Object-Sharing as Symmetric Sharing: Evidence from Dàgáârè

Ken Hiraiwa and Adams Bodomo
University of Victoria and Hong Kong University

1. Introduction

How to make sense of the so-called Object-Sharing has been one of the important issues in the study of Serial Verb Constructions (see Baker 1989, Lefebvre 1991, Collins 1997, 2002, Baker and Stewart 1999, 2002, Stewart 2001, Carstens 2002, among many others). In this paper, building on novel data from interactions between a Predicate Cleft Construction (PCC) and a Serial Verb Construction (SVC) in Dàgáârè (a Gur language of the Niger-Congo family), we argue that object-sharing SVCs in Dàgáârè must have a syntactic Symmetric Sharing structure and add to firm empirical support for Baker’s original intuition of “double-headedness” and object-sharing. The evidence comes from a particular case of object pied-piping in predicate clefting in SVC, which is not available in many other languages (see Bûli: Hiraiwa 2005b, Nupe: Kandybowicz 2006, among others).

An example of Object-Sharing SVC in Dàgáârè is illustrated in (1). The object nénè is shared by the two transitive verbs së and ô. There are three issues that we address here. First, the object is sandwiched in between two verbs. Thus, (1a) is grammatical but (1b) is not. Second, there is only one object in the object-sharing SVC, even though there are two verbs. Finally, as we will see momentarily, even a (resumptive) pronoun is prohibited after V2.

(1) a. ò dà së lá nénè ôô.
   3Sg. Pst roast F meat eat
   ‘He roasted meat and ate it.’

b. *ò dà së lá ôô nénè.
   3Sg. Pst roast F eat meat
   ‘He roasted meat and ate it.’

There have been various approaches to Object-Sharing SVCs in the literature. Baker (1989) proposes a ternary-branching structure (2a) in which the object is literally shared by the two verbs. Collins (1997), on the other hand, argues that object-sharing is mediated by a null pronoun pro. Thus, he proposes the VP-shell structure (2b) where the second verb (=V3) takes a pro and the first verb (=V2) takes the object. Hale (1991) proposes yet another structure, the VP-adjunction structure (2c). This structure also posits a pro for the second verb.

   b. Collins (1997)
   c. Hale (1991)
The crucial observation that we will make in this paper is that the direct object can be pied-piped either with \( V_1 \) or \( V_2 \) in Dàgááré under predicate clefting (i.e., it can form a syntactic constituent with \( V_1 \) or \( V_2 \)). Based on this observation, we will claim that object-sharing in Dàgááré involves syntactic symmetric sharing.

2. Object-sharing SVC in Dàgááré

In some languages, SVCs are sometimes hard to distinguish from Covert Coordination. In this section, we would like to firmly establish first that Object-Sharing SVCs in Dàgááré are a real SVC, not a coordination. Some crucial hallmarks of SVCs reported in the literature will be examined below for Dàgááré (see Bodomo 2002 for various types of SVCs in Dàgááré).

2.1. The single tense-marker test

First, only one tense-marker is allowed in SVCs (Collins 1997). Thus, in the SVC (3a), the past tense particle \( dà \) cannot be repeated before \( V_2 \). This contrasts with the overt coordination (3b), where the two VPs are coordinated by the overt coordination marker \( à \) and the tense particle can optionally be repeated.

\[(3) \ a. \ ô \ dà \ sè \ lá \ nń̀̋ne \ (*dà) \ àà. \ \ \ \ b. \ ô \ dà \ sè \ lá \ nń̀̋ne, [à] (dà) \ àà.
\]

3Sg. Pst roast F meat Pst eat
‘He roasted meat and ate it.’
3Sg. Pst roast F meat Cnj Pst eat
‘He roasted meat and then ate it.’

2.2. The pronouns/empty category test

Second, an overt pronoun cannot appear after \( V_2 \) in SVCs (Baker 1989; cf. Collins 1997), whereas such a pronoun is licit in overt coordination. In (4), the third person plural pronoun behaves differently in the SVC and the coordination.

\[(4) \ a. \ ô \ dà \ sè \ lá \ sìŋkâá \ àà (*á). \ \ \ \ b. \ ô \ dà \ sè \ lá \ sìŋkâá, [à] (dà) \ à à á.
\]

3Sg. Pst roast F groundnut.Pl eat them
‘He roasted groundnuts and ate them.’
3Sg. Pst roast F groundnut.Pl Pst eat them
‘He roasted groundnuts and then ate them.’

2.3. The extraction test

Finally, extraction tests also establish that SVCs are not instances of covert coordination. As shown in (5), the SVC is free from the Coordinate Structure Constraint (Ross 1967) and hence the object can be extracted (see Stahlke 1970, Baker 1989, Hale 1991). On the other hand, in the overt coordination structure, extraction of the object makes the sentence degraded.

\[(5) \ a. \ bông \ lá \ ká \ ô \ dà \ sè \ àà ? \ \ \ \ b. *bông \ lá \ ká \ ô \ dà \ sè \ a (dà) àà á ?
\]

what F C 3Sg. Pst roast eat
‘What did he roast and eat?’
what F C 3Sg. Pst roast Cnj Pst eat it
‘What did he roast and then eat?’

All in all, these tests demonstrate that Dàgááré SVCs are not (C)overt Coordination.

3. PCC in Dàgááré

3.1. Predicate clefting

others for PCCs).¹ In the PCC (6b), the verb dá is contrastively focused and is moved to the left periphery. Notice that the dislocated verb is obligatorily nominalized and the original copy of the verb must be pronounced, too (see Bodomo 2004 for nominalization of predicates).²

(6) a. à n dá dá lá bóó.
   1Sg. Pst buy F goat
   ‘I bought a goat.’

   b. dááó lá ká ń dá dá bóó.
      buy.Nml F C 1Sg. Pst buy goat
      ‘It is buying that I bought a goat.’

Now, significantly, the object can be optionally pied-piped in a PCC in Dágáárè (see Hiraiwa 2005b for Bụlị and Manfredi 1993 and Kobele 2006 for Yor`bá). The object bóó is also moved to the left periphery and the original copy of the object remains unpronounced (note that within DPs, the only position in which DPs can appear is [Spec, DP] in Dágáárè).

(7) bóó dááó lá ká ń dá á (*ò/*bóó).
   goat buy.Nml F C 1Sg. Pst buy (it/goat)
   ‘It is buying a goat that I bought.’

The pied-piping is not due to incorporation. As (8) shows, there is no restriction on the syntactic size of a pied-piped object: it can be a definite DP and, furthermore, it can even accompany adjectives.

(8) à bóó/bó-vèlàà ná dááó lá ká ń (dá) dá.
   D goat/goat-good Dem buy.Nml F C 1Sg. Pst buy
   ‘It is buying that (good) goat that I bought.’

Furthermore, it is important to show that what looks like pied-piping is not derived from multiple focusing–fronting of the object and fronting of the predicate. That multiple focus fronting is not allowed is shown in (9). Multiple Wh-fronting is not licit in Dágáárè, either. The ungrammaticality of (9) convincingly shows that the pied-piping in (7) and (8) must be derived by moving a larger single syntactic constituent.

(9) *à sóó, nènè; lá ká ó dé tjt ńgmàà.
   D knife meat F C 3Sg. take.Perf. cut
   ‘It is the knife, meat that he took and cut.’

3.2. PCC and SVC

Now the most significant fact relevant to our discussion here is that PCCs can interact with SVCs in interesting ways (see Déchaîne 1993, Hiraiwa 2005b, Kobele 2006, among others). In the Object-Sharing SVC (10a), there are three possible Predicate Clefting patterns: either V₁ or V₂ is clefted or the V₁-V₂ complex is clefted.

