops’ and *modumo* ‘thunder’),⁶ the promotion is possible (6.b) (ibid. 82):

- (6) a. **Morotho o-roth-wa ke pula* (Du Plessis 2010: 20)
 dripping SA-drip-PASS by rain
 ‘The dripping is dripped by rain.’

⁴ Similar constructions are found with verbs such as *rotha* ‘drip’, *wa* ‘fall’, *duma* ‘thunder’, *rothotho* ‘rain heavily’, and *gadima* ‘flash’, and nouns such as *morotho* ‘dripping’, *marotho* ‘drops’, *morothotho* ‘heavy fall’ *mowo* ‘a (snow) fall’, and *mogadimo* ‘flashes’ (Mojapelo 1997: 79-80).

⁵ The other combination that tolerates object agreement or pronominalization is *duma* ‘to thunder’ + *modumo* ‘the thunder’ (Mojapelo 1997: 81-82).

⁶ Note that these are the same verbs that allow for object agreement and pronominalization.

- b. *Marothi* *a-roth-wa* *ke* *pula* (Mojapelo 1997: 82)
 drops SA-drip-PASS by rain
 “Drops are dripped by rain.”

2.3 IsiXhosa

The use of COs is a common feature of the majority of weather verbs in isiXhosa (7) (Andrason and Visser forthcoming). In such instances, the CO (e.g. *isiphango* ‘storm’) tends to occupy an immediate postverbal position, typical of objects:

- (7) *Invula* *i-netha* *isiphango*⁷
 rain SA-rain rain.storm
 “It is storming (lit. Rain rains a rain storm).”

All such COs may usually be indexed on the verb by means of pronominal clitics or object agreement markers (*ibid.*):

- (8) a. *Invula* *i-yawu_i-na* *umkhwitsho_i*
 rain SA-OA-rain drizzle
 “The rain rains a drizzle.”
 b. *Invula* *i-yasi_i-netha* *isiphango_i*
 rain SA-OA-rain rain.storm
 “The rain rains a rain storm.”

The weather constructions containing COs cannot be passivized (19.a-b). Accordingly, the CO of an active weather verb cannot be promoted to the subject of a corresponding passive construction nor can the active subject be expressed by a postverbal copulative phrase (*ibid.*):

- (9) a. **Umkhwitsho u-ya-n-iwa* (*yi-mvula*)
 drizzle SA-PRES-rain-PASS (by-rain)
 Intended meaning: “The drizzle is rained (by rain).”
 b. **Isiphango si-ya-gxigxis-wa* (*yi-mvula*)
 rain.storm SA-PRES-rain.heavily-PASS (by-rain)
 Intended meaning: “The rain storm is rained (by rain).”

2.4 IsiZulu

COs are widely tolerated by weather verbs in isiZulu (Mchunu 1996: 52). For instance, in (10), the verb *khiza* ‘drizzle’ is redundantly accompanied by the noun *umkhizo* that refers to the same weather phenomenon, i.e. ‘drizzle’. In the canonical word order, such COs occur in the object position, thus following the verb:

⁷ CO constructions may also be formed with objects such as *umkhwitsho*, *intshazane* and *umtshizo* ‘drizzle’, *izandyonyo*, *umvu/imbi* and *isiphango* ‘heavy rain’, *isicho tho* ‘hail’ and *iliqhwa* ‘sleet’; and verbs such as *-na* and *-netha* ‘rain’, *khwitsha* ‘drizzle’, *dyuduza*, *ngxaza* *ngxaza*, *gxagxaza*, and *gxigxiza* ‘rain heavily’, and *wa* ‘fall, precipitate’ (Andrason and Visser forthcoming).

- (10) *Invula* *i-khiza* *umkhizo*⁸ (ibid. 48)
 rain SA-drizzle drizzle
 “Rain drizzles drizzle.”

Object agreement (or pronominalization) is grammatical in these types of CO constructions as illustrated by (11) (Mchunu 1996: 48, 52; see also Hlongwane 1976: 59):

- (11) *Invula* *i-yawu_i-na* *umvimb_i* (Mchunu 1996: 48)
 rain SA-OA-rain continuous.rain
 “The rain rains (it) continuous rain.”

COs may also be moved to the subject position in passive constructions (Mchunu 1996: 53). However, the passives formed with weather verbs are not accompanied by the copulative phrase that expresses the agent (Mchunu 1996: 52; cf. Hlongwane 1976: 54-56), regularly acceptable in other types of passive constructions (Zievogel, Louw and Taljaard 1976: 108; Poulos and Msimang 1998: 191-193, 371). In such instances, the demoted subject of an active weather verb appears directly after the verb, being only marked by tone, not by the copulative.

- (12) *Amaconsi* *a-cons-wa* *imvula* (Mchunu 1996: 52)
 drops SA-drip-PASS rain
 “Drops are dripped by rain.”

2.5 Tshivenda

Weather verbs may also appear with COs in Tshivenda (Nekhumbe 1995: 47-50). In the canonical word order, they occupy a postverbal, object position as demonstrated by *vhusuto* ‘drizzle’ (pleonastic complement of *suta* ‘drizzle’) below:

- (13) *Mvula* *i-suta* *vhusuto*⁹ (ibid. 47)
 rain SA-drizzle drizzle
 “Rain drizzles drizzle.”

In these types of constructions, COs may be pronominalized or co-indexed with object agreement markers (Nekhumbe 1995: 51; Du Plessis 2010). In (14), the CO *marotha* ‘drops’ is co-indexed with the object agreement marker *a-a* of the corresponding noun class (i.e. class 6).

- (14) *Mvula i-aa_i-rotha* *maroth_i* (Nekhumbe 1995: 51)
 rain SA-OA-drip drops
 “Rain drips (them) drops.”

CO constructions may also be passivized with the CO being promoted to the subject position (Nekhumbe 1995: 51-52; Du Plessis 2010). In such cases, the verb exhibits a subject agreement marker that is co-indexed with the promoted CO – compare *a-rothwa* (class 6) and *marotha* (class 6) in the example below:

⁸ This construction type is also possible with verbs like *na* ‘rain’, *consa* ‘drip’, and *phazima* ‘flash’ and nouns such as *umvimb_i* ‘continuous rain’, *amaconsi* ‘drops’, and *umbani* ‘lightning’ (Mchunu 1996: 48, 51-52).

⁹ This construction is also admissible with other verbs (e.g. *rotha* ‘drip’, *bvuma* ‘thunder’, *penya* ‘flash’) and nouns (e.g. *marotha* ‘drops’, *mubvumo* ‘thunder’, and *phenyo* ‘lightning’) (Nekhumbe 1995: 47, 50).

- (15) *Marotha a-roth-wa nga mvula* (Nekhumbe 1995: 51)
 drops SA-drip-PASS by rain
 “Drops are dropped by rain.”

2.6 Xitsonga

Xitsonga attests to a variety of CO constructions with weather verbs (Mdumela 1996: 71-72; Du Plessis 1999: 222-225, 2010, 2016). In the canonical type of word order, COs appear in a postverbal object position, as illustrated by *ndhambi* ‘heavy rain’ in the following example:

- (16) *Mpfula yi-na ndhambi*¹⁰ (Mdumela 1996: 72)
 rain SA-rain heavy.rain
 “Rain rains heavy rain.”

CO constructions generally tolerate pronominal clitics and object agreement (Mdumela 1996: 73-75; Du Plessis 2016: 12-13). Accordingly, COs can be pronominalized (17.a) or co-indexed with object agreement markers (17.b-c).

- (17) a. *Mathonsi_i* *mpfula* *ya-wai-nthona* (Mdumela 1996: 75)
 drops rain SA-OA-drip
 “Drops, rain drips them.”

b. *Mpfula* *ya-yi_i-na* *ndhambi_i* (ibid. 73)
 rain SA-OA-rain heavy.rain
 “Rain rains (it) heavy rain.”

c. *Mpfula* *ya-xi_i-na* *xihangui* (Du Plessis 2010: 16)
 rain SA-AO-rain hail
 “Rain rains (it) hail.”

Similarly, the passivization of the weather-verb CO constructions is grammatical. The CO can be moved to the empty subject slot (see *ndhambi* ‘heavy rain’ and *mathonsi* ‘drops’ in 18.a and 18.b respectively), triggering subject agreement on the verb (Mdumela 1996: 76-77; Du Plessis 2010: 17, 2016: 12, 14):

- (18) a. *Ndhambi yi-n-iwa hi mpfula* (Mdumela 1996: 76)
 heavy.rain SA-rain-PASS by rain
 “Heavy rain is rained by rain.”

b. *Mathonsi ya-nthon-iwa hi mpfula* (ibid.)
 drops SA-rain-PASS by rain
 “Drops are dropped by rain.”

3. Discussion – from linguistic variation to a grammaticalization path

The six African languages of South Africa discussed in this study attest to a considerable variation in the treatment of COs of weather verbs. In some languages, COs exhibit certain syntactic properties typical of genuine objects. In other languages, however, their syntactic

¹⁰ These types of constructions are also possible with other verbs (e.g. *nthona* ‘drip’, *hunga* ‘blow’, *hatima* ‘flash’) and nouns (e.g. *mathonsi* ‘drops’, *rihati* ‘lightning’, *ximbembhe* ‘storm wind’, *bubutsa* ‘dust storm’, *xihuhuri* ‘whirlwind’, *xihangu* ‘hail’, and *mirubi* ‘continuous rain’) (Mdumela 1996: 72; Du Plessis 2010).

behavior fully conforms to genuine objects. Inversely, in some languages, COs are prototypical instantiations of the CO category, while in others their compliance with the CO prototype is low. The prototypicality of being a true internal argument (object) is inversely proportional to the prototypicality of being a CO. As the former increases, the latter decreases.

In Sesotho, COs of weather verbs fail to be genuine objects – their pronominalization (or use with object agreement markers) and promotion to subjects in passive constructions is ungrammatical (Ramathe 1996: 85, 88). In Sepedi, the ungrammaticality of object agreement with COs (or pronominalization) and their promotion in passives is less uniform. Although most COs cannot be marked on the verb by means of object agreement markers and pronominal clitics, nor can they be promoted to subjects in passive constructions, a few exceptions to both tendencies are found (Mojapelo 1997: 82). In isiXhosa, COs of weather verbs can regularly be indexed on the verb by means of object agreement affixes or pronominal clitics. However, contrary to constructions involving exemplary objects, weather verbs containing COs cannot be passivized. Accordingly, such COs are viewed as semi-prototypical – an intermediate stage between a prototypical CO and a prototypical object (Andrason and Visser forthcoming). In isiZulu, the COs of weather verbs are nearly true arguments. They can be pronominalized and promoted to subjects in passives, although the latter disallows the use of copulative agentive phrases (Mchunu 1996: 53). In Tshivenda (Nekhumbe 1995: 47, 52) and Xitsonga (Mdumela 1996: 73, 75-77; Du Plessis 1999: 222-225; Du Plessis 2010) the co-indexation of COs by means of object agreement markers, their pronominalization with clitics, and promotion to subjects in passive constructions (also with copulative agent-like complements) are fully grammatical – COs behave as prototypical objects. All the evidence is summarized in the following table:

Table 1: Object properties of COs of weather verbs in the African languages of South Africa

	Object position	Object agreement (pronom.)	Promotion
Sesotho	+	-	-
Sepedi	+	- / (+)	- / (+)
isiXhosa	+	+	-
isiZulu	+	+	+ (no copulative)
Tshivenda	+	+	+
Xitsonga	+	+	+

We propose that the variation attested in the six African languages reveals a grammaticalization path. The prototype of a CO used with weather verbs fails to tolerate object agreement or pronominalization, and promotion to the subject position (stage 1). The only syntactic property which it shares with genuine objects is the postverbal position in the canonical word order (Sesotho). At a subsequent stage (stage 2), COs may be pronominalized or co-indexed with agreement markers (isiXhosa). However, their passivization is ungrammatical. Lastly, at the final stage (stage 3), COs may be promoted to the subject role in passive constructions apart from being pronominalized and accompanied by object agreement markers (Tshivenda and Xitsonga). At the end of the process, COs are genuine objects and weather verbs are true accusative verbs (Figure 1). As is typical of grammaticalization, the process is gradual with intermediate transition phases between the distinguished stages. Sepedi arguably attests to the transition between stage 1 and stage 2, while isiZulu attests to the transition between stage 2

and stage 3. The cline is possibly universal suggesting that pronominalization regularly precedes passivization in the adaptation of COs to genuine objects.

Stage 1	Stage 2	Stage 3
object position	object position pronominalization/agreement	object position pronominalization/agreement promotion in passive
Sesotho	Sepedi	isiXhosa isiZulu Tshivenda and Xitsonga

Figure 1: Grammaticalization path of COs of weather verbs¹¹

Our results corroborate the understanding of cognate object constructions in terms of a sequence of stages that link prototypical intransitivity and prototypical transitivity, as postulated by Höche (2002: 168-169). According to that view, CO constructions deliver a set of variants from those that are more intransitive-like (unaccusative and unergative) to fully transitive CO constructions (*ibid.*). In the former variants, COs exhibit exemplary CO properties, while in the latter variants, they behave like (or similarly to) genuine objects.

From a broader perspective, this research provides further support for syntactic gradience (Aarts 2007; Traugott and Trousdale 2010). Specifically, it corroborates a fuzzy transition from the category of adjunct to that of (internal) argument, through a cloud of less prototypical objects (Aarts 2007: 174-175, 186; Andrason forthcoming). Prototypical COs would constitute a class of such non-prototypical objects – the so-called objoid (Allerton 2006: 164). Less prototypical COs would, however, gradually approach the category of object. Therefore, it is not only the adjunct-argument split that is gradient. The intersective (i.e. semi-adjunct and semi-object) category of COs is gradient as well.

4. Conclusion

The present note demonstrates that the variation in properties of COs of weather verbs attested synchronically in six African languages of South Africa may have a diachronic explanation in terms of a grammaticalization path. This path leads from prototypical COs that disallow object agreement / pronominalization and promotion in passives to prototypical objects where both agreement / pronominalization and promotion are allowed. This supports the understanding of COs as gradient, the same for adjunct-argument distinction, and syntactic categories in general.

Abbreviations

CO – cognate object; OA – object agreement / pronominal clitic; SA – subject agreement; PASS – passive; PRES – present.

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¹¹ The position of specific languages on this continuum is, of course, approximate.

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