Valency properties of Mandinka verbs

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1. Introduction

Mandinka, spoken by approximately 1.5 million speakers in The Gambia, Senegal, and Guinea-Bissau, is the westernmost member of the Manding dialect cluster included in the Western branch of the Mande language family.[1] The area where Mandinka is spoken largely coincides with the pre-colonial state of Kaabu.[2] Speakers of Mandinka call themselves *Mandiŋkóolu* (singular: *Mandiŋkôo*) and designate their language as *mandiŋkakáŋo*.[3] Rowlands (1959), Creissels (1983), and Creissels & Sambou (2013) constitute the main references on Mandinka grammar.

The question addressed in this paper is the grouping of Mandinka verbs into valency classes. The only Manding variety whose argument structure has been studied in some detail before is Bambara – see Creissels 2007.

The data quoted in this paper originate from a variety of sources but have been systematically checked with the help of two Mandinka consultants, Boubacar Cissé and Amadou Massaly, during field trips to Sédhiou (Senegal) carried out in November 2010 and November 2011.[4] Some additional data has also been provided by Pierre Sambou, who teaches Mandinka at the University of Dakar. Most examples originate from texts but have been re-formulated with the help of the consultants in order for the reader to be able to concentrate on the aspects of their construction directly relevant to the topic of this paper.

The paper is organized as follows. Section 2 provides basic information about the structure of Mandinka clauses and shows that the transitivity alternations of Mandinka cannot be analyzed as involving null subjects or objects. Section 3

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[1] On the classification of Mande languages, see Vydrin (2009).

[2] According to oral traditions, the Kaabu kingdom originated as a province of the Manding empire conquered in the 13th century by a general of Sundiata Keita called Tiramakhan Traore. After the decline of the Manding empire, Kaabu became an independent kingdom. Mandinka hegemony in the region lasted until 1867, when the Kaabu capital (Kansala) was taken by the armies of the Fula kingdom of Futa Jallon.

[3] *Mandiŋkóo* is the definite form of a noun *mandiŋká* resulting from the addition of the suffix *-ŋka* 'people from ...' to the toponym *Mandíŋ*, which primarily refers to the region that constituted the starting point of the Manding expansion. *Mandiŋkakáŋo* is literally 'language of the people from Manding'.

[4] These field trips have benefited from the support of the French National Research Agency (ANR) within the frame of the 'Sénélangues' project (ANR-09-BLAN-0326).

describes the valency patterns in terms of coding frames. Section 4 deals with the uncoded alternations. Section 5 is devoted to coded alternations. Section 6 puts forward valency classes of Mandinka verbs. Section 7 provides a concluding discussion. The list of the Mandinka equivalents of the 70 verb meanings constituting the questionnaire of the Valency Classes Project is given as an appendix.

2. Mandinka clause structure

2.1. The prototypical transitive construction

The two core arguments of the prototypical transitive construction A and P obligatorily precede the verb, and A obligatorily precedes P. Independent assertive and interrogative transitive clauses always include a *predicative marker* encoding TAM and polarity (*yé* 'completive positive (transitive)', *mâŋ* 'completive negative (intransitive)', *ka* 'imperfective positive', etc.), inserted between A and P.

Obliques are most of the time encoded as postpositional phrases. Toponyms, spatial adverbs and a few common nouns fulfill the function of ground in spatial relationships without requiring the addition of an adposition, but apart from this particular case, adpositionless obliques are only marginally possible. Obliques follow the verb, with two exceptions: time and place adjuncts may also be found in sentence initial position, and accompaniment or manner adjuncts introduced by the associative preposition *níŋ* 'with' may immediately follow A or P, depending on their semantic scope.

A and P are neither flagged nor indexed on the verb. Pronouns occupy the same positions as canonical NPs and have the same forms in all their possible functions.

(1) a. *Kambaan-óo ye sãa búsá fál-óo la.*
      boy-DEF   CMP.POS.TR snake.DEF   hit   stick-DEF OBL[5]
      'The boy hit the snake (with a stick).'

    b. *Kambaan-óo maŋ ber-ôo fáyí palantéer-óo kaŋ.*
      boy-DEF   CMP.NEG.TR stone-DEF   throw   window-DEF   on
      'The boy did not throw the stone into the window.'

    c. *Kew-ó ka a téerímâa máakóyí kód-óo to.*
      man-DEF INCMP.POS   3SG   friend   help   money-DEF   LOC
      'The man helps his friend financially.'