(10) a. ó dá sé lá nènè ììì.
    3Sg. Pst roast F meat eat
    ‘He roasted meat and ate it.’

   b. sééó lá ká ó sé nènè ììì.
      roast.Nml F C 3Sg. roast meat eat
      ‘It is roasting that he roasted and ate meat.’ (clefting of V₁)

¹ In this paper, we assume the theory of PCC proposed in Hiraiwa (2005a,b). For reasons of space, we cannot elaborate on the proposals here.
² PCCs are interpreted as contrastively focused and they are often difficult to translate in English. In what follows, English translations should be taken as more like word-by-word glosses rather than real translations.
c. ọ́ọ́ lá ká ó sè nénè ììì.
eat. Nml F C 3Sg. roast meat eat
‘It is eating that he roasted and ate meat.’ (clefthing of V₂)
d. sè-ọ́ọ́ lá ká ó dà sè nénè ììì.
roast-eat. Nml F C 3Sg. Pst roast meat eat
‘It is roasting and eating that he roasted and ate meat.’ (clefthing of V₁+V₂)

Furthermore, the object in Object-Sharing SVC can be pied-piped either with V₁, V₂, or V₁-V₂ as shown in (11a)-(11c). Crucially, pied-piping is possible with V₂ and Dàgáárè differs from other languages in this respect. Given our earlier observation that pied-piping is not due to multiple fronting, this means that the object can form a syntactic constituent either with V₁ or V₂.

(11) a. nénè sèèó lá ká ó sè ììì.
meat roast. Nml F C 3Sg. roast eat
‘It is roasting meat that he roasted and ate.’ (clefthing of V₁+OBJ)
b. nénè ọ́ọ́ lá ká ó sè ììì.
meat eat. Nml F C 3Sg. roast eat
‘It is eating meat that he roasted and ate.’ (clefthing of V₂+OBJ)
c. nénè sè-ọ́ọ́ lá ká ó sè ììì.
meat roast-eat. Nml F C 3Sg. roast eat
‘It is roasting meat and eating it that he roasted and ate.’ (clefthing of V₁+V₂+OBJ)

That the object pied-piping must respect syntactic constituency is further confi rms by SVCs that do not have a shared object. In (12), V₁ is an intransitive verb and hence the object is not shared. In such cases, clefting of V₁ with the object results in ungrammaticality. In (13), V₁ and V₂ are transitive verbs. However, the V₁ “take” does not select the object “meat”. Again, clefting of V₁ with the second object is disallowed. Clefting of V₂ with the fi rst object is not allowed, either.

(12) a. ñ dà wà dì lá kàpálà.
1Sg. Pst come eat F fufu
de fufu eat. Nml F C 1Sg. Pst come eat
‘I came and ate fufu.’
b. kàpálà dìíú lá ká ñ dà wà dì.
fufu eat. Nml F C 1Sg. Pst come eat
‘It is eating fufu that I came and ate fufu.’
c. *kàpálà wááó lá kà ñ dà wà dì.
fufu come. Nml F C 1Sg. Pst come eat
‘It is coming fufu that I came and ate fufu.’

(13) a. ò dé lá à sòó ngmààà nénè.
3Sg. take. Perf. F D knife cut meat
de cut meat with the knife.’
b. nénè ngmááó lá ká ó dé à sòó ngmààà.
meat cut. Nml F C 3Sg. take. Perf. D knife cut
de cutting meat that he took the knife and cut.’
c. *nénè dèèó lá ká ó dé à sòó ngmààà.
meat take. Nml F C 3Sg. take. Perf. D knife cut
‘It is taking meat that he took the knife and cut.’
d. * à sòó ngmááó lá ká ó dé ngmààà nénè.
D knife cut. Nml F C 3Sg. take. Perf. cut meat
‘It is the knife cutting that he took and cut meat.’

It is also worth noting that this kind of sharing in pied-piping is also found in Resultative SVCs, as shown in (14). (In (14), both verbs are transitive verbs. Dàgáárè lacks SVCs in which the object of a transitive V₁ is shared by the subject of an unaccusative V₂.)
4. Object-sharing as symmetric sharing

4.1. The issue

Our main observation is summarized as follows.

(15) In Dàgáárè, not only can V1 and the object form a syntactic constituent excluding V2, but also V2 and the object can form a syntactic constituent excluding V1.

(15) is entirely unexpected under the previous analyses of Object-Sharing SVCs. On Baker’s theory, it is correctly expected that the object can be pied-piped together with V1 and V2. However, because of the ternary structure, V1-Object and V2-Object constituencies are not straightforwardly explained. Collins’ analysis also suffers a problem. It is not immediately clear how the constituencies in (15) are formed.3 Finally, Hale’s VP-adjunction structure also fails to explain the constituency of V2 and the object excluding V1, due to the null pronoun.4

4.2. Symmetric sharing

Based on the observation in (15), we propose that the object in Object-Sharing SVCs (in Dàgáárè) is structurally shared. We call this Symmetric Sharing as shown in (17).


(17) The object is symmetrically shared by both verbs in SVCs in Dàgáárè.

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3 We should note here that Collins’ analysis is motivated by his Ewe data. It is possible that constraints of UG make available more than one structure for Object-Sharing SVCs and thus we leave for future research a parametric investigation of Object-Sharing SVCs. In fact, pied-piping of the object with V2 has not been well attested in other languages, to the best of our knowledge.

4 There is another possible analysis in which the object undergoes sideward movement from the complement of V2 to the complement of V1 in (16c). This could explain (15), but it raises a question of whether sideward movement should be allowed in UG. As far as we know, no such analysis of Object-Sharing SVCs has been proposed in the literature.
By symmetric sharing, we mean that an element X is merged with Y and Z simultaneously. This is called Parallel Merge by Citko (2005). In other words, it constitutes a multi-dominance structure (see Citko 2005 and references therein).

Applying symmetric sharing to Object-Sharing SVCs, we propose that Object-Sharing SVCs have the following syntactic structure in (19). Under this structure, the object is merged with V₁ and V₂ at the same time. The structure crucially differs from Baker’s (1989) theory in that V₁ and V₂ are not merged. Thus, in (19), the pied-piping patterns reduce to the movement of the syntactic constituent AspP₁ or the movement of another constituent AspP₂. If the higher constituent AspP₁+₂ is moved, (11c) results.⁵

The proposed structure has two important aspects to note. First, it is “double-headed” in the sense of Baker (1989) and Baker and Stewart (1999). Namely, the entire Asp Phrase consists of two distinct Asp projections, each of which dominates V₁ and V₂, respectively. We assume (20), following Baker and Stewart (1999).

Second, the symmetric sharing structure raises a question about to what extent such Parallel Merge is allowed in narrow syntax. We adopt the position that Parallel Merge is licit in narrow syntax and interface conditions require that such a structure be rendered linearizable before Spell-Out.

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⁵We assume that predicate clefting without object pied-piping (10b)–(10d) is also derived by the same mechanism with the difference being whether the object is pronounced in the moved position or in the original position.
5. Symmetry breaking and object shift

In this final section, we address two important challenges that our theory of Symmetric Sharing faces. First, as we have stated, symmetric sharing is not linearizable by itself (Kayne 1994, Chomsky 1995, Citko 2005). Thus, it is necessary to break the symmetry before Spell-Out. Second, symmetric sharing does not explain why the object is sandwiched on the surface. To see this, let us consider (22). In earlier discussions, we have assumed, without any argument, that symmetric sharing takes the form as shown in (22a) (where X=V₁, Y=Object, Z=V₂). However, nothing inherent to symmetric sharing forces (22a); in fact, nothing prevents us from imagining (22b). The crucial difference between these options is the surface order: the structure in (22a) has a sandwiched order, whereas (22b) has a “V₁ V₂ Object” order. Thus, some mechanism must exist to ensure the sandwiched surface order.

(22) a. XP Y ZP b. XP ZP Y

X Y Z

Significantly, there is evidence that the verb in Dágáárè undergoes short movement. As described in Bodomo (1997), almost every main (declarative) clause in Dágáárè has the “focus” particle lá and the main verb must precede it as shown in (23a). Thus, (23b) is ungrammatical.

(23) a. `n ngmé lá Dákóráá. 1Sg. hit F Dákóráá
   ‘I hit Dákóráá.’

   b. *`n lá ngmé Dákóráá.

   c. vP

   v FocP

   v Foc AspP

   lá Asp VP

   V Asp tV OBJ

   It is also important to note that weak pronominal objects always shift to the left of the particle lá. As shown in (24), the weak pronoun ó must front to the left of lá (but to the right of the moved main verb). Assuming that the verb moves to v and the weak pronoun cliticizes onto the particle lá, the derivation is represented as in (25).

(24) a. `n ngmé ó lá. 1Sg. hit 3Sg. F lá.
   ‘I hit him.’

   b. *`n ngmé lá ó.

   c. vP

   v FocP

   v Foc AspP

   ó Foc lá Asp VP

   V Asp tV OBJ

(25)
In contrast, a full DP object cannot undergo the same movement. It must remain to the right of the focus particle \( \text{lá} \).

(26) a. \( \text{n} \text{1Sg.} \text{ngm´} \text{E} \text{hit} \text{F} \text{Dàkóráá} \text{Dàkóráá} \) ‘I hit Dàkóráá.’
b. \( \text{ñ} \text{1Sg.} \text{ngm} \text{E} \text{hit} \text{Dàkóráá} \text{Dàkóráá} \) ‘I hit Dakoraa.’

However, let us formulate the following hypothesis that even though a full DP object doesn’t undergo movement past the Foc head, it does undergo “short” object shift (see Chomsky 2005, Hiraiwa 2005b for short object shift).

(27) A Hypothesis

Full DP objects always shift to the edge of AspP (but not to the edge of \( vP \)) in Dàgáárè.

Combining (27) with the V-to-\( v \) movement, the derivation of SVCs is represented as in (28). \( V_1 \) moves to \( v \) and the shared object undergoes short object shift to the specifier of AspP\(_{1+2} \). Importantly, the verb movement and the object shift change a symmetric structure to an antisymmetric structure. Furthermore, these two operations correctly derive the sandwiched word order for Object-Sharing SVCs. Thus, the hypothesis (27) gives us a simple answer to both challenges.\(^6\) Assuming that operations apply simultaneously (Chomsky 2004, 2005, Hiraiwa 2005b), predicate clefting, verb movement, and object shift all apply simultaneously at the \( vP \) phase level.

(28)

6. Conclusion and implications

In this paper, we have presented novel data from Dàgáárè about interactions between Predicate Clefting and SVCs and argued that Object-Sharing SVCs must have a Symmetric Sharing structure. It has been claimed that the syntactic symmetry breaks down before Spell-Out because of V-to-\( v \) movement and short object shift.

Our proposed theory has some theoretical implications. First, as far as we know, adverb-sharing or PP-sharing in the form \( [ V_1 \text{ Adv/PP} \ V_2 ] \) has not been attested cross-linguistically. This is in fact exactly what our theory expects. As we have shown, to break the symmetry, object shift is crucially required. Because adverbs and PPs cannot undergo object shift, the observation follows. This in turn brings another

\(^6\)As Jason Kandybowicz pointed out, a question arises as to what principle chooses \( V_1 \), but not \( V_2 \) as the target for V-to-\( v \) movement. Our symmetric structure has no good answer to this at this point, because either verb is equally close to \( v \). One way to get around this is to abandon the double-headedness and to adjoin AspP\(_2 \) to AspP\(_1 \). This singles out \( V \) as the target for V-to-\( v \) movement (while it faces some adjunct island issues). However, we would like to mention that this is a problem for any theory. All the three approaches in (16) implicitly build in information about which verb is merged as \( V_1 \) (and hence closer to \( v \)) and therefore do not provide a fundamental answer, either.
prediction to light. As stated in footnote 3, (15) is rarely observed in other languages. Our theory links those languages without (15) to the absence of object shift and verb movement. Without them, symmetric sharing crashes at PF and hence is not allowed. Although a quick look suggests this prediction seems to be borne out, further cross-linguistic investigation remains to be done.

References


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