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Additive coordination, comitative adjunction, and associative plural in Tswana

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Abstract

This paper discusses the contribution of Tswana (Bantu, S31) to the typology of coordination, in particular additive coordination, with an emphasis on the relationship between additive coordination, the expression of comitativity, and plural marking. Tswana has a strict distinction between the additive coordination of NPs, attributive adjectives, and clauses, but uses the same proclitic *le* **lí-** as an additive coordinator for NPs ('and'), as an additive particle ('also'), and as a comitative marker ('with'). None of the constructions expressing the additive coordination of clauses lends itself to mechanisms of ellipsis comparable to those found in European languages. Inclusory additive coordination is of particular interest, since Tswana has a cross-linguistically rare type of inclusory additive coordination with the associative plural form of an individual name as the first coordinand, and the analysis of this construction suggests a possible etymology for the Tswana prefix of class 2a.

Keywords

Bantu, coordination, additive coordination, comitative adjunction, associative plural

Résumé

Cet article discute la contribution du Tswana (bantou, S31) à la typologie de la coordination, notamment de la coordination additive, avec une attention particulière à la relation entre la coordination additive, l'expression de la comitativité et le marquage du pluriel. Le tswana a une distinction stricte entre la coordination additive des groupes nominaux, des adjectifs épithètes et des phrases, mais utilise le même proclitique *le* **lí-**

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comme marque de la coordination additive de groupes nominaux ('et'), comme particule additive ('aussi') et comme marqueur comitatif ('avec'). Aucune des constructions exprimant la coordination additive de phrases ne se prête à des mécanismes d'ellipse comparable à ceux rencontrés dans les langues d'Europe. La coordination additive inclusive présente un intérêt particulier, du fait que le tswana a un type rare de coordination additive inclusive avec le pluriel associatif d'un nom individuel comme premier terme de la construction. En outre, l'analyse de cette construction suggère une étymologie possible du préfixe tswana de classe 2a.

Mots clés

bantou, coordination, coordination additive, comitatif, pluriel associatif

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1. Introduction [2]

> The term *coordination* refers to syntactic constructions in which two or more units of the same type are combined into a larger unit and still have the same semantic relations with other surrounding elements... All languages appear to possess coordination constructions (or *coordinate constructions*) of some kind, but there is a lot of cross-linguistic variation. (Haspelmath 2007: 1)

Sub-Saharan languages have much to contribute to a general typology of coordination constructions, and to the debate on the universality or non-universality of coordination. More generally, the accumulation of cross-linguistic data on the constructions that meet the broad definition quoted above is essential for a better understanding of coordination as a general and abstract concept underlying the constructions in question.

In this perspective, the present paper describes the constructions expressing additive coordination in Tswana (Bantu, S31), with an emphasis on their relationship with the expression of comitativity and plural marking, a question on which Tswana data are particularly suggestive.

The paper is organized as follows. Section 2 aims at clarifying some basic aspects of the general notion of coordination directly relevant to the topic of this paper. Section 3 provides the necessary background information on Tswana morphosyntax. Section 4 describes the use of *le* lɩ́- as an additive coordinator. Section 5 describes the other uses of this morpheme. Section 6 and 7 deal with additive coordination of attributive adjectives and clauses, respectively. Section 8 describes an inclusory additive coordination construction involving an associative plural marker, and Section 9 discusses a possible etymology for this associative plural marker

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based on its involvement in the construction described in Section 8. Section 10 summarizes the main conclusions.

2. A succinct typology of coordination

Cross-linguistically, *additive* coordination (marked in English by *and*) is by far the most frequently occurring type of coordinate construction. Other semantic types of coordination commonly mentioned in grammars include *disjunctive* coordination (English *or*), *adversative* coordination (English *but*), [3] and *causal* coordination (English *for*). *Implicational* coordination (English *let alone*) is not commonly mentioned, but it is clearly grammaticalized for example in Manding languages and in Soninke.

Additive coordination is more commonly designated as 'conjunctive coordination' or 'conjunction', but I avoid these terms because of their potential ambiguity with other uses of 'conjunction' in linguistics : in many grammatical traditions, coordinators are classified as 'conjunctions', whatever type of semantic relationship they may encode, and subordinators are equally classified as 'conjunctions'. Moreover, the correspondence between 'conjunction' as this term is used in classical logic and additive coordination is only partial, since 'conjunction' in classical logic refers only to the additive coordination of clauses. This means that, for example, cases of additive coordination of NPs that cannot be explained as the reduction of a sequence of coordinated clauses have nothing in common with logical 'conjunction'.

Linguistically, there is an obvious asymmetry between additive coordination and the other semantic types of coordination. As a rule, reference grammars describe additive coordination in detail, but devote much less attention to non-additive types of coordination, which often are simply not mentioned at all. The obvious reason is that additive coordination as it is commonly delimited by linguists encodes not only relationships between events (like other types of coordination), but also the relationship between individual parts of plural individuals. [4] The point is that, semantically, whatever the commonalities that may underlie the use of the same grammatical word or clitic to encode both operations in some languages, there is no possibility of deriving the formation of plural individuals from an operation on events, or vice-versa. By contrast, nothing similar exists for other semantic types of constructions identified by linguists as coordinate constructions.

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3. Subtypes of adversative coordination must be recognized in some languages: *plain adversative* coordination vs. *rectificative* coordination (Spanish *pero* vs. *sino*, German *aber* vs. *sondern*), or *concessive* coordination vs. *oppositive* coordination (Russian *a* vs. *no*).

4. The notion of plural individual defined as the sum of its individual parts, crucial for a proper understanding of the semantics of plural NPs and NP additive coordination, was introduced by Link (1983). See Bach (1989: 69-84) for a discussion of this notion couched in terms more accessible to linguists.

Some decades ago, early generative grammar adopted the extreme view that all non-clausal coordination involves ellipsis, and that the corresponding non-elliptical structures all involve clausal coordination. I am aware of no decisive proof that this view would be incorrect for non-additive coordination.[5] In other words, the reduction of all cases of non-additive coordination to clausal coordination (non-additive coordination of phrases being derived from clausal coordination via ellipsis) is a matter of taste, or of theoretical assumptions. By contrast, it is not difficult to convince oneself that derivation from clausal coordination via ellipsis cannot account for all cases of additive coordination of NPs, as illustrated by English sentences such as *John and Mary met* (**John met and Mary met*), *John and Peter are similar* (**John is similar and Peter is similar*), or *Mix the oil and the vinegar* (**Mix the oil and mix the vinegar*).[6] Similarly, derivation from clausal coordination via ellipsis does not provide a simple and satisfactory account of cases of additive coordination of VPs such as *Many people like nature and live in town*.

Another clear asymmetry between additive coordination and other semantic types of coordination concerns the use of different coordinators for clausal and non-clausal coordination. It is widely recognized that languages may require different coordinators depending on the syntactic types of the coordinands, but the equally important fact that this applies only to additive coordination, not to the other semantic types of coordination, is largely ignored in the general literature on coordination.

These asymmetries between additive and non-additive coordination are consistent with the fact that the semantic specificity of the additive coordination of NPs has no equivalent with other semantic types of coordination. Non-additive coordination basically encodes relationships between events. Consequently, it is normal that non-additive coordinators are basically interclausal linkers, and that non-additive coordination of other categories, when it is possible (which is by no means universal), is encoded by the same linkers, since it can always be analyzed as resulting from the reduction of a coordination of clauses.

It is also interesting to observe that English and some other languages have constructions commonly (but misleadingly) designated simply as *emphatic coordination* (*both ... and*) and *emphatic negative coordination*

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5. As observed by one of the LLA reviewers, sentences like *I didn't buy fruit or vegetables* can be viewed as problematic for this assumption, since this sentence cannot be analyzed as *I didn't buy fruit or ~~I didn't buy~~ vegetables*. However, as rightly observed by this reviewer, a clausal coordination analysis can be rescued by deriving this sentence from NEG[*I bought fruit or ~~I bought~~ vegetables*], whereas no similar analysis can be imagined for the cases of additive coordination of NPs quoted at the end of this paragraph.

6. Note that the ungrammaticality of such sentences is not absolute: uttered in the right context and with the right intonation, *Mix the oil, and mix the vinegar* may be acceptable, with however a meaning different from *Mix the oil and the vinegar*.

(*neither ... nor*). The point is that such constructions do not simply add some emphatic flavor to additive coordination. Crucially, they cannot be used in cases of additive coordination of NPs that cannot be paraphrased by a coordination of clauses, as shown by the agrammaticality of *Both John and Peter greeted each other* or *Neither John nor Peter greeted each other*.

To summarize, semantically, the notion of coordination as used by linguists encompasses a precise and well-defined operation on the referents of NPs (the construction of a plural individual having the referents of the coordinated NPs as its individual parts) and a fuzzy set of inter-clausal relationships that for some reason tend to be encoded by constructions that do not show (or show only partially) the characteristics of subordinate constructions, and often lend themselves to reduction via ellipsis. There is important cross-linguistic variation on (at least) the following three points:

1. the extension of the use of the grammatical word or clitic expressing the relationship between individual parts of a plural individual to the expression of other semantic types of relationships,

2. the reduction of coordinate constructions involving clauses to mono-clausal constructions in which the same coordinator links constituents of various categories (as in English [*Do you want fish*]*, or* [*do you want meat*]*? > Do you want [fish] or [meat]?*),

3. the reduction of coordinate constructions involving clauses to con-structions in which one of the coordinands only is a regular syntactic constituent (as in English [*John played the piano*] *and* [*Peter the violin*],[7] *I sent* [*a letter to John*] *and* [*a postcard to Peter*], or [*John adores*] *but* [*Peter hates*] *Chinese food*.[8]

On these three points, the dominant tendencies in Sub-Saharan languages contrast with those observed in European languages and other languages best represented in the general linguistic literature:

– among Sub-Saharan languages, the use of the same grammatical word or clitic for the additive coordination of NPs and for the additive coordination of clauses is not common,

– the grammatical word or clitic used for the additive coordination of NPs tends to be used also as a comitative adposition,[9]

– coordinate constructions analyzable as involving ellipsis mechanisms of the type mentioned in (b) above are less common than in European languages,

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7. This particular type of ellipsis in coordinate constructions is known in the literature as *gapping*.

8. This particular type of ellipsis in coordinate constructions is known in the literature as *right periphery ellipsis* or *right node raising*.

9. For a survey of this typological parameter in the languages of the world, see Stassen (2000).

– coordination constructions analyzable as involving ellipsis mecha-
nisms of the type mentioned in (c) above are quite uncommon. [10]

3. Some basic information about Tswana

Tswana (aka Setswana) is a southern Bantu language spoken in Botswana
and South Africa by more than 5 million speakers. [11] Its closest relatives
are Pedi and Southern Sotho. [12] Typologically, Tswana is in almost every
respect a typical Bantu language. [13]

3.1 Noun classes

Tswana has 12 noun classes. As a rule, noun forms that have the same
agreement properties share a prefix characteristic of the class in question,
but the correlation between noun prefixes and agreement classes is not
perfect.

Number marking is an important function of noun classes. Some
classes include singular forms, others include plural forms, and nominal
lexemes can be grouped into genders on the basis of correspondences
such as *mosadi* **mò-sádí** (cl. 1) 'woman' / *basadi* **bà-sádí** (cl. 2) 'wo-
men'. *Mosadi* 'woman' as a singular form belongs to class 1, but *mosadi*
is also the quotation form of a nominal lexeme belonging to gender 1–2.
The major genders in Tswana are 1–2 (*mosadi* **mò-sádí** 'woman' pl.
basadi **bà-sádí**), 3–4 (*motse* **mò-tsì** 'village' pl. *metse* **mì-tsì**), 5–6 (*lee*
lì-í 'egg' pl. *mae* **mà-í**), 7–8/10 (*selepe* **sì-lépé** 'axe' pl. *dilepe* **dì-lépé**), [14]
9–8/10 (*podi* **púdí** 'goat' pl. *dipodi* **dì-púdí**), 11–6 (*losea* **lù-síá** 'baby'
pl. *masea* **mà-síá**), 11–8/10 (*loso* **lù-sò** 'spoon' pl. *dintsho* **dì-ǹtsʰɔ**), and
14–6 (*bothata* **bò-tʰátá** 'problem' pl. *mathata* **mà-tʰátá**).

3.2 The structure of Tswana NPs

As illustrated by ex. (1), in which a head noun combines with two adjec-
tives, a relative clause and a demonstrative, Tswana NPs have two very

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10. One of the LLA reviewers signals that such constructions are acceptable for many Zulu speakers,
and that they have been found to be acceptable in various Eastern Bantu languages. On the basis of
my own experience of working on spontaneous texts in many Subsaharan languages belonging to
different families, and of similar observations made by colleagues with whom I had the opportunity
to discuss this question, I am inclined to think that such acceptability judgments are the result of a
recent influence of European languages.

11. In Botswana, ethnic Batswana constitute 80% of the population, estimated at 2,1 million. In
South Africa, Tswana is dominant in the Northwest Province and in some districts of the Free State
Province, and the number of its speakers is estimated at 4 million.

12. In fact, these three languages, with a total number of approximately 16 million speakers, are so
close to each other that, from a strictly linguistic point of view, they should be considered as three
varieties of a single language. Pedi is commonly designated as Northern Sotho, but this term is
ambiguous, since it is also used with reference to lects (Lobedu, Tswapong, etc.) that, linguistically,
are better considered languages distinct from Sotho-Tswana proper.

13. For an overall presentation of Tswana, see Cole 1955, Creissels 2003.

14. Tswana has conflated the reflexes of the Proto-Bantu classes 8 and 10.

general characteristics: noun dependents follow their head, and express class agreement with their head. [15]

(1a) *mosadi yo moleele yo montsho yo o opelang yole*
      'that tall woman with dark complexion who is singing'
      mʊ̀-sádì   **jó**   **mʊ̀-léèlé**   **ꜜjó**   **mʊ́-ǹtsʰʊ̀**
      CL1-woman   CL1.ATTR C   L1-tall   CL1.ATTR   CL1-black
      jó   **ꜜʊ́-ɔ́pɛ́là-ŋ́**   **ꜜjó-lé**
      CL1.ATTR   CL1-sing:PRS-REL   DEM.CL1-DIST

(1b) *lekau le leleele le lentsho le le opelang lele*
      'that tall boy with dark complexion who is singing'
      ɺ̀-káu   **lé**   **ɺ̀-léèlé**   **ꜜlé**   **lí-ǹtsʰʊ̀**
      CL5-boy   CL5.ATTR   CL5-tall   CL5.ATTR   CL5-black
      lé   **ꜜlí-ɔ́pɛ́là-ŋ́**   **ꜜlé-lé**
      CL5.ATTR   CL5-sing:PRS-REL   DEM.CL5-DIST

In Tswana NPs, the *head-dependent* order is not absolutely obligatory, but noun dependents preceding their head are extremely rare in spontaneous texts. [16] By contrast, the rule according to which noun dependents express agreement with their head suffers no exception. Noun dependents can be classified according to the particular sets of agreement markers by means of which they express agreement.

3.3 Canonical verbal predication

The basic constituent order in Tswana is *Subject-Verb-Objects-Obliques*. There is no flagging of NPs in core syntactic roles, but the indexation of arguments by means of verbal prefixes provides a firm basis for recognizing a syntactic function 'subject' grouping together the single core argument of intransitive verbs and the agent of prototypical transitive verbs, contrasting with a syntactic function 'object' including the patient of prototypical transitive verbs.

Verb forms heading independent assertive or interrogative clauses include an obligatory prefix representing the single core argument of intransitive verbs and the agent of prototypical transitive verbs, designated as *subject index*. [17]

If a co-referent NP is present, the subject index expresses class agreement with it. In the absence of a co-referent NP, subject indexes that do not belong to 1st or 2nd person are interpreted anaphorically, triggering

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15. In the presentation of the examples, the first line is the transcription in current Tswana orthography, which may unfortunately be quite misleading in a linguistic analysis of this language, since it distinguishes only 5 vowels and does not note tones at all, whereas Tswana has 9 vowel phonemes, and tones are crucial for morphological analyses. Moreover, many morphemes that are unquestionably prefixes (in particular, subject indexes and object indexes) are written as if they were separate words. The correct word division is given in the phonetic transcription (third line).

16. The anteposition of noun dependents adds emphasis, but never modifies the denotative meaning. Anteposition is equally possible (and equally rare) with all types of noun dependents.

17. On Tswana verb morphology, see Creissels & al. (1997), Creissels (2006, Forthcoming 2016).

the identification of the argument they represent to a contextually salient referent compatible with the class expressed by the subject index, ex. (2).

(2a) *Ngwana o thubile mae.* ꜜ
      'The child broke the eggs.'
      ŋʷ-àná   ó-tʰùbílé   mà:-ɪ́
      CL1-child   CL1-break:PRF:CJ   CL6-egg

(2b) *Ngwana o tsile.*
      'The child came.'
      ŋʷ-àná   ꜜó-tsî:lè
      CL1-child   CL1-come:PRF:DJ

(2c) *O thubile mae.*
      'He/She broke the eggs.'
      ó-tʰùbílé   mà:-ɪ́
      CL1-break:PRF:CJ   CL6-egg

(2d) *O tsile.*
      'He/she came.'
      ó-tsî:lè
      CL1-come:PRF:DJ

(2e) **Ngwana thubile mae.*

(2f) **Ngwana tsile.*

As illustrated by ex. (2a, 2c), the object of transitive verbs is not obligatorily indexed on the verb form, but topical objects whose precise description is considered superfluous by the speaker are represented by object indexes prefixed to verbs. Object indexes immediately precede the verb stem and may be separated from subject indexes by TAM or negation markers – ex. (3a-b).

(3a) *Ngwana o a thubile.*
      'The child broke them (the eggs).'
      ŋʷ-àná   ó-à-tʰúbî:lè
      CL1-child   CL1-CL6-break:PRF:DJ

(3b) *Ngwana o tlaa a thuba.*
      'The child will break them (the eggs).'
      ŋʷ-àná   ꜜó-tɬáà-á-tʰû:bà
      CL1-child   CL1-FUT-CL6-break:DJ

Tswana has multiple-object constructions in which the hierarchy between the objects is minimal: each object can be converted into the subject of a passive construction, or represented by an object marker. Non-derived verbs may have two non-coordinated objects, and valency-increasing derivations (causative and applicative) may result in constructions with three objects, as in ex. (4).

(4a) *Ngwana o nole maši.*
'The child drank milk'

ŋʷ-àná	ꜜʊ́-nʊ́lé	mâ:-ʃì
CL1-child	CL1-drink:PFT:CJ	CL6-milk

(4b) *Ke nositse ngwana maši.*
'I made the child drink milk'

kì-nʊ́sítsé	ŋʷ-àná	mâ:-ʃì
1SG-drink:CAUS:PFT:CJ	CL1-child	CL6-milk

(4c) *Ke noseditse Dimpho ngwana maši.*
'I made the child drink milk in Dimpho's place'

kì-nʊ́sédítsé	dím̀pʰɔ́	ŋʷ-àná	mâ:-ʃì
1SG-drink:CAUS:APPL:PFT:CJ	(CL1)Dimpho	CL1-child	CL6-milk

As in other Southern Bantu language (and in contrast to the situation observed in Central Bantu languages), locative phrases do not have access to the subject function. They have the internal structure of noun phrases, from which they differ only in that (a) they are headed by a locative, i.e. a nominal form to which the locative prefix *go* χʊ́- or the locative suffix *-ng* -ŋ̀ has been added, and (b) they optionally combine with one of the three locative prepositions *ko* kó (relative remoteness), *fa* fá (relative proximity), or *mo* mó (interiority, contact). The choice between the locative prefix *go* χʊ́- and the locative suffix *-ng* -ŋ̀ is entirely determined by the grammatical nature of the head of the locative-marked noun phrase. Toponyms and a handful of common nouns are used as locatives without locative marking. Neither locative affixes nor locative prepositions specify the distinction between static location, source of movement, or direction of movement.

Tswana has three non-locative prepositions: *le* lɪ- (comitative), *ka* ká (instrumental, also used for manner and time adjuncts), and *ke* kɪ (used exclusively for obliques representing the demoted subject in passive constructions). The uses of *le* lɪ- constitute the topic of Sections 4 and 5. For more details on the other prepositions and on locatives, see Creissels (2011, 2013).

4. The additive coordinator *le* lɪ́

In Tswana, the additive coordination of NPs cannot be expressed by mere juxtaposition, and requires the use of *le* lɪ-, which in its role of coordinator will be glossed 'and'. Other possible uses of *le* lɪ́- will be described in Section 5, but its use as a coordinator is strictly limited to the additive coordination of the following types of units:

– noun phrases,

– adpositional phrases,

– adverbs syntactically equivalent to adpositional phrases,

– infinitival phrases,

– complement clauses introduced by the complementizer *gore* **χʊ̀rì**
  'that'.

4.1 Additive coordination of two noun phrases

Ex. (5) illustrates the additive coordination of two NPs. In (5b-d-f), *Kitso
le Mpho* **kítsɔ́ lí-m̀pʰɔ́** 'Kitso and Mpho' refers to a plural individual
whose individual parts *Kitso* and *Mpho* share the semantic roles assigned
to the singular individual *Kitso* in (5a-c-e). Crucially, when such an NP
occurs in subject function –as in (5b)–, it must be resumed in the verb
form by a plural index: the subject index in (5b) (*ba* **bá-**) belongs to class
2, which in the noun class system of Tswana constitutes the regular plural
of the class to which individual names such as *Kitso* or *Mpho* belong
(class 1, expressed in (5a) by the subject index *o* **ʊ́-**).

(5a) *Kitso o tsile maabane.*
      'Kitso came yesterday.'
      kítsɔ́   **ʊ́-tsìlé**   **máàbâ:nì**
      (CL1)Kitso   CL1-come:PFT:CJ yesterday

(5b) *Kitso le Mpho ba tsile maabane.*
      'Kitso and Mpho came yesterday.'
      kítsɔ́   **lí-m̀pʰɔ́**   **bá-tsìlé**   **máàbâ:nì**
      (CL1)Kitso   with-(CL1)Mpho   CL2-come:PFT:CJ   yesterday

(5c) *Ke laleditse Kitso.*
      'I invited Kitso.'
      kʊ̀-lálédítsé   **ꜜkî:tsɔ̀**
      1SG-invite:PFT:CJ   (CL1)Kitso

(5d) *Ke laleditse Kitso le Mpho.*
      'I invited Kitso and Mpho.'
      kʊ̀-lálédítsé   **ꜜkítsɔ́**   **lí-m̀:pʰɔ́**
      1SG-invite:PFT:CJ   (CL1)Kitso   with-(CL1)Mpho

(5e) *Ke apeetse Kitso dijo.*
      'I did the cooking for Kitso.'
      kʊ̀-àpéétsí   **ꜜkítsɔ́**   **dì:-dʒɔ́**
      1SG-cook:APPL:PFT:CJ   (CL1)Kitso   CL8/10-food

(5f) *Ke apeetse Kitso le Mpho dijo.*
      'I did the cooking for Kitso and Mpho.'
      kʊ̀-àpéétsí   **ꜜkítsɔ́**   **lí-m̀pʰɔ́**   **dì:-dʒɔ́**
      1SG-cook:APPL:PFT:CJ   (CL1)Kitso   with-(CL1)Mpho   CL8/10-food

Note that, although written as a separate word in the current orthogra-
phy, the coordinator *le* **lí-** is a proclitic that attaches to the second co-
ordinand. In Tswana, the rules of tonal sandhi ensure a clear-cut distinc-
tion between word-internal boundaries and boundaries between adjacent
words, and the tonal properties of *le* **lí-** unambiguously identify it as a
proclitic – for more precisions on this point, see Creissels & al. (1997 :
15-26).

4.2 Additive coordination of prepositional phrases

Ex. (6) illustrates the possibility of using *le* **lí-** to coordinate prepositional phrases. The preposition in Ex. (6) is the instrumental preposition *ka* **ká**, also used to flag adjuncts encoding the localization of an event in time. Note that *le* **lí-** in coordinator function precedes the instrumental preposition *ka* **ká**, and *ka* **ká** is repeated. The same construction is possible with the other prepositions, and with locative phrases.

(6a) *Ke tlaa tla gape ka Laboraro.*
'I'll come again on Wednesday.'
kì-tɬàà-tɬà   **χápé**   **ká**   **lábòrâːrò**
1SG-FUT-come:CJ again   with   Wednesday

(6b) *Ke tlaa tla gape ka Labotlhano.*
'I'll come again on Friday.'
kì-tɬàà-tɬà   **χápé**   **ká**   **lábòtɬʰâːnò**
1SG-FUT-come:CJ again   with   Friday

(6c) *Ke tlaa tla gape ka Laboraro le ka Labotlhano.*
'I'll come again on Wednesday and Friday.'
kì-tɬàà-tɬà   **χápé ká**   **lábòrárú**   **ˡlí-ká**   **lábòtɬʰâːnò**
1SG-FUT-come:CJ   again with   Wednesday   and-with Friday

4.3 Additive coordination of infinitival phrases and complement clauses

In Ex. (7), *le* **lí-** operates on clausal constituents: infinitival phrases (7a) and finite clauses introduced by the complementizer *gore* **χòrì** 'that'. The coordination of infinitival phrases by means of *le* **lí-** (as in 7a) is not surprising, since Tswana infinitives are basically nominal forms including the class 15 prefix *go* **χò-**, although they have some verbal properties (for example, they can have objects exactly like finite verb forms). [18] The use of *le* **lí-** to coordinate complement clauses (as in 7b) is not surprising either, since etymologically, the complementizer *gore* **χòrì** 'that' is the infinitive of the quotative verb *re* **-rì** 'say'.

(7a) *Ke itse go bua Setswana le go se kwala.*
'I can speak and write Tswana'
lit. 'I can speak Tswana and write it.'
kì-ítsí   **χò-búá**   **sì-tsʷáná**   **lí-χò-sí-kʷâːlà**
1SG-know:CJ INF-speak:CJ CL7-Tswana   and-INF-CL7-write:DJ

(7b) *Ke itse gore o bua maaka le gore o a utswa.*
'I know that he lies and steals.'
lit. 'I know that he lies and that he steals.'
kì-ítsí   **χórì ó-búá**   **má-àká**   **lí-χórì**   **ó-à-ûːtsʷà**
1SG-know:CJ that   CL1-tell:CJ   CL6-lie   and-that CL1-DJ-steal

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18. See Creissels and Godard (2005) for a description and analysis of the mixing of nominal and verbal properties that characterizes Tswana infinitives.

Note incidentally that, in Tswana, it is absolutely impossible to reduce such constructions in the same way as their English equivalents: *Ke itse go bua le go kwala Setswana* or *Ke itse gore o bua maaka le o a utswa* would be completely agrammatical.

4.4 Multiple additive coordination

Ex. (8) illustrates the additive coordination of NPs with more than two coordinands. In this construction, *le lí-* must be repeated before each non-initial coordinand.

(8) *Re bonye ditau le dinare le ditlou.*
     'We saw lions, buffaloes, and elephants.'
     r̀-bóɲí   dí-tàú   lí-dì-nárí   ꜜlí-dí-tɬô:ù
     1PL-see:PRF:CJCL8/10-lion and-CL8/10-buffalo and-CL8/10-elephant

4.5 The behavior of *NP1 le NP2* phrases in class agreement

Since in Tswana, pronouns, subject indexes and object indexes express noun class distinctions, it is important to make explicit not only the agreement behaviour of *NP1 le NP2* phrases including pronouns referring to the speech act participants – Ex. (9a-b), but also the noun class assigned to phrases in which *NP1* and *NP2* are ordinary NPs – Ex. (9c-d).

(9a) *Nna le Kitso re tlaa sala mono.*
     'Kitso and I will stay here.'
     ǹná   ꜜlí-kítsɔ́   rí-tɬàà-sálà   mô:nʊ̀
     1SG   with-(CL1)Kitso 1PL-FUT-stay:CJ   here

(9b) *Wena le Lorato lo tlaa apaya dijo.*
     'Lorato and you will do the cooking.'
     wèná lí-lòrátɔ́   ꜜl6-tɬáá-àpàjà   dì:-dʒɔ́
     2SG   with-(CL1)Lorato 2PL-FUT-cook:CJ CL8/10-food

(9c) *Leburu le Lekula ba tsamaile mmogo.*
     'The Afrikaner and the Indian left together.'
     l̀-búrú   lí-l̀-kúlá   bá-tsàmáílé   m̀mɔ̀:χɔ̀
     CL5-Afrikaner and-CL5-Indian CL2-leave:PRF:CJ   together

   (Both *Leburu* and *Lekula* belong to class 5 in the singular and to class 6 in the plural, but *Leburu le Lekula* governs class 2 agreement.)

(9d) *Mmidi le mabele di jelwe.*
     'The maize and the millet have been eaten.'
     m̀-mídí   ꜜlí-má-bèlɛ́   dí-dʒ̀:lʷé
     CL3-maize and-6-millet CL8/10-eat:PRF:DJ

   (*mmidi* belongs to class 3 in the singular and to class 4 in the plural, *mabele* belongs to class 6, but *mmidi le mabele* governs class 8/10 agreement.)

As can be expected, if one of the coordinands is a 1st person pronoun, *NP1 le NP2* triggers 1st person plural agreement, irrespective of the na-

ture of the second coordinand. [19] If one of the coordinands is a 2nd person pronoun, and the other is not a 1st person pronoun, *NP1 le NP2* invariably triggers 2nd person plural agreement.

The question of gender resolution in constructions with coordinated NPs in subject or object function occupies the major part of the literature on coordination in Bantu languages – see among others Marten (2000) on Swahili, Marten & Ramadhani (2001) on Luguru, De Vos & Mitchley (2012) on Southern Sotho. In Tswana, if none of the coordinands is a 1st or 2nd person pronouns, it is always possible to apply the following gender resolution rule (Cole 1955: 429):

  – if both coordinands have human referents, *NP1 le NP2* governs class 2 agreement – Ex. (9c);
  – if both coordinands have non-human referents, *NP1 le NP2* governs class 8/10 agreement – Ex. (9d).

The semantic basis of this rule is obvious, since the generic term for 'human' (*motho* **mò-tʰò** pl. *batho* **bà-tʰò**) belongs to gender 1–2, and the generic term for 'thing' (*selo* **sì-lò** pl. *dilo* **dì-lò**) belongs to gender 7–8/10.

According to Cole (1955), an alternative strategy is possible when the coordinands belong to the same class in the plural. In that case, the class in question can be selected instead of class 2 or class 8/10. According to my own observations, this is possible, but speakers tend to prefer the rule according to which the class assigned to *NP1 le NP2* phrases is selected on a purely semantic basis, regardless of the gender of the coordinands. Interestingly, in Tswana, this is the only case in which, within the limits of the clause, semantic agreement takes precedence over morphological agreement.

The resolution rule just formulated raises the following question: what could be the agreement properties of *NP1 le NP2* phrases with one of the coordinands human, and the other non-human? In fact, Tswana speakers simply avoid such constructions, and when asked to give a Tswana equivalent of English sentences such as 'The hunter and his dog got lost in the bush', they suggest translations in which the second coordinand in the English sentence is rendered as a comitative adjunct ('The hunter got lost with his dog in the bush').

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19. Note that, in Tswana coordinate constructions involving 1st or 2nd person pronouns, the linear order must respect the following hierarchy: 1 > 2 > 3.

5. Other uses of *le* lí-

5.1 *Le* lí- as an additive particle

In addition to its use as a coordinator, *le* **lí-** is used as an adnominal additive particle that can be rendered in English as *also*, *too*, or *even* – Ex. (10). [20]

(10a) *Le Mpho o tsile maabane.*
        'Mpho too came yesterday.'
        lí-m̀pʰɔ́   **ú-tsìlé**   **máàbâ:nì**
        also-(CL1)Mpho   CL1-come:PRF:CJ   yesterday

(10b) *Ke laleditse le Mpho.*
        'I invited Mpho too.'
        kù-lálédítsè   **lí-m̀:pʰɔ́**
        1SG-invite:PRF:CJ   also-(CL1)Mpho

(10c) *Ke apeetse le Mpho dijo.*
        'I did the cooking for Mpho too.'
        kù-àpéétsì   **lí-m̀pʰɔ́**   **dì:-dʒɔ́**
        1SG-invite:APPL:PRF:CJ   also-(CL1)Mpho   CL8/10-food

In this use, *le* **lí-** expresses semantic role sharing in the same way as in its use as a coordinator. The difference is that the involvement of another participant with the same role in a similar event is presupposed. The use of the same grammatical word or clitic as an additive coordinator and as an additive particle is not rare in the languages of the world. The same situation is found for example in Slavic languages, and among Sub-Saharan languages, in Maba (Maban), Sar (Central Sudanic), and Sereer (Atlantic) – Creissels (2015).

5.2 *Le* lí- as a comitative marker

Le **lí-** can also be used as a comitative marker introducing adjuncts which semantically differ from the second coordinand in the construction described in Section 4 in that they do not necessarily share a semantic role with another term of the construction, but rather fulfill the role of companion. [21]

(11a) *Kitso o tsile maabane le Mpho.*
        'Kitso came yesterday with Mpho.'
        kítsɔ́   **ú-tsìlé**   **máàbání**   **lí-m̀:pʰɔ́**
        (CL1)Kitso   CL1-come:PRF:CJ   yesterday   with-(CL1)Mpho

(11b) *Kitso o opela le Mpho.*
        'Kitso sings / is singing with Mpho.'
        kítsɔ́   **ꜜú-ópélà**   **lí-m̀:pʰɔ́**
        (CL1)Kitso   CL1-sing:PRS:CJ   with-(CL1)Mpho

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20. Note however that, contrary to English *also*, *too*, or *even*, Tswana *le* **lí-** cannot be used as an additive particle with scope over the predicate (as in English *We also danced*).

21. On the specificity of the role of companion, and more generally on the typology of comitative constructions, see Arkhipov (2009a, 2009b) and Stolz & al. (2006).

Given that the notion of companion includes the notion of semantic role sharing as a particular case, the use of the same marker for comitative adjuncts and for the second coordinand in the additive coordination of NPs raises the following question: is it really justified to recognize a coordinate construction in which *le* **lí-** serves as a coordinator, and a distinct construction in which the same marker is used to flag comitative adjuncts? In fact, we might have just one construction in which the NP introduced by *le* **lí-** does not occupy a fixed position, and its interpretation is simply context-dependent.

Among Sub-Saharan languages, Manding languages (Mande) illustrate a situation in which it is not possible to recognize a construction expressing specifically that a semantic role is shared by the referents of two NPs. For example, in Mandinka, as discussed in more detail in Creissels (2016), there is nothing that could justify positing two distinct constructions in (12a) and (12b), in spite of the obvious fact that the two NPs in the *NP1* **níŋ** *NP2* sequence must be interpreted as sharing the same semantic role in (12a), but do not lend themselves to such an interpretation in (12b). Crucially, Mandinka does not have the agreement mechanisms that help to distinguish additive coordination from comitative adjunction in many other languages, and the Mandinka marker **níŋ** that assigns the role of companion (in a very broad sense) to the NP it precedes, must obligatorily follow the other NP involved in the comitative relationship.

Mandinka (Creissels 2016)

(12a) I   futa-ta   [Fúládûu níŋ   Kaabú]   naanéw-o   to.
      3PL   reach-CPL Fuladuu with Kaabu   border-D   LOC
      'They reached the border between Fuladuu and Kaabu.'

(12b) [Súŋkút-ôo   níŋ kumbóo] naa-ta.
      girl-D   with crying.D come-CPL
      'The girl came in tears.'
      lit. 'The girl with crying came.'

In this respect, Tswana illustrates the situation most commonly found among Sub-Saharan languages, in which a construction that specifically expresses the additive coordination of NPs can be distinguished from uses of the same marker that do not imply semantic role sharing between the referents of two NPs, and must rather be analyzed in terms of comitative adjunction.

In Tswana, the distinction between additive coordination of NPs and comitative adjunction is particularly clear in pairs of sentences such as (13b/e). In a *N1 V le N2* sequence such as (13b), the verb expresses agreement with a subject of class 1 exactly in the same way as in (13a),

and a plural subject index would be ungrammatical. [22] By contrast, in a
N1 le N2 V sequence such as (13d), the verb cannot express agreement
with *N1* only, and a plural subject index is obligatory, which shows that
the subject function is now fulfilled by the complex NP *Kitso le Mpho*.

(13a)   *Kitso o tsile.*
        'Kitso came.'
        kítsɔ́   **ꜜú-tsî:lè**
        (CL1)Kitso   CL1-come:PRF:DJ

(13b)   *Kitso o tsile le Mpho.*
        'Kitso came with Mpho.'
        kítsɔ́   **ó-tsìlé**   **lí-m̀:pʰɔ́**
        (CL1)Kitso   CL1-come:PRF:CJ   with-(CL1)Mpho

(13c)   **Kitso ba tsile le Mpho.*
        (With a subject index of class 2, the sentence becomes agrammatical.)

(13d)   Kitso le Mpho ba tsile.
        'Kitso came with Mpho.'
        kítsɔ́   **lí-m̀pʰɔ́**   **ꜜbá-tsî:lè**
        (CL1)Kitso   with-(CL1)Mpho   CL2-come:PRF:DJ

(13e)   *Kitso le Mpho o tsile.
        (With a subject index of class 1, the sentence becomes agrammatical.)

Moreover, constructions similar to that illustrated in (12b) for Man-
dinka, in which the semantic nature of *NP2* in a sequence *NP1 le NP2 V*
would preclude semantic role sharing with *NP1*, are not possible in
Tswana.

Consequently, in *NP1 le NP2 V* sequences, *NP1 le NP2* can only be
analyzed as a complex NP resulting from additive coordination and
occupying the subject function. It would not be possible to analyze *le
NP2* as a comitative adjunct that has moved from postverbal to preverbal
position.

Once this distinction has been established, the following dissymmetry
can be observed between *le NP* as the second coordinand in an additive
coordination of NPs, and *le NP* as a comitative adjunct. A comitative
adjunct can only be converted into the second coordinand of an additive
coordination if its meaning is compatible with semantic role sharing. For
example, 'Kitso brought the money' is commonly expressed in Tswana
as 'Kitso came with the money', but contrary to Mandinka, a construction
in which 'come' would take a constituent 'Kitso and/with the money' as
its subject is not possible. By contrast, it seems to be always possible to

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22. Note that this observation is by no means trivial, since in some languages, for example Joola-
Fooñi (Atlantic), a singular subject is compatible with a verb expressing plural agreement, if the verb
is followed by a comitative adjunct interpretable as sharing the semantic role assigned to the subject
(author's field notes). In other words, the transposition of the agrammatical Tswana sentence (13c) in
Joola-Fooñi would give a perfectly correct sentence.

convert the second coordinand of an additive coordination into a comitative adjunct, even when the meaning of the verb implies that the role assigned to the subject can only be assigned to a plural individual, as in Ex. (14b-c), where the verb is marked as reciprocal. [23]

(14a) *Kitso o rata Lorato.*
'Kitso loves Lorato.'
kítsɔ́	**⁺ʊ́-rátá**	**lʊ̀râ:tɔ̀**
(CL1)Kitso	CL1-love:PRS:CJ	(CL1)Lorato

(14b) *Kitso le Lorato ba a ratana.*
'Kitso and Lorato love each other.'
kítsɔ́	**lí-lʊ̀rátɔ́**	**bá-à-rátâ:nà**
(CL1)Kitso	and-(CL1)Mpho	CL2-DJ-love:RECIP:PRS

(14c) *Kitso o ratana le Lorato.*
'Kitso and Lorato love each other.'
lit. 'Kitso loves each other with Lorato.'
kítsɔ́	**⁺ʊ́-rátánà**	**lí-lʊ̀râ:tɔ̀**
(CL1)Kitso	CL1love:RECIP:PRS:CJ	with-(CL1)Lorato

5.3 Potential ambiguities between the different uses of *le* lí-

When a *le NP* sequence occurs in preverbal position, its interpretation suffers no ambiguity: if no NP precedes the *le NP* sequence, *le* lí- can only be interpreted as an additive particle ('also'), whereas *le* lí- immediately preceded by another NP can only be interpreted as a coordinator. By contrast, in postverbal position, *le* lí- immediately preceded by an NP can be interpreted as expressing additive coordination, comitative adjunction to the preceding noun, or comitative adjunction to the subject, and the choice between the three possible interpretations can only be guided by semantic considerations.

There is another case of potential ambiguity, when *le* lí- followed by a pronoun occurs in clause-final position and the pronoun can be interpreted as resuming the subject. The point is that clauses with *le* lí- as an additive particle attached to the subject, as in (15a), have an alternative construction in which *le* lí- attaches to a resumptive pronoun in clause-final position, as in (15b). In this position, *le* lí- can also be interpreted as introducing a comitative adjunct, if the pronoun is interpreted as referentially distinct from the subject of the clause, as in (15c). However, in so far as *le* lí- immediately follows the verb and the clause is headed by a verb form expressing the *conjoint* vs. *disjoint* distinction, the ambiguity is avoided by the choice of a conjoint or disjoint verb form: the conjoint form is selected if *le* lí- introduces a comitative adjunct expressed as a pronoun referentially distinct from the subject, whereas *le* lí- as

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23. For a detailed analysis of these two possible constructions of reciprocal verbs in Zimbabwean Ndebele (a Bantu S40 language whose behavior in this respect is quite similar to that of Tswana), see Khumalo (2014).

an additive particle followed by a pronoun resuming the subject triggers the selection of the disjoint form. In Ex. (15), this distinction is expressed tonally (and consequently is not apparent in the current orthography): **tsílè** in (15a-b) is the disjoint form of the perfect of 'come', whereas **tsìlé** in (15c) is the conjoint form of the perfect of the same verb. [24]

(15a) Le Kitso o tsile.
      'Kitso too came.'
      lí-kítsɔ́   **ꜜú-tsî:lè**
      also-(CL1)Kitso CL1-come:PRF:DJ

(15b) Kitsoᵢ o tsile le eneᵢ.
      'Kitso too came.'
      lit. 'Kitso came he too.'
      kítsɔ́   **ꜜú-tsílè**   **lí-ɛ̀:nɛ́**
      (CL1)Kitso CL1-come:PRF:DJ also-CL1

(15c) Kitsoᵢ o tsile le eneⱼ.
      'Kitso came with him/her.'
      kítsɔ́   **ú-tsìlé**   **lí-ɛ̀:nɛ́**
      (CL1)Kitso CL1-come:PRF:CJ with-CL1

6. The additive coordination of attributive adjectives

In Tswana, attributive adjectives are obligatorily introduced by an attributive linker (ATTR, also used with relative clauses, expressing class agreement with the head noun). Neither *ATTR1 ADJ1 le ATTR2 ADJ2* nor *ATTR ADJ1 le ADJ2* are possible ways of expressing the additive coordination of adjectives. Two strategies are available:

– if the two adjectives refer to mutually compatible characteristics of the referent of the head, the adjectives are simply juxtaposed, as in (16c); note that the attributive linker is obligatorily repeated;

– if the two adjectives refer to mutually exclusive characteristics of the referent of the head noun, *le* **lí-** is used, as in (17c), but the construction cannot be analyzed as a coordination construction, since the form introduced by *le* **lí-** is not an adjective agreeing with the head noun: it is an abstract noun (characterized by the prefix of class 14) whose function can only be analyzed as that of a comitative adjunct.

(16a) *monna yo moleele*
      'a tall man'
      mù-ńnà **jó**   **mù-léèlé**
      CL1-man CL1.ATTR   CL1-tall

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24. The distinctive property of conjoint verb forms is that they cannot occur in clause-final position, whereas disjoint verb forms can be found both in clause-final and clause-internal position. For more details on the function of the *conjoint* vs. *disjoint* distinction in Tswana, see Creissels (1996). On the role of tone in the expression of this distinction, see Creissels (Forthcoming 2016).

(16b) *monna yo mokima*
'a stout man'
mò-ńnà   jó   mú-kìmà
CL1-man CL1.ATTR CL1-stout

(16c) *monna yo moleele yo mokima*
'a tall stout man'
mò-ńnà   jó   mò-léèlé   jó   mú-kìmà
CL1-man CL1.ATTR CL1-tall   CL1.ATTR CL1-stout

(17a) *kobo e tshweu*
'a white blanket'
kòbɔ̀   é   tsʰwèú
(CL9)blanket   CL9.ATTR (CL9)white

(17b) *kobo e khibidu*
'a red blanket'
kòbɔ̀   é   ꜜkʰíbídú
(CL9)blanket   CL9.ATTR (CL9)red

(17c) *kobo e tshweu le bohibidu*
'a red and white blanket'
lit. 'a white blanket with redness'
kòbɔ̀   é   tsʰwèú   lí-bò-híbídú
(CL9)blanket   CL9.ATTR (CL9)white   with-CL14-red

Interestingly, it is possible to find nouns followed by two adjectives with *le* **lí-** inserted between the two adjectives, but in such a sequence, as shown in (18), *le* **lí-** can only be interpreted as expressing the coordination of two NPs, in which the first coordinand is a noun modified by an attributive adjective, and the second coordinand is a headless NP whose unexpressed head is interpreted as lexically identical to the head of the first coordinand.

(18a) [monna yo moleele] le [– yo mokima]
'a tall man and a stout one'
mò-ńnà   jó   mò-léèlé   ꜜlí-jó   mú-kìmà
CL1-man CL1.ATTR CL1-tall   with-CL1.ATTR CL1-stout

(18b) [kobo e tshweu] le [– e khibidu]
'a white blanket and a red one'
kòbɔ̀   é   tsʰwèú   lí-é   ꜜkʰíbídú
(CL9)blanket   CL9.ATTR (CL9)white   with-CL9.ATTR (CL9)red

7. The additive coordination of clauses

7.1 Introductory remarks

In the general literature on coordination and in descriptions of individual languages, the notion of additive coordination of clauses is sometimes restricted to combinations of clauses consisting of formally independent clauses to which one or more linking elements are added. However, the

definition of coordination quoted at the very beginning of this article does not imply such a restriction. According to this definition, there is no reason to exclude the constructions commonly described as clause chaining constructions from coordination, since in the constructions in question, the fact that all clauses but one (either the first or the last one) are syntactically dependent does not imply a semantic hierarchy.

As already mentioned above, the additive coordination of verbs, VPs, or clauses cannot be expressed in Tswana by means of the same operator *le* **lí-** as the additive coordination of NPs. [25] Tswana sentences equivalent to English sentences involving *and*-coordination of two verbs, VPs, or clauses obligatorily consist of two clauses, with three possibilities: the two clauses may be simply juxtaposed, they may be linked by a coordinator, or their relationship may be marked by the use of special verb forms in the second clause.

7.2 Interclausal linkers expressing additive coordination

The additive coordination of clauses can be expressed by means of *e bile* **íbìlé**, whose precise meaning can be rendered as 'and in addition to that'. Ex. (19) illustrates the complementary distribution between *le* **lí-**, used to coordinate NPs but not clauses, and *e bile* **íbìlé**, used to coordinate clauses, but not NPs.

(19a)   *Ke bua Setswana e bile ke a se kwala.*
     'I speak Tswana and in addition I write it.'
     kì-búá　　　　**sì-tsʷáná**　　**íbìlé**　　　　　**kí-à-sí-kʷâːlà**
     1SG-speak:PRS:CJ CL7-Tswana　and_in_addition　1SG-DJ-CL7-write:PRS

(19b)   **Ke bua Setswana le ke a se kwala.*

(19c)   Ke rekile diaparo e bile ke rekile ditlhako.
     'I bought clothes and in addition I bought shoes'
     kì-rékílé　　　**dí-àpàrɔ̀**　　**íbìlé**　　　　　**kì-rékílé**
     1SG-buy:PRF:CJ　CL8/10-cloth　and_in_addition　1SG-buy:PRF:CJ
     dí-tɬʰàːkó
     CL8/10-shoe

(19d)   **Ke rekile diaparo e bile ditlhako.*

Etymologically, *e bile* **íbìlé** can be glossed as 'this having been'. It is cognate with an auxiliary whose original meaning can be reconstructed as 'be'.

Tswana has another interclausal linker frequently used as the equivalent of English *and*: *mme* **m̀mí**, but contrary to *e bile* **íbìlé**, which is

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25. As already commented in Section 4.3, *le* **lí-** can coordinate infinitives or complement clauses introduced by *gore* **χòrì** 'that', but this is consistent with the hybrid nature of infinitives (which include the noun prefix of class 15/17 *go* **χʊ̀-** and can occupy typically nominal syntactic positions in which they govern class 15/17 agreement), and with the fact that, etymologically, the complementizer *gore* **χòrì** 'that' is the infinitive of 'say'.

incompatible with an adversative reading, *mme* m̀mɪ́ blurs the distinction between additive and adversative coordination. As illustrated by Ex. (20), *mme* m̀mɪ́ can be found in contexts in which it unambiguously corresponds to English *and*, but also in contexts in which an adversative reading is more natural, and these two possible uses of *mme* m̀mɪ́ are equally common in spontaneous texts.

(20a) *Koloi e thudile tonki mme go na le yo o golafetseng.*
　　　'The car collided with a donkey and there is an injured person.'

kólóí	ꜜí-tʰúdílé	ꜜtɔ́ŋ́kí
(CL9)car	CL9-collide:PRF:CJ	(CL9)donkey

m̀mɪ́	χʊ́-nà	lí-jó	ꜜʊ́-χɔ́láfétsɛ̀:-ŋ́
and/but	CL17-be	with-CL1.ATTR	CL1-be_injured:PRF-REL

(20b) *Ke rata mosetsana yo, mme o a nkgana.*
　　　'I love this girl but she does not like me.'

kì-rátá	mò-sítsánà	jó	m̀mɪ́	ʊ́-à-ŋ́-qʰâ:nà.
1SG-love:PRS:CJ	CL1-girl	CL1.DEM	and/but	CL17-DJ-1SG-refuse:PRS

It is absolutely impossible to reduce the clause sequences in which *e bile* íbʲ̀lé or *mme* m̀mɪ́ are involved, whatever elements the clauses in such sequences may have in common. This property sharply distinguishes *e bile* íbʲ̀lé and *mme* m̀mɪ́ from the linkers used for the additive coordination of clauses in European languages.

7.3 Dependent verb forms expressing the additive coordination of clauses

In Tswana, the use of special verb forms is another possible strategy to encode interclausal relationships comparable to those expressed by additive coordinators in other languages: [26]

　– clause sequences in which the first clause is the only one headed by an independent verb form, and the following ones include *sequential* verb forms, as in (21c), are a common strategy to describe successive events without further specifying their relationships;

　– biclausal constructions in which the second clause is headed by a *circumstantial* verb form, as in (21d), are a common strategy to describe simultaneous events without further specifying their relationships. [27]

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26. For a detailed description of the morphological distinction between independent indicative verb forms, sequential verb forms, and circumstantial verb forms in Tswana, see Creissels & al. (1997).

27. I use the label 'circumstantial verb forms' for dependent verb forms that are typically used in adverbial subordination, but show no morphological evidence of non-finiteness (they combine with subjects, express agreement with their subject and inflect for TAM exactly like independent verb forms). In the South-African Bantu grammars that follow the terminological tradition initiated by Doke, they are called 'participles', but this term is misleading, since in the traditional grammars of European languages, participles are non-finite forms typically used as noun modifiers, whereas the circumstantial forms of Tswana verbs have subjects exactly like independent verb forms, and by themselves (i.e. in the absence of additional morphological material) cannot be used as noun modifiers, but only as temporal adjuncts.

(21a) *Lorato o tlaa opela.*
       'Lorato will sing.'
       lòrátɔ́   **ꜜʊ́-tɬáà-ɔ́pê:là**
       (CL1)Lorato   CL1-FUT-sing:DJ

(21b) *Kitso o tlaa letsa katara.*
       'Kitso will play the guitar.'
       kítsɔ́   **ꜜʊ́-tɬáá-l̀ltsà**   **kàtâːrà**
       (CL1)Kitso   CL1-FUT-play:CJ   (CL9)guitar

(21c) *Lorato o tlaa opela Kitso a letse katara.*
       'Lorato will sing, and then Kitso will play the guitar.'
       lò-rátɔ́   **ꜜʊ́-tɬáà-ɔ́pélá**   **ꜜkítsɔ́**   **á-l̀ltsí**   **kàtâːrà**
       (CL1)Lorato   CL1-FUT-sing:DJ (CL1)Kitso CL1-play:SEQ:CJ (CL9)guitar

(In the second clause, the future form *o tlaa letsa* **ʊ́-tɬáá-l̀ltsà** is replaced by
the sequential form *a letse* **á-l̀ltsí**.)

(21d) *Lorato o tlaa opela Kitso a letsa katara.*
       'Lorato will sing, and at the same time Kitso will play the guitar.'
       lò-rátɔ́   **ꜜʊ́-tɬáà-ɔ́pélá**   **ꜜkítsɔ́**   **ꜜá-lítsá**   **kàtâːrà**
       (CL1)Lorato   CL1-FUT-sing:DJ (CL1)Kitso   CL1-play:CIRC (CL9)guitar

(In the second clause, the future form *o tlaa letsa* **ʊ́-tɬáá-l̀ltsà** is replaced by
the circumstantial form *a letsa* **á-lítsá**.)

Here again, as illustrated by Ex. (22), whatever elements the clauses
involved in such constructions may have in common, the Tswana cons-
tructions lend themselves to no mechanism of ellipsis, contrary to the
corresponding constructions in European languages.[28]

(22)   *Kitso o nwa mofine Mpho aa nwa biri.*
       'Kitso is drinking wine, and Mpho, beer.'
       lit. 'Kitso drinks wine Mpho drinking beer.'
       kítsɔ́   **ꜜʊ́-nʷá**   **mò-fíné**   **m̀pʰɔ́**
       (CL1)Kitso   CL1-drink:PRS:CJ   CL3-wine   (CL1)Mpho
       áà-nʷá   **ꜜbîːrì**
       CL1-drink:CIRC   (CL9)beer

8. Inclusory additive coordination

In Tswana, when the coordinands are individual names, the construction
expressing the additive coordination of nouns *NP1 le NP2* has the two
optional variants *bo-NP1 le NP2* and *ba/tsa ga NP1 le NP2*.

8.1 The *bo-NP1 le NP2* construction

In the first variant of the additive coordination construction *NP1 le NP2*,
illustrated in (23c), *bo-* **bó-** is the prefix designated as the prefix of class

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28. To the best of my knowledge, disjunctive coordination is in Tswana the only type of construction
in which the same linkers (*kgotsa* **qʰòtsà**, *kana* **kànà**) can operate at NP level and at clause level,
making it possible to analyze the disjunctive coordination of NPs as originating from the disjunctive
coordination of clauses via ellipsis.

2a in the Bantuist tradition: it is used as a plural prefix for the nouns that govern class 1 agreement but show no overt prefix – Ex. (23a), including proper names of persons, in combination with which this prefix expresses associative plural – Ex. (23b). Noun forms including this prefix govern class 2 agreement exactly like those including the regular class 2 prefix *ba-* **bà-.**

(23a) *phiri* / *bophiri*
    'a hyena'   'hyenas'
    pʰírí / **bó-pʰírí**
    (CL1)hyena   CL2a-hyena

(23b) *boKitso*
    'Kitso and his companion(s)'
    bó-kítsɔ́
    CL2a-Kitso

(23c) *boKitso le Mpho*
    'Kitso and Mpho'
    bó-kítsɔ́   **lí-m̀pʰɔ́**
    CL2a-Kitso   with-(CL1)Mpho

'Kitso and Mpho' is not the only possible interpretation of (23c). Given that *boKitso* alone is interpreted as 'Kitso and its companions', another possible reading of (23c) is 'Kitso and its companions, plus Mpho'. But in addition to this compositional meaning, (23c) has a non-compositional interpretation in which the plural marker *bo-* **bó-** seems to make no contribution to the meaning of the construction.

A question that arises at this point is whether *bo-NP1 le NP2* in its non-compositional reading is absolutely equivalent to the ordinary additive coordination construction *NP1 le NP2*. An obvious observation is that *bo-NP1 le NP2* is not very frequent in texts, and presumably implies some degree of emphasis. Apart from that, no hypothesis about a possible semantic contrast emerges from my observations on texts or from the comments of my consultants.

8.2 The *ba ga NP1 le NP2* construction

In the *ba ga NP1 le NP2* variant of the additive coordination of individual names, the first coordinand combines with a sequence of two prefixes (written in Tswana orthography as if they were distinct words).

The first prefix *ba* **bá-** is the genitival linker of class 2. This prefix basically expresses agreement of the genitival modifier to which it attaches with a head noun of class 2, but it can also be used by itself to express 'the people of ...', as in *ba kgosi* **bá-qʰósí** 'the king's people' (servants, warriors, etc.).[29]

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29. Note that its H tone distinguishes the genitival linker of class 2 **bá-** from the nominal prefix of class 2 **bà-.**

The second prefix *ga* χ**á-** (whose tone becomes L when it is preceded by another H-toned prefix)[30] is the genitival linker of class 17. This means that *ga* χ**á-** basically expresses agreement of a genitival modifier with a head noun of class 17, but can also be used by itself to express 'the place of ...', as in *ga Kitso* χ**á-kítsɔ́** 'at Kitso's'.

Ex. (24) illustrates this variant of the additive coordination of two individual names.

(24)   *ba ga Kitso le Mpho*
        'Kitso and Mpho'
        lit. 'the people of Kitso's place with Mpho'
        bá-χà-kítsɔ́   **lí-m̀pʰɔ́**
        CL1.GEN-CL17.GEN-(CL1)Kitso   with-(CL1)Mpho

Here again, the construction is in fact ambiguous. Since *ba ga Kitso* alone means 'the people of Kitso's place', (24) can be interpreted compositionally as 'the people of Kitso's place, plus Mpho'. But in addition to this compositional reading, it also has a non-compositional reading in which, according to my consultants, it is interchangeable with (23c).

8.3 The *tsa ga NP1 le NP2* construction

In traditional tales in which names of animals are used as individual names for protagonists that have an ambiguous status between humans and animals, the same construction occurs with the genitival linker of class 8/10 *tsa* **tsá-** instead of that of class 2. The genitival linker of class 8/10 basically expresses agreement with a head noun of class 8/10, but can also be used by itself to express 'the things/animals of ...' – Ex. (25).

(25)   *tsa ga Podi le Lengau*
        'Goat and Cheetah'
        lit. 'the things/animals of Goat's place with Cheetah'
        tsá-χà-púdí   **ꜝlí-lí-ŋáù**
        CL8/10.GEN-CL17.GEN-(CL9)goat   with-(CL5)cheetah

Here again, a compositional reading 'the things/animals of Goat's place, plus Cheetah' is also possible.

8.4 The *bo-NP1 le NP2* and *ba/tsa ga NP1 le NP2* constructions as inclusory additive coordination constructions

In their non-compositional reading, the constructions illustrated by Ex. (23c), (24), and (25) are instances of *inclusory additive coordination*, i.e. of *N1 & N2* constructions in which the first coordinand *N1* expresses a meaning that can be glossed as 'a plural individual with a given entity

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30. In the tonal morphology of Tswana, inherently H-toned prefixes, when preceded by other H-toned prefixes, may have L-toned variants analyzable in terms of H-tone domain retraction motivated by a non-adjacency constraint between H-tone domains. For example, the class 2a prefix *bo-* **bó-** loses its H tone when immediately preceded by *le* **lí-** 'with'. Additional examples concerning verbal prefixes can be found in Creissels (Forthcoming 2016).

(*Kitso*, *Podi*) as one of its individual parts', and the second coordinand *N2* restricts this potential denotation by making explicit the individual part(s) of the referent of *N1 & N2* not mentioned explicitly in the first coordinand (*Mpho*, *Lengau*).

Cross-linguistically, inclusory additive coordination is not rare. Constructions of this type can be found among others in Russian (for example *my s toboj* lit. 'we with you' > 'you and me') and in some French varieties (for example *nous deux ma sœur* lit. 'we two my sister' > 'my sister and I'). [31] However, all the examples of inclusory additive coordination I have been able to find in the literature include a pronoun as the first coordinand, and the use of pronouns is posited as a general property of inclusory additive coordination in the definition put forward by Bhat (2004: 89-90):

> There is a construction called 'inclusory conjunction', occurring in several languages, that involves either (i) the conjunction of a personal pronoun with another nominal (in the form of a noun phrase) or (ii) the use of a personal pronoun along with a comitative argument, with the two occurring in different phrases… There are several languages that require the personal pronouns occurring in constructions of the type (1a) [*I and John went to the market*] and (1b) [*I went to the market with John*] to be used in their 'dual' or 'plural' form, in spite of the fact that they do not by themselves express a dual or plural meaning. That is, the languages appear to indicate the number of the whole phrase through those pronouns rather than the number of their own referent(s).

Ex. (23c), (24), and (25) show that Tswana illustrates an apparently rare variety of inclusory additive coordination, that has so far passed unnoticed in general discussions of coordination,[32] and necessitates broadening the definitions of inclusory coordination found in the literature. In this subtype of inclusory additive coordination, the first coordinand is either the associative plural of an individual name, or a form that transparently means 'the people of X's place'.

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31. Interestingly, the Khoisan languages of Southern Africa, which are not genetically related to Tswana but are spoken in the same area, are among the languages in which inclusory coordination is common (Tom Güldemann, p.c.).

32. The only languages with this particular type of inclusory additive coordination I am aware of are Margi (Chadic), Alaskan Eskimo Yu'pik, and Koalib (Kordofanian). The first two are mentioned in Moravcsik's article on associative plural (Moravcsik 2003: 494-495). I am grateful to Nicolas Quint for calling my attention to the case of Koalib and providing the following example :

Kwókkò-ŋá   Kwómmè-k-ê

Kwókkò-APL   Kwómmè-CL-COM

lit. 'Kwókkò_and_others with Kwómmè', but commonly used for 'Kwókkò and Kwómmè'.

9. Additive coordination of NPs and associative plural

9.1 Introductory remarks

Creissels (1991: 157) mentions observations on Sara languages (Central Sudanic, Nilo-Saharan) and Basque suggesting the possibility that plural markers result from the grammaticalization of additive coordinators, and this question is addressed again in Creissels (2015). Tswana illustrates another possible type of interference between additive coordination and plural marking. Moreover, as developed in this section, the inclusory additive coordination constructions presented in Section 8 provide evidence for a possible etymology of the nominal prefix of class 2a – a question that has puzzled generations of Bantuists. However, before developing the hypothesis I am putting forward, I must refute the objections raised by one of the two LLA reviewers against very basic aspects of my analysis of the Tswana nominal prefix of class 2a *bo* **bó-**.

9.2 The nominal prefix of class 2a *bo-* bó-: answer to a reviewer

One of the two LLA reviewers makes suggestions about the analysis of the Tswana nominal prefix of class 2a *bo* **bó-** that are in total contradiction with my data on the phonological and morphological properties of this morpheme. I have no idea of where the data evoked by this reviewer may come from, but their suggestions most probably rely on confusions that I will try to correct in this section.

The situation is certainly different in some other Bantu languages, [33] but in Tswana, at least in the two varieties for which I have detailed and precise phonetic data coming from my own field work (Ngwaketse and Ngwato), *bo* **bó-** is unquestionably a prefix. There is absolutely nothing that could suggest analyzing it as less tightly bound to the noun stem than the other class prefixes of nouns: it cannot be followed by a downstep, and its H tone can spread to two successive syllables, which means that the tonal properties of the boundary between *bo* **bó-** and the noun stem are typically those of a boundary between two formatives of the same word (Creissels & al. 1997: 20-23).

Moreover, the reviewer's remark that "the vowel quality and the high tone of the prefix *bo* patterns with properties seen in other proclitics and in locative prefixes *mo-* and *go-* which take a prefixed noun as a complement" makes no sense, and just reveals very serious confusions.

Synchronically, Tswana does not have the locative prefix of class 18 *mo-* **mʊ̀-**, but only frozen vestiges thereof. Tswana does have the locative prefix of class 17 *go-* **χʊ̀-** (as in **χʊ̀-lɔ̀** 'place'), but like all the other class

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33. In particular, the parallelism suggested by this reviewer with the locative prefixes of Shona has no value, since Shona has the locative system typical for Central Bantu languages, whereas Tswana is among the Southern Bantu languages whose locative system has been radically reorganized, as briefly explained in Section 3.3 above – for more details, see Creissels (2011).

prefixes of nouns that are obvious reflexes of Proto-Bantu noun prefixes, it has the low tone and the vowel **ʊ** expected from the regular correspondences between Proto-Bantu and Tswana. Moreover, the locative prefix *go-* **χʊ̀-** does not "take a prefixed noun as a complement", but directly attaches to the noun stem, like all class prefixes.

In fact, rather than the locative class prefixes *mo* **mʊ̀-** and *go* **χʊ̀-**, the reviewer probably has in mind *fa* **fá**, *ko* **kó**, and *mo* **mó**. However, synchronically, as demonstrated in Creissels (2011), *fa* **fá**, *ko* **kó**, and *mo* **mó** are prepositions completely devoid of the properties that could justify analyzing them as prefixes, and they have no possible involvement in class agreement. The tonal processes operating at their boundary with the noun that follows them are typically those operating at the junction between words (they can be followed by a downstep, and their H tone cannot spread to more than one syllable). Diachronically, they are not the reflexes of Proto-Bantu prefixes, but former demonstratives of locative classes that have grammaticalized as prepositions.

There is also a possible confusion with the locative marker *go-* **χʊ́-**, which marks locative phrases in complementarity with the locative suffix *-ng* **-ŋ̀** (and like *-ng* **-ŋ̀**, is not involved in class agreement). Like *bo* **bó-** (and contrary to *fa* **fá**, *ko* **kó**, and *mo* **mó**), *go-* **χʊ́-** has the tonal properties typical for affixes, and it has a H tone, but its vowel is different, and it probably originates from the grammaticalization of a dependent form of the copula – Grégoire (1975).

Suggestions relying on such confusions cannot have any value, and I will not consider them in the analysis that follows.

9.3 Inclusory additive coordination and the origin of the nominal prefix of class 2a *bo-* bó-

It is widely acknowledged that it is not possible to reconstruct a class 2a marker in Proto-Bantu, and the question of the possible origins of the class 2a markers found across Bantu languages remains an unsolved problem.

Van de Velde (2006) tackles the question of the origin of the marker commonly designated as class 2a prefix with reference to Eton (A71). The analysis I propose here, although different, does not contradict Van de Velde's analysis. The point is that there are important differences between the Eton and Tswana data. In particular, in Eton, the class 2a marker is not a prefix, whereas in Tswana, as mentioned in Section 9.2, its behavior as concerns the tone sandhi rules is unambiguously that of a prefix. Consequently, it seems reasonable to posit that the class 2a prefixes found across the Bantu family do not result from a grammaticalization path shared by all Bantu languages, but rather from different grammaticalization paths whose only common point is that their input included some marker or pronoun belonging to class 2.

The analysis put forward in the remainder of this section implies absolutely no claim about the possible extension of the etymology I propose for the Tswana prefix of class 2a to a greater or lesser proportion of Bantu languages.

The only obvious thing about the Tswana prefix of class 2a *bo-* **bó-** (and the same can be said about the class 2a markers of many other Bantu languages) is that it cannot be the reflex of a reconstructed Bantu prefix. Its high tone is not normal, and its vowel is problematic too, since no Proto-Bantu vowel has [**o**] as its regular reflex in Tswana.[34] As discussed in Creissels (2005), in present-day Tswana, /o/ is a phoneme distinct from both /ʊ/ and /ɔ/, and /e/ is a phoneme distinct from both /ɪ/ and /ɛ/, but the vowels [**o**] and [**e**] emerged in the history of Tswana as the result of various processes, and cannot be straightforwardly identified as the reflexes of Proto-Bantu vowels in certain contexts.

However, the fact that the Tswana prefix of class 2a *bo-* **bó-** occurs in one of the two variants of inclusory additive coordination, the other variant being etymologically transparent, suggests a possible grammaticalization scenario.

The hypothesis I propose to explore is that both variants of inclusory additive coordination in Tswana have 'the people at X's place with Y' as their etymology, and consequently, the original meaning of the class 2a prefix is 'the people at X's place'. Semantically, there is no difficulty in imagining a grammaticalization path by which an expression whose original meaning was 'the people at X's place' grammaticalized first as an associative plural marker with individual names and kinship terms, and the use of the associative plural marker was subsequently extended to other nouns as a plain plural marker.

According to this hypothesis, in the *ba ga X le Y* variant of the inclusory additive coordination construction, the element carrying the meaning 'the people of' and the locative element have remained distinct and can be identified without any problem, whereas in the *bo-X le Y* variant, they have fused into a synchronically unanalyzable morpheme. And precisely, it is not difficult to find a locative marker whose fusion with the genitival linker of class 2 *ba* **bá-** may have given the class 2a prefix *bo-* **bó-**. Tswana has a locative prefix *go* **χʊ́-** used in particular with individual names. The forms resulting from the prefixation of the genitival linker of class 17 *ga* **χá-** and of the locative marker *go* **χʊ́-** to individual names are not entirely synonymous, but both of them basically encode that the person referred to fulfills the function of ground in a

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34. In the remainder of this section, square brackets are systematically used in order to emphasize that **e** and **o** must not be understood with their value in the current orthography of Tswana, but with their precise IPA value [**e**] (not [ɪ] or [ɛ]) and [**o**] (not [ʊ] or [ɔ]). Slashes are used when it is important to emphasize their phonemic status. This precision is crucial for a proper evaluation of the hypothesis I am putting forward.

spatial relationship with another entity in the role of figure.

Consequently, there is no difficulty (either from the phonetic or semantic point of view) in imagining that the prefix of class 2a *bo-* **bó-**, still used with individual names as an associative plural marker, may have resulted from the contraction of a sequence *ba go **bá-χó-** (genitival linker of class 2 + locative marker) whose etymological meaning ('the persons at X's place') was not very different from that of the sequence *ba ga* **bá-χà-**, which in present-day Tswana is interchangeable with *bo* **bó-** in inclusory additive coordination.

Table 1. Tswana demonstratives (classes other than 1 and 15/17)

	DEM
class 2	**[ba]**
class 3	**[o]**
class 4	**[e]**
class 5	**[le]**
class 6	**[a]**
class 7	**[le]**
class 8/10	**[tse]**
class 9	**[e]**
class 11	**[lo]**
class 14	**[dʒo]**

This analysis is further supported by the fact that, in Tswana historical phonology, the contraction of originally dissyllabic sequences is a major source of [**o**] and [**e**]. For example, Tswana demonstratives in their simplest form are monosyllabic. However, they result from the fusion of a class prefix with another formative, and with the exception of classes 1 and 15/17, which are problematic in several respects, [35] they can be straightforwardly described as having a vowel [**a**], [**e**], or [**o**], depending on the vowel normally found in the prefixes characteristic of each class (see Table 1): in the classes which in other contexts are expressed by prefixes including an [**a**], the vowel of the demonstrative is [**a**], it is [**e**] in

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35. The demonstrative of class 1 *yo* [**jó**] shows an initial [**j**] that has no obvious explanation. The variants of the demonstrative of class 15/17, namely *fa* [**fá**], *ko* ~ *kwa* [**kó** ~ **kwá**], and *mo* [**mó**] are vestiges of the former distinction between three distinct locative classes, which has been lost in Tswana – see Creissels (2011).

the classes normally expressed by prefixes including an [ɩ] or an [i], and finally, it is [o] in the classes whose prefixes normally include an [ʊ].

The reasonable hypothesis is therefore that, in the demonstratives, [e] and [o] resulted from the contraction of sequences that initially included a close vowel and an [a], which makes very plausible the explanation proposed above about the origin of the nominal prefix of class 2a.

10. Conclusion

In this paper, I have tried to show how the additive coordination constructions found in Tswana can contribute to a general typology of coordination. Tswana has a strict distinction between the additive coordination of NPs, attributive adjectives, and clauses, but uses the same proclitic *le* **lɩ-** as an additive coordinator for NPs ('and'), as an additive particle ('also'), and as a comitative marker ('with'). None of the constructions expressing additive coordination in Tswana lends itself to mechanisms of ellipsis comparable to those found in European languages. Inclusory additive coordination is of particular interest, since Tswana has a cross-linguistically rare type of inclusory additive coordination, with the associative plural form of an individual name as the first coordinand. Moreover, the comparison of the two variants of inclusory additive coordination suggests that the nominal prefix of class 2a *bo-* **bó-**, used in particular with individual names as an associative plural marker, may result from the contraction of the sequence **ba go* **bá-χʊ́-** (genitival linker of class 2 + locative marker).

Abbreviations

APL: associative plural, APPL: applicative, ATTR: attributive linker, CAUS: causative, CIRC: circumstantial, CJ: conjoint, CL: noun class, COM: comitative, CPL: completive, D: definite, DEM: demonstrative, DIST: distal, DJ: disjoint, FUT: future, GEN: genitive, INF: infinitive, LOC: locative, PL: plural, PRF: perfect, PRS: present, RECIP: reciprocal, REL: relative, SEQ: sequential, SG: singular.

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