

COMPARISON IN BAMBARA: AN INFINITIVAL VERB PHRASE\*

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An infinitival verb phrase is generated to express comparison in Bambara. In particular, the comparative verb phrase has the structure: INFINITIVE MARKER + INTRANSITIVE VERB + NP + POSTPOSITION. The structural constraints on the comparative verb phrase are not specific to comparison, but are the more general constraints resulting from concatenating verb phrases. However, a special structural and pragmatic relation is established between the head clause and the comparative infinitival verb phrase. This relation has consequences for the structure of the NP in the comparative phrase and for deletion of lexical items within the comparative phrase. In this respect, the comparative infinitival phrase behaves differently from non-comparative infinitival verb phrases.

1. Introduction

To express comparison in English, a specific syntactic structure is generated. (1) and (2) are examples of the comparative construction in English.

- (1) Betty is taller than Kent [is tall].
- (2) Paul has more cats than [he has] dogs.

In general, every comparative construction in English consists of a head clause, a COMP that marks the comparative clause, and a comparative clause (see Greenberg [1963]; Andersen [1982]; Pinkham [1982]; Bresnan [1972, 1973,

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1975, 1977]; Chomsky [1977]; Napoli [1983] for more complete discussions of English comparatives). The head clause of the comparative construction precedes the COMP (*than, as*). The comparative clause follows the COMP and must lexically contrast in some way with the head. Thus, the comparative clause contains some lexical items that are non-identical with some lexical items in the head, as well as lexical items that are identical with the head (as indicated by the brackets in (1) and (2)). The non-identical lexical items are the focus of the comparison.

Expressing a comparison in Bambara, a dialect of Mande, a Niger-Congo language, is not unlike that of many other African languages, e.g. Yoruba, Ewe, Shona, Igbo, among others, in which a verb with the general interpretation of 'surpass' is used (cf. Welmers [1974]). More specifically, the verb phrase generated to express comparison in Bambara is syntactically similar to other infinitival verb phrases in this language. Consequently, the structural constraints on the comparative expression are not specific to comparison, but are the more general constraints resulting from concatenating verb phrases. The following description of Bambara comparatives shows that the comparative infinitival verb phrase is constrained by these general structural properties. However, in some kinds of comparisons, the comparative verb phrase does behave differently from other infinitival phrases, arising from its unique purpose of expressing a comparison.

## 2. General Properties of Infinitival Verb Phrases

Infinitival verb phrases can be either intransitive or transitive, regardless of the head verb phrase. The infinitival phrase that expresses comparison in Bambara is structurally similar to other intransitive infinitival phrases. For example, compare the following:

- (3) Fanta ka òòn kà tèmèn Umu kàn<sup>1</sup> 'Fanta is bigger than Umu is'  
 Fanta is big and surpass Umu over

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<sup>1</sup>Bambara words are either high or low in tone. In the present paper, low toned words are marked with a grave accent ( ` ). High toned words are not marked. In addition, the definite article is represented by a low tone follow-

- (4) Musa bε wuli kà taa sugu` la  
 Musa PRES get up and goes market to  
 'Musa gets up and goes to the market'

In (3), the infinitival verb phrase is kà tèmèn Umu kàn and expresses comparison. In (4), the infinitival verb phrase is kà taa sugu` la, but it does not express comparison. Nonetheless, the structure of both infinitival phrases is INFINITIVE MARKER + INTRANSITIVE VERB + NP + POSTPOSITION.

The structure is only slightly different for infinitival verb phrases having transitive verbs. In (5), the infinitival verb phrase kà kini sà̀n sugu` la has the structure INFINITIVE MARKER + NP + TRANSITIVE VERB + NP + POSTPOSITION.

- (5) Musa bε sà̀gàw fèerè kà kini sà̀n sugu` la  
 Musa PRES sheep sell and rice buy market at  
 'Musa sells sheep and buys rice at the market'

Two fundamental points demonstrate that the comparative infinitival verb phrase is structurally similar to other infinitival phrases. These points refer to (1) the tense and (2) the (non-)negation of infinitival verb phrases.

The head verb phrase in a given series of verb phrases is assigned tense and thereby governs the tense of all coordinate verb phrases. The infinitival marker kà is not inflected for either present or past tense in (6) or (7), respectively.

- (6) Musa bε dɔ̀gɔ̀ tìgè k' à fèerè Ali la  
 Musa PRES wood cut and it sell Ali to  
 'Musa cuts firewood and sells it to Ali'
- (7) Musa ye dɔ̀gɔ̀ tìgè k' à fèerè Ali la  
 Musa PAST wood cut and it sell Ali to  
 'Musa cut firewood and sold it to Ali'

The same is also true for the infinitival verb phrase that expresses comparison, namely, kà tèmèn Y kàn. The head verb phrase governs the tense of the whole

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ing a specific noun and any modifiers. The plural marker -w also takes the definite low tone if the preceding noun is specific.

comparison.

- (8) Musa bɛ dɔɔgɔ` tìgè kà tɛ̀mèn Ali kàn  
 Musa PRES wood cut and surpass Ali over  
 'Musa cuts more firewood than Ali does'
- (9) Musa ye dɔɔgɔ` tìgè kà tɛ̀mèn. Ali kàn  
 Musa PAST wood cut and surpass Ali over  
 'Musa cut more firewood than Ali did'

A second point demonstrating the structural similarity between the comparative infinitival phrase and other infinitival phrases involves negation. The head verb phrase also governs the scope of negation for all coordinate verb phrases. Compare the meanings between the (a) and (b) examples in the following non-comparative sentences.

- (10) a. Musa ma sàgàw` fèerè kà baw` sà.  
 Musa PAST-NEG sheep sell and goats buy  
 'Musa did not sell sheep and [did not] buy goats'
- b. Musa ye sàgàw` fèerè nkà à ma baw` sà  
 Musa PAST-AFF sheep sell but he PAST-NEG goats buy  
 'Musa sold sheep but he did not buy goats'
- (11) a. Fanta tɛ wuli kà taa sugu` la  
 Fanta PRES-NEG get up and go market to  
 'Fanta does not get up and [does not] go to the market'
- b. Fanta bɛ wuli nkà à tɛ taa sugu` la  
 Fanta PRES-AFF get up but she PRES-NEG go market to  
 'Fanta gets up but she does not go to the market'

In the (a) examples, the scope of negation is the whole sentence. Thus, when the head verb is negated, all verb phrases in the sentence are interpreted as negated. If only the infinitival verb phrase is negated, as in the (b) examples, the result is no longer a series of verb phrases but rather a series of sentences. In this case, the subject of the second sentence is phonetically realized as the pronominal form of the subject of the head sentence and the tense marker is negated in the second sentence. The contrastive sentences are

conjoined by the coordinate conjunction *nkà* 'but'.

Examples (12a-b) show the comparative verb phrase. Essentially, the same principles apply to *kà tèmèn*. Again, (12b) shows that negation of only the infinitival comparative phrase results in a series of sentences rather than a series of verb phrases.

- (12) a. Musa tɛ sàgàw fèerè kà tèmèn Ali kàn.  
 Musa not sheep sell and surpass Ali over  
 'Musa does not sell more sheep than Ali'
- b. Musa bɛ sàgàw fèerè nkà à tɛ tèmèn Ali kàn  
 Musa PRES sheep sell but he not surpass Ali over  
 'Musa sells sheep but he does not surpass Ali'

Infinitival verb phrases, whether or not they express comparison, cannot be negated if their head verb phrase is in the affirmative.

### 3. Structure of the Comparative Infinitival Verb Phrase

The comparative verb phrase in Bambara, then, is not a unique structure generated to express comparison. Rather, it is an infinitival verb phrase with many structural properties similar to other infinitival phrases. The "comparative" verb phrase in Bambara contains the infinitival verb form *kà tèmèn* 'and surpass' and a postpositional phrase *Y kàn* 'Y over'.<sup>2</sup> *Y* represents the lexical item in the *kà tèmèn Y kàn* verb phrase that is compared to some lexical item, *X*, in the head clause. Thus, *X* and *Y* are the focus of the comparison.

<sup>2</sup>It is also possible to express a comparison with the complex postpositional phrase *nì Y ye*, which can loosely be translated as 'in-relation-to' [Bird and Kante 1976; Bird et al. 1977]. For example,

- (i) Fanta ka jàn (nì) Umu ye 'Fanta is taller than Umu'  
 Fanta is tall (and) Umu in-relation-to

Although the postpositional phrase can often be used interchangeably with the infinitival verb phrase to express comparison, a subtle semantic difference may exist for some Bambara speakers. The postpositional phrase may specify that the comparison is less obvious, whereas the infinitival phrase may specify that the comparison is more observable. In the present study of comparison, only the infinitival verb phrase will be discussed.

- (13) Fanta be kini` sà̀n kà tèmèn nyò` kàn  
 Fanta PRES rice buy and surpass millet over  
 'Fanta buys more rice than millet'
- (14) Musa ka jàn kà tèmèn Ali kàn.  
 Musa is tall and surpass Ali over  
 'Musa is taller than Ali is'

In both sentences, the comparative verb phrase consists of the infinitive marker *kà* and the verb *tèmèn* 'surpass', the object of comparison, and the postposition *kàn* 'over'.<sup>3</sup> In (13), *nyò* 'millet' is the lexical item in the comparative verb phrase that is being compared to *kini* 'rice' in the head clause. In (14), *Ali* is the lexical item in the comparative verb phrase that is being compared to *Musa* in the head clause.

As is already obvious, the structure of the comparative verb phrase allows for only NPs to be compared. That is, for some X in the head clause and some Y in the *kà tèmèn Y kàn* comparative verb phrase, X and Y must be NPs. Structurally, Y must be an NP because it is the object of the postposition *kàn* 'over'. Observe in the following examples that verbs and adjectives that express physical sensations are nominalized.

- (15) Umu ka bòlì` ka tɛlin kà tèmèn panni` kàn  
 Umu her running is fast and surpass trotting over  
 'Umu runs faster than she jogs'
- (16) sùnògò` be Umu la kà tèmèn kongo` kàn  
 sleep is Umu on and surpass hunger over  
 'Umu is more sleepy than hungry'

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<sup>3</sup>There is some disagreement as to whether the head verb phrase in (14) is a verbal construction, as I have described it, or whether it is a non-verbal construction [Charles Bird, personal communication]. If it is a non-verbal construction, then the infinitival verb phrase that expresses comparison is conjoined to either a verb phrase, as in (13), or to an adjective phrase, as in (14). According to the non-verbal argument, the comparative infinitival verb phrase is peculiar because all other infinitival verb phrases are conjoined only to verb phrases. Nonetheless, the similarities between the syntactic structure of the comparative and the non-comparative infinitival verb phrases remain.

3.1. The structure of the compared NP. The Y, or object of comparison in the *kà tèmèn Y kàn* comparative verb phrase, can be either a non-possessive NP, as has been illustrated in the previous examples, or it can be a possessive NP whose structure expresses possession. The use of the non-possessive versus the possessive NP is dependent upon whether the head clause expresses possession. Thus, the structure of the head clause determines the structure of the NP in the comparative verb phrase.

Possessive NPs are illustrated in (17) and (18). The sentences in (17) may be referred to as "locative-possessive comparisons" and those in (18) as "possessor-possessed comparisons". In the head clause of (17), *bɛ...fɛ̀* is a locative construction expressing possession. In this construction, *bɛ* denotes existence, location, or state. The postposition *fɛ̀* acts relationally to locate objects and, in the possessive sense, can be translated as 'with'. The possessive comparisons in (18) are termed "possessor-possessed" because the head noun phrase has the structure NOUN + POSSESSIVE MARKER + NOUN, where *ka* is the possessive marker.<sup>4</sup> Thus, possession can be expressed in the head clause by either a noun phrase or a locative construction.

(17) Locative-Possessive Comparisons:

- a. *bàw caman bɛ Ali fɛ̀ kà tèmèn Musa ka sàgàw kàn*  
 goats many are Ali with and surpass Musa his sheep over  
 'Ali has more goats than Musa has sheep'
- b. *bàw caman bɛ Ali fɛ̀ kà tèmèn Musa tàw kàn*  
 goats many are Ali with and surpass Musa his (goats) over  
 'Ali has more goats than Musa has'

(18) Possessor-Possessed Comparisons:

- a. *Ali ka bàw ka ca kà tèmèn Musa ka bàw kàn*  
 Ali his goats are many and surpass Musa his goats over  
 'Ali has more goats than Musa has'

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<sup>4</sup>The possessive marker *ka* is inserted only when the possessed item is alienable from the possessor [Bird et al. 1977]. That is, the possessed object is neither physically nor familiarly a part of the possessor. Conversely, inalienable possession signifies that the object is physically or familiarly a part of the possessor and *ka* is not inserted.

- b. Ali ka baà ka ca kà tèmèn Musa taà kàn  
 Ali his goats are many and surpass Musa his (goats) over  
 'Ali has more goats than Musa has'

Thus, regardless of how possession is expressed in the head clause of (17) and (18), the compared items in the comparative verb phrase of both (17) and (18) are possessive NPs. In (17a) and (18a), the possessive NPs in the comparative phrases have the structure NOUN + POSSESSIVE MARKER ( ka ) + NOUN. In (17b) and (18b), the possessive NPs have the structure NOUN + POSSESSIVE PRO-NOUN ( taà 'his').

The examples in (19a-d) are non-possessive comparatives because possession is *not* expressed in the head clause. Consequently, non-possessive comparisons do not generate possessive NPs as the compared item in the comparative verb phrase.

(19) Non-possessive Comparisons:

- a. ù be poponiw belebele` dila kà tèmèn nègèsòw kàn  
 they PRES motorbikes big make and surpass bicycles over  
 'they make bigger motorbikes than they make bicycles'
- b. Mamadou ye dɔgɔ` caman tà kà tèmèn ji` kàn  
 Mamadou PAST wood much carry and surpass water over  
 'Mamadou carried more firewood than water'
- c. Musa be dumuni nyuman` dila kà tèmèn Fanta kàn  
 Musa PRES food good make and surpass Fanta over  
 'Musa makes better food than Fanta does'
- d. Musa be dumuni nyuman` dila kà tèmèn mɪnfènw kàn  
 Musa PRES food good make and surpass drinks over  
 'Musa makes better food than he makes drinks'

The non-possessive comparison in (20) is ungrammatical because of the possessive NP in the comparative phrase. To express the same idea, the contrastive coordinated sentence in (21) is generated instead.

- (20) \*Musa be dumuni nyuman` dila kà tèmèn Fanta ka mɪnfènw kàn  
 Musa PRES food good make and surpass Fanta her drinks over

- (21) Musa bε dumuni nyuman` dilà nkà Fanta tε mɪnfɛ̀nɔ̀ nyuman` dilà  
 Musa PRES food good make but Fanta not drinks good make  
 'Musa makes good food but Fanta does not make good drinks'

The ungrammaticality of (20) demonstrates that unless the head clause expresses possession, a possessive NP in the comparative infinitival verb phrase results in a comparison that is unacceptable to Bambara speakers.

It is interesting to observe that this kind of relation between the head clause and the comparative infinitival verb phrase does not constrain non-comparative infinitival verb phrases. The following sentences illustrate that possessive NPs can occur in non-comparative infinitival verb phrases without the head clause expressing possession. The non-comparative phrase is interpreted independently of the head clause, with the exception that the subject of the head clause is understood as the subject of the infinitival phrase.

- (22) Fanta bε mangorow` fèerè kà Sali ka bagi` tìgè  
 Fanta PRES mangoes sell and Sali her cloth buy  
 'Fanta sells mangoes and buys Sali's cloth'
- (23) Fanta dònnà kungo` kɔ̀nɔ̀ k' à den` nyini  
 Fanta entered woods into to her child look for  
 'Fanta entered the woods to look for her child'

It appears, then, that because the NP in the comparative verb phrase is structurally contingent upon the structure of the head clause, a functional relation holds between the head clause and the NP of the comparative infinitival phrase. Moreover, a pragmatic relation also holds because the head clause establishes the context for interpreting the comparative phrase and, therefore, the whole comparison. The same structural and pragmatic relation, however, is not established between head clauses and non-comparative infinitival phrases. The meaning of non-comparative infinitival phrases is independent of the meaning of their head clauses.

These facts suggest that whereas the comparative infinitival phrase is structurally similar to other infinitival phrases, it does have the unique function of expressing a comparison. Together, the pragmatic and structural relation between the head clause and the comparative verb phrase has consequences

for the NPs in the comparative phrase.

3.2. Optional deletion of identical NPs. The possessive NP in the comparative verb phrase of possessive comparisons can undergo optional deletion without changing the intended meaning of the comparison. However, this is true if and only if the deleted noun (or pronoun) in the comparative phrase is identical with a noun in the head clause. Examples (24a) and (25a) illustrate the comparative phrases before deletion, and (24b) and (25b) illustrate the same phrases after deletion has applied.

- (24) a. bàw caman bε Ali fὲ kà tēmèn Musa ka bàw kàn  
 goats many are Ali with and surpass Musa his goats over  
 'Ali has more goats than Musa has'
- b. bàw caman bε Ali fὲ kà tēmèn Musa kàn  
 goats many are Ali with and surpass Musa over  
 'Ali has more goats than Musa has'
- (25) a. Ali ka bàw ka ca kà tēmèn à ka sàgàw kàn  
 Ali his goats are many and surpass he his sheep over  
 'Ali has more goats than sheep'
- b. Ali ka bàw ka ca kà tēmèn sàgàw kàn  
 Ali his goats are many and surpass sheep over  
 'Ali has more goats than sheep'

Deletion does not disrupt the pragmatic or structural relation between the comparative phrase and head clause. The recoverability of the deleted items allows for the recoverability of their function within the comparative phrase. As a result, the comparison will be correctly interpreted.

Deletion of non-identical nouns obviously results in a change of meaning. This is shown when deletion applies to the comparative phrase in (26). Neither (27) nor (28) mean the same as (26) because their base-structures are not (26).

- (26) Ali ka bàw ka ca kà tēmèn Musa ka sàgàw kàn  
 Ali his goats are many and surpass Musa his sheep over  
 'Ali has more goats than Musa has sheep'

- (27) Ali ka bàw ka ca kà tèmèn sàgàw kàn  
 Ali his goats are many and surpass sheep over  
 'Ali has more goats than sheep'
- (28) Ali ka bàw ka ca kà tèmèn Musa kàn  
 Ali his goats are many and surpass Musa over  
 'Ali has more goats than Musa has'

In (26), the comparison is between the number of goats Ali has and the number of sheep Musa has. If deletion applies and deletes *Musa ka* as in (27), the meaning becomes 'the number of goats Ali has is more than the number of sheep he [Ali] has'. The base-structure for (27) is (25a) above. Furthermore, if deletion applies and deletes *ka sàgàw* as in (28), the meaning becomes 'the number of goats Ali has is more than the number of goats Musa has'. The possessive pronoun *tàw* 'his' can be inserted optionally in the comparative phrase to communicate this meaning more explicitly, i.e., ... *kà tèmèn Musa tàw kàn*. *Tàw* indicates that Musa owns goats and not sheep because its referent is 'goats' in the head clause. The base-structure for (28) is (18a) above.

Likewise, optional deletion is not possible in other non-possessive, non-comparative infinitival verb phrases without changing the intended meaning.

- (29) Ali dònna kungo` kɔɔ kà Musa ka m̀sìw nyini  
 Ali entered woods into to Musa his cows look for  
 'Ali entered the woods to look for Musa's cows'
- (30) Ali dònna kungo` kɔɔ kà m̀sìw nyini  
 Ali entered woods into to cows look for  
 'Ali entered the woods to look for the cows'

Example (29) means that Ali is looking only for Musa's cows, whereas (30) means that Ali is looking for some cows, but the cows are not (necessarily) Musa's; they may be Ali's, Musa's, or someone else's cows. Thus, the deletion of *Musa ka* may result in structural ambiguity. Although context may help to disambiguate the meaning of (30), there is no ambiguity in (31). In this case, only *Musa* is inserted in the base-structure. The NP in the underlying comparative phrase is not possessive.

- (31) Ali dònna kungo` kɔnɔ kà Musa nyini  
 Ali entered woods into to Musa look for  
 'Ali entered the woods to look for Musa'

Optional deletion is unique to the possessive comparatives. Possessive NPs in the comparative verb phrases are generated to maintain a structural and pragmatic relation between the comparative phrase and head clause. Possessive NPs may or may not contain some lexical items that are identical in the comparative phrase and head clause. However, deletion of items is optional in the comparative phrase if and only if a noun in the comparative verb phrase is identical to some noun in the head clause, and the head clause expresses possession.

#### 4. Summary

The present paper has attempted to show that the construction generated to express comparison in Bambara is an infinitival verb phrase with the same basic syntactic properties as other infinitival verb phrases that do not express comparison. First, the basic structure of the comparative verb phrase is: INFINITIVE MARKER + INTRANSITIVE VERB + NP + POSTPOSITION. This structure is the same as any other infinitival intransitive verb followed by a postpositional phrase. Second, kà cannot be marked for tense or negation without resulting in a series of sentences rather than a series of verb phrases.

With respect to the details of the comparative infinitival phrase, it was shown that the compared items must be NPs. This is a direct consequence of the structure of the postpositional phrase in the comparative verb phrase. Furthermore, the structure of the NP in the comparative phrase is contingent upon the head clause. If the head clause expresses possession, then a possessive NP is generated in the comparative verb phrase. Conversely, if the head clause does not express possession, then the NP in the comparative phrase cannot express possession, and a non-possessive NP is generated in the base-structure. Thus, a structural relation is maintained between the head clause and comparative phrase. Moreover, the comparative verb phrase, unlike other non-comparative infinitival verb phrases, is contextually dependent upon the head

clause for its meaning. The head clause establishes the context for interpreting the comparative phrase and, hence, for interpreting the whole comparison.

Finally, as a result of the special structural and pragmatic relation between the head clause and the comparative phrase, optional deletion may occur in the comparative phrases of possessive comparatives, but if and only if the deleted noun in the comparative verb phrase is lexically identical with some noun in the head clause. This ensures maximal recoverability of the structural and pragmatic function of the deleted items, thus maintaining the correct interpretation for the whole comparison.

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