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[5] In the examples below, postpositions marking oblique arguments are glossed according to the meaning they typically express as heads of postposition phrases in adjunct function, with three exceptions: *lá, má,* and *tí,* for which the generic gloss OBL is used. The reason is that the analysis of the uses of these three postpositions as extensions of some 'central' or 'prototypical' meaning is particularly problematic.

2.2. Intransitive predication

The NP representing the unique argument U of monovalent verbs (usually labeled 'S' in the English-language literature) precedes the verb. It is neither flagged nor indexed on the verb. Obliques behave exactly in the same way in transitive and intransitive clauses.

In intransitive predication, three predicative markers are different from those found in transitive predication: [6]

– the completive positive, encoded by the predicative marker *yé* in transitive predication, is encoded in intransitive predication by the verbal suffix *-tá*;
– the completive negative, encoded by the predicative marker *máŋ* in transitive predication, is encoded in intransitive predication by the predicative marker *mâŋ*;
– the negative copula *té* used as an incompletive negative auxiliary has its usual form *té* in transitive predication, but occurs as *tê* in intransitive predication.

The complementary distribution between the two variants of three predicative markers provides a very simple criterion for recognizing constructions as transitive or intransitive in case of doubt. The other TAM and polarity values are encoded by the same predicative markers in transitive and intransitive constructions. In intransitive predication, the predicative markers other than *-tá* (completive positive) are inserted between U and the verb.

(2)   a. *Dendik-óo jaa-tá   til-óo   la.*
       shirt-DEF   be/become_dry-CMP.POS.INTR   sun-DEF   OBL
       'The shirt dried up in the sun.'

      b. *Kew-ô   mâŋ   kúmá   mus-óo   ye.*
         man-DEF CMP.NEG.INTR   talk   woman-DEF BEN
         'The man did not talk to the woman.'

      c. *Díndíŋ-o   ká   tootóo   jamáajamaa.*
         child-DEF   INCMP.POS   cough   often
         'The child often coughs.'

2.3. Intransitive alignment, and the notions of subject and object

A and P show no contrast in either flagging or indexation, and both precede the verb. The only coding property of A and P that can be used to characterize Mandinka clause structure with respect to intransitive alignment is that A precedes the predicative markers, whereas P follows them. The fact that A and U equally precede the TAM-polarity markers that are not suffixed to the verb, whereas P

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[6] Note that, in the completive negative and incompletive negative, the distinction is not always apparent, since depending on the tonal context, the distinction between *máŋ* and *mâŋ*, or *té* and *tê*, may be neutralized. It is however always apparent if the following word begins with a high-toned syllable.

follows them, constitutes therefore the only coding property of the core terms of transitive and intransitive clauses on the basis of which a notion of subject conflating U and A can be recognized.

The following formula, in which S, O and X stand for 'subject', 'object' and 'oblique' respectively, summarizes the canonical structure of Mandinka clauses:

S (O) V (X) (X') ...

2.4. Ditransitive alignment

Mandinka clauses cannot include more than two core NPs, in the sense that they never include a third NP whose behavior would be more similar to that of the object than to that of ordinary obliques. In the construction of semantically trivalent verbs, one of the three arguments must necessarily be encoded as an optional postpositional phrase in post-verbal position, and its behavioral properties do not distinguish it from obliques representing adjuncts. For example, Mandinka has two equivalents of English 'give': with *díi* (which by itself implies nothing more than transfer), the gift (alias *theme*) is represented by the object NP ('indirective' alignment), whereas with *só* (which implies that the recipient becomes the possessor of the gift) the object NP represents the recipient ('secundative' alignment).

(3) a. *Kew-ó ye   kód-ôo   díi   mus-óo   la.*
         man-DEF CMP.POS.TR money-DEF give woman-DEF OBL
         'The man gave money to the woman.'

     b. *Kew-ó ye   mus-ôo   só   kód-óo   la.*
         man-DEF CMP.POS.TR woman-DEF give money-DEF OBL
         'The man gave money to the woman.'

2.5. Transitivity alternations, or null subjects or objects?

In language description, the analysis of lability is conditioned not only by the alignment properties of the languages, but also by the existence of a more or less clear-cut distinction between transitive and intransitive predications.

In a language like English, the notion of A-lability is problematic in the sense that it boils down to the optionality / obligatoriness of NPs in object function, and does not imply the deletion of the corresponding participant from argument structure: a verb like *eat* can be simply described as a transitive verb accepting a null object with an unspecific reading. By contrast, the behavior of verbs like *break* cannot be described in a similar way, but only by positing a transitivity alternation by which the subject of an objectless construction is assigned a semantic role similar to that assigned to the object when an object NP is present. Symmetrically, in languages in which S is fully aligned with P, the notion of P-lability may be problematic, whereas A-lability clearly involves a transitivity alternation – see Creissels 2009.

In Mandinka, the analysis of lability is facilitated by the fact that:

(a) subjects and objects are distinguished from each other by their position to the left or to the right of predicative markers, and

(b) three TAM-polarity markers have variants conditioned by transitivity.

In Mandinka, regardless of their status as arguments or adjuncts, obliques are syntactically optional, whereas participants encoded as subjects or objects (i.e., represented by NPs preceding the verb) are obligatorily expressed. The two crucial observations are that:

– a construction with a null subject would be *Ø pm O V* (where *pm* stands for 'predicative marker'), with the predicative marker in clause-initial position, which is absolutely impossible in assertive or interrogative clauses;[7]

– in a transitive construction with a null object (*S pm Ø V*), the completive positive, completive negative and incompletive negative markers would occur as *yé*, *máŋ* and *té* immediately preceding the verb, which is absolutely impossible too.

It would consequently not be correct to recognize null subjects or objects (with either an anaphoric or unspecific reading) in the analysis of Mandinka clauses. This must however be emphasized, since at first sight, phenomena that must be analyzed as involving a change in the construction of the clause might give the impression of being analyzable in terms of null subjects or objects.

For example, the comparison between (4a) and (4b) might suggest that (4b) includes a null object, since the distinction between *máŋ* (transitive) and *mâŋ* (intransitive) is apparent in (4a) but not in (4b), due to the action of tonal processes that neutralize the distinction before a word beginning with a low-toned syllable, such as *teyí* 'cross'.

(4) a. *Mǒo-lu   maŋ   báa   teyi.*
          person.DEF-PL   CMP.NEG.TR river.DEF cross
          'The people did not cross the river.'

    b. *Mǒo-lu   máŋ   teyi.*
          person.DEF-PL   CMP.NEG.INTR   cross
          'The people did not cross.'

However, this analysis is contradicted by the fact that the positive sentence corresponding to (4b) unambiguously includes the intransitive variant of the completive positive marker (*-ta*) – Ex. (4d-e).

(4) c. *Mǒo-lu   ye   báa   teyi.*
          person.DEF-PL   CMP.POS.TR river.DEF cross
          'The people crossed the river.'

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[7] The only predicative marker that can be found in clause-initial position is *kána* (subjunctive negative) in imperative sentences, in which a second person subject is understood.

d. **Mǒo-lu   yé   teyi.*
person.DEF-PL   CMP.POS.TR   cross
intended: 'The people crossed.'[8]

e. *Mǒo-lu   teyi-ta.*
person.DEF-PL   cross-CMP.POS.INTR
'The people crossed.'

Moreover, (4f) shows that the missing argument in the construction illustrated by Ex. (4b) & (4e) can be encoded as an oblique.

(4)   f. *Mǒo-lu   teyi-ta   báa   la.*
person.DEF:PL   cross-CMP.POS.INTR river.DEF OBL
'The people crossed the river.'

There is therefore converging evidence that *teyí* 'cross' is not a transitive verb compatible with a null object, but an A-labile verb whose second argument can be encoded as either the object of a transitive construction, or an oblique argument in an intransitive construction. (4b) does not contradict the principle according to which null objects are not allowed in Mandinka, since the missing argument in (4b) is not the object of a transitive clause, but the oblique argument of an intransitive construction of the same verb: comparison with (4c-f) shows that (4b) must be analyzed as *Mǒolu máŋ teyi (báa la)* rather than **Mǒolu máŋ (báa) teyi*. More generally, the two constructions of *teyí* 'cross' can be schematized as indicated in (4g).

(4)   g.   *x* **teyí** (*y* lá) intransitive construction with an optional oblique argument
       ~ *x y* **teyí**   transitive construction with an obligatory object

Similarly, in Ex. (5b), the absence of anything that could be analyzed as passive marking might suggest the recognition of a null subject with an arbitrary reading. However, if *kúlúŋo* were the object in a transitive construction with a null subject, the TAM-polarity marker (here, the negative copula used as an incompletive negative auxiliary in combination with the infinitive form of the verb) would be *té* rather that *tê* (note that, due to the fact that the first syllables of *kúlúŋo* 'boat' and *dádáa* 'repair' are high-toned, the distinction is apparent here), and it would precede *kúlúŋo*, as in the ungrammatical sequence (5c).

(5)   a. *Kew-ó   te   kúlúŋ-o   dádáa-la.*
man-DEF   INCMP.NEG.TR   boat-DEF   repair-INF
'The man will not repair the boat.'

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[8] The sequence *Mǒolu yé teyi* is acceptable, but only with the meaning 'The people should cross', i.e., if *yé* is interpreted as the subjunctive marker, which is homonymous with completive *yé* but can occur in intransitive clauses too, contrary to completive *yé*.

b. *Kúlúŋ-o   tê   dádáa-la.*
   boat-DEF   INCMP.NEG.INTR repair-INF
   'The boat will not be repaired.'

c. **Ø   té   kúlúŋ-o   dádáa-la.*
     INCMP.NEG.TR boat-DEF   repair-INF

Consequently, (5b) is not a transitive construction with a null subject, but an intransitive construction whose subject (*kúlúŋo*) has the same semantic role as the object of the transitive construction (5a).

2.6. The middle construction

In Mandinka, the use of intensive pronouns such as *ŋ́ fáŋo* [1SG INT] constitutes the productive way of expressing reflexivity, but Mandinka also has a reflexive pronoun with two possible forms (*ŋ́* in the 1st person, *í* in the 2nd and 3rd persons) used with some transitive verbs to express object reflexivization. Formally, the construction with this reflexive pronoun in object position (henceforth 'middle construction') is unambiguously a transitive construction in which the O slot is occupied by the reflexive pronoun, since in the presence of the reflexive pronoun, the marker of the completive positive is invariably *yé*, never *-tá*. However, functionally, much in the same way as the *se*-construction in French and other Romance languages, it does not always express the reflexivization of a transitive construction with a canonical NP in O function, and therefore must be treated as a distinct construction in a study of the valency properties of verbs.

Ex. (6) illustrates the reflexive use of the middle construction, whereas in Ex. (7), the middle construction encodes a valency operation of the antipassive type.

(6) a. *Mus-óo   ye   díndíŋ-o   kuu.*
        woman-DEF CMP.POS.TR child-DEF   wash
        'The woman washed the child.'

     b. *Mus-óo   ye   í   kuu.*
        woman-DEF CMP.POS.TR REFL wash
        'The woman washed (herself).'

(7) a. *Kew-ó   ye   kambaan-ôo jé.*
        man-DEF CMP.POS.TR   boy-DEF   see
        'The man saw the boy.'

     b. *Fiŋkintéw-o-lu   búka   í   je.*
        blind-DEF-PL   INCMP.NEG   REFL see
        'The blind do not see.'

2.7. Postpositions

Two postpositions are particularly common in the function of oblique argument marker: *lá* and *má.*

Comparative data shows that *lá* is originally a spatial postposition, but in Mandinka, its use in the expression of concrete spatial relationships is marginal. In addition to its use as an oblique argument marker, *lá* is fully productive in the encoding of adjuncts expressing non-spatial location (such as *dookúwo lá* 'at work'), and of instrumental adjuncts, and *lá*-marked cause or purpose adjuncts are common too. *Lá* is also used as a genitive marker of 'alienable' possession.

Comparative data suggests that the original function of *má* was the expression of contact, but in Mandinka, this postposition is almost exclusively used as an oblique argument marker. Apart from that, *má* is only found with adjuncts encoding a participant affected by an event in which (s)he plays no role, as in Ex. (8).

(8) a. *Bâa   fáa-tá   i   ma.*
        river.DEF be_full-CMP.POS.INTR   3PL   OBL
        'The tide was high when they arrived at the river.'
        lit. 'The river was full for them.'

The other postpositions used in the function of oblique argument marker are *tí* (productively used in equative, functive, transformative and comparative functions, also marginally found in comitative function), *tó* (a spatial postposition which does not refer to any particular type of spatial configuration), *yé* (benefactive), *káŋ* 'on', *kótó* 'under' (cognate with the noun *kótó* 'meaning'), *kóo(ma)* 'behind' (cognate with the noun *kóo* 'back'), *bálá* (cognate with the noun *bálá* 'body', productively used to encode contact), *búlú* (cognate with the noun *búlú* 'hand', productively used to encode reference to the personal sphere of an individual), and *nǒoma* 'after' (cognate with *nóo* 'track').

3. Coding frames [9]

In this section, the coding frames for monovalent, bivalent, and trivalent verbs are illustrated by verbs that have one possible coding frame only, or for which there is clear evidence that the coding frame in question is basic. Verbs with multiple frames will be dealt with systematically in Section 4.

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[9] In the schematic presentation of coding frames, the dash indicates the slot occupied by the verb, and the variables *x*, *y* and *z* symbolize NPs in argument function. 'Postp' symbolizes the postposition taking an oblique argument as its complement. Note however that oblique arguments encoding the ground in a spatial configuration do not necessarily have the form of a postposition phrase, since some noun phrases (in particular, toponyms) can be used in this function by themselves. In the presentation of the coding frames of individual verbs, such oblique arguments will be represented as 'L' (abbreviation for 'locative expression').

3.1. Coding frames for monovalent verbs

3.1.1. The intransitive frame *x* —

The following verbs are among those for which this frame is the only one available:

x **fájí** = *x* boils
x **jǎa** = *x* is dry
x **jaŋkárí** = *x* falls ill
x **kóŋkó** = *x* is hungry
x **sǎa** = *x* dies
x **tootóo** = *x* coughs

3.1.2. The middle frame *x* **Refl** —

The middle frame is the only possible frame, or at least the default frame, for a few Mandinka verbs, for example:

x Refl **súmúnáa** = *x* urinates

In the particular case of *súmúnáa*, the only other possibility is a transitive construction referring to the marked situation in which micturition results in the emission of something else than urine (blood for example).

3.2. Coding frames for bivalent verbs

3.2.1. The transitive frame *x y* —

No Mandinka verb has the transitive frame as its only possible frame, since all verbs for which the transitive frame can be considered basic are also used intransitively with a passive reading (see 4.2). The following verbs are among those for which an intransitive construction with a passive reading is the only alternative to the transitive frame:

x y **báyíndí** = *x* follows *y*
x y **dádáa** = *x* makes *y*, *x* repairs *y*
x y **dómó** = *x* eats *y*
x y **félé** = *x* looks at *y*
x y **kanú** = *x* likes *y*, *x* loves *y*
x y **kǔu** = *x* washes *y*
x y **láa** = *x* sings *y* – *y* a song
x y **líi** = *x* shaves *y*
x y **máakóyí** = *x* helps *y*

x y **moyí** = *x* hears *y*
x y **mutá₁** = *x* catches *y*
x y **nikíŋ** = *x* learns *y*
x y **ñíní(ŋ)** = *x* searches for *y*
x y **síi** = *x* grinds *y*
x y **sílá-ndí** = *x* frightens *y* (< *síláŋ* 'fear')
x y **sĭŋ** = *x* digs *y*, *x* digs for *y*
x y **sumbú** = *x* smells *y*, *x* kisses *y*
x y **tábí** = *x* cooks *y*
x y **wótó** = *x* peels *y*

3.2.2. The extended intransitive frame *x — y* **Postp**

The following verbs are among those for which this frame is the only one available:

x **lafí** *y* lá = *x* likes *y*, *x* wants *y*
x **síláŋ** *y* lá = *x* fears *y*

3.2.3. The extended middle frame *x* **Refl** — *y* **Postp**

The extended middle frame is the only one possible for a few Mandinka verbs, for example:

x Refl **lákúrá** *y* lá = *x* finishes *y*

3.3. Coding frames for trivalent verbs

3.3.1. The extended transitive frame *x y — z* **Postp**

For the following verbs, the extended transitive frame and the corresponding extended intransitive frame with a passive reading are the only possible frames:

x y **díi** *z* lá = *x* gives *y* to *z*
x y **nĭi** *z* lá = *x* offers *y* to *z*
x y **ñiniŋkáa** *z* lá = *x* asks *y* about *z*
x y **só** *z* lá = *x* gives *z* to *y*
x y **yita(ndí)** *z* lá = *x* shows *y* to *z*
x y **fó** *z* yé = *x* tells *y* to *z*

3.3.2. The doubly extended intransitive frame *x — y* **Postp₁** *z* **Postp₂**

This frame is attested with a few verbs, but I have been able to find no verb for which it would be the only one possible.

4. Uncoded valency alternations

4.1. Causative / Anticausative Alternation

In the *Causative / Anticausative Alternation,* a verb that can be used transitively also has an intransitive construction which does not imply the involvement of a participant with the semantic role assigned to the subject of the transitive construction; the referent of the subject of the intransitive construction is presented as undergoing the same process as the object of the transitive construction, but without any hint at a possible external cause – Ex. (9).

(9) a. *Máŋk-óo jolón-tá   baŋk-óo   to.*
    mango-DEF fall-CMP.POS.INTR   ground-DEF LOC
    'The mango fell on the ground.'

   b. *Kew-ó   ye   mur-óo   jolóŋ   baŋk-óo   to.*
    man-DEF CMP.POS.TR knife-DEF   drop   ground-DEF LOC
    'The man dropped the knife on the ground.'

The relationship between two constructions related in this way is of the type expressed in other languages either by a transitivizing derivation of the causative type, or by a de-transitivizing derivation of the anticausative type. In Mandinka, the productivity of this alternation is limited not only by the possibility to conceive events as more or less spontaneous processes affecting a single participant, but also by the possible use of derived causative verbs making explicit the involvement of an agent.

Dǔŋ 'enter' illustrates the case of a verb lending itself to the causative / anticausative alternation – Ex. (10a-b), which however also has a morphologically marked causative form – Ex. (10c).

(10) a. *Wul-óo dun-ta   búŋ-o   kóno.*
    dog-DEF enter-CMP.POS.INTR house-DEF   inside
    'The dog went into the house.'

   b. *Mus-óo   ye   miráŋ-o   duŋ díndíŋ-o   búlu.*
    woman-DEF CMP.POS.TR bowl-DEF   enter child-DEF   PSPH
    'The woman put the bowl into the hands of the child.'

   c. *Mus-óo   ye   kew-ó du-ndi   búŋ-o   kóno.*
    woman-DEF CMP.POS.TR man-DEF enter-CAUS house-DEF   inside
    'The woman let the man into the house.'

The competition between Causative / Anticausative Alternation and Causative Derivation is one of the trickiest aspects of Manding grammar. Their respective productivity shows important dialectal variations (and Mandinka is one of the dialects in which Causative Derivation is particularly productive), and fluctuations

can be observed even within the limits of a given dialect. Lexicalization also plays an important role. An unquestionable regularity is however that, as already illustrated by Ex. (10), the use of causative forms tends to correlate with less direct causation, a relatively high degree of agentivity of the causer, and the ability of the causee to control the process and/or to oppose the manipulation exerted by the causer. Ex. (11) provides another illustration: with *borí* 'run, move quickly', the transitive use of the verb in its non-derived form is limited to a particular type of direct causation ('ride a horse', 'drive a car'), whereas the causative form does not show the same limitation.

(11) a. *Suw-ó   bori-ta.*
     horse-DEF   run-CMP.POS.INTR
     'The horse ran.'

   b. *Kew-ó   ye   suw-ó   bori.*
     man-DEF CMP.POS.TR horse-DEF   ride
     'The man rode the horse.'

   c. *Kew-ó   ye   suw-ó   bori-ndi.*
     man-DEF CMP.POS.TR horse-DEF   run-CAUS
     'The man rode the horse.' or 'The man made the horse run.'

4.2. Active / Passive alternation

The *Active / Passive Alternation* has already been presented in Section 2.5, in the discussion of constructions in which the only expressed argument of a transitive verb is the patient. In this alternation, a verb that can be used transitively also has an intransitive construction interpreted as implying the same participants as the transitive construction. The subject of the intransitive construction encodes the same participant as the object of the transitive construction, whereas the participant encoded as the subject of the transitive construction is left unexpressed.

(12) a. *Kew-ó   ye   wot-ôo dádaa.*
     man-DEF CMP.POS.TR   car-DEF   repair
     'The man has repaired the car.'

   b. *Wot-ôo dádáa-ta.*
     car-DEF   repair-CMP.POS.INTR
     'The car has been repaired.'

(13) a. *Kambaan-óo ye   nás-óo   feereetoo-bóŋ   kolóŋ-o kóno.*
     boy-DEF   CMP.POS.TR magic_water-DEF cleverly-pour   well-DEF inside
     'The boy cleverly poured the magic water into the well.'

b. *Nás-óo   feereetoo-bón-tá   kolóŋ-o kóno.*
   magic_water-DEF   cleverly-pour-CMP.POS.INTR   well-DEF inside
   'The magic water was cleverly poured into the well.'

The existence of the Active / Passive Alternation giving rise to morphologically unmarked passive constructions constitutes the most original aspect of Manding argument structure. In spite of the absence of anything that could be analyzed as passive morphology, the construction illustrated by sentences (12b) & (13b) is passive in the sense that the patient is the subject of an intransitive construction in which the agent is syntactically *demoted* without however being *deleted* from argument structure. A decisive proof of the passive nature of the intransitive constructions involved in this alternation is their ability to include an agent-oriented adverb, such as *feereetoo-* 'cleverly' in Ex. (13b).

The passive reading of such intransitive clauses is not bound to any particular condition on aspect, mood, or referentiality. Mandinka speakers use intransitive constructions with a passive reading in the same conditions and with the same semantic implications as agentless passive clauses in languages that have canonical passive constructions.

There is however an important difference between Mandinka and other Manding dialects in the syntactic properties of the passive construction. In other Manding dialects, intransitive clauses constituting the passive counterpart of a transitive clause may include an oblique representing the participant encoded as the subject of the transitive construction, as in Ex. (15) from Bambara.

(14) a. *Wulû   má   sogô   dún.*   [Bambara]
        dog.DEF   CMP.NEG   meat.DEF eat
        'The dog did not eat the meat.'

   b. *Sogô   má   dún (wulú   fɛ).*   [Bambara]
      meat.DEF CMP.NEG   eat   dog.DEF   by
      'The meat has not been eaten (by the dog).'

This possibility does not exist in Mandinka. Interestingly, the passive clauses of Mandinka may include obliques marked by the same postpositions as those used to encode the agent in the other Manding dialects (i.e., postpositions whose basic meaning is reference to the personal sphere of an individual), but in the passive clauses of Mandinka, such obliques are interpreted as referring to a person who has some link with the event but does not play an active role in it, or to an involuntary agent, as in Ex. (15).

(15)   *Kód-ôo   dómó-tá   ŋ   fee.*
       money-DEF   spend-CMP.POS.TR   1SG   beside
       'The money was spent without my knowing.' or 'I spent the money, but I did not do it on purpose.'

The Active / Passive Alternation is not bound to conditions on semantic roles, and the only limitation to its productivity seems to be ambiguity avoidance with verbs also involved in the Causative / Anticausative Alternation (but even with such verbs, intransitive constructions with a passive reading are common in contexts suggesting a passive reading).

4.3. Object / Oblique Alternation

In the *Object / Oblique Alternation*, the verb occurs in an intransitive construction including an oblique which can equally be encoded as the object of a transitive construction. As discussed above on the example of *teyi* 'cross', in accordance with the general properties of objects and obliques in Mandinka, the participant that can be encoded as the object of the transitive construction of as an oblique in the corresponding intransitive construction is obligatorily expressed in the transitive construction, but can be omitted from the intransitive construction.

Two semantic subtypes of the Object / Oblique Alternation can be distinguished: the *Delimitative Alternation* and the *Applicative Alternation*.

4.3.1. Delimitative Alternation

In the *Delimitative Alternation*, typically found with verbs expressing a manner of moving, the transitive construction encodes the same one-participant event as the intransitive construction; the unique participant is encoded as the subject, and the object encodes the temporal or spatial delimitation of the event – Ex. (16) & (17).

(16) a. *Kew-ô   táamá-ta.*
     man-DEF walk-CMP.POS.INTR
     'The man walked.'

   b. *Kew-ó   ye   wúl-ôo bêe   táama.*
      man-DEF CMP.POS.TR bush-DEF all   walk
      'The man walked through the whole bush.'

   c. *Kew-ó   ye   tilî   lúulú   táama, a   máŋ   futá saatéw-o   to.*
      man-DEF CMP.POS.TR day   five   wander 3SG   CMP.NEG.INTR arrive village-DEF LOC
      'The man walked five days without arriving at the village.'

(17) a. *Kúnuŋ   í   yáayí-ta   báake.*
     yesterday   2SG wander-CMP.POS.INTR   a_lot
     'You wandered a lot yesterday.'

   b. *Musu-kéebáa-lu níŋ deenaan-óo ye   saatéw-o bêe yáayi.*
      woman-old.DEF-PL with baby-DEF   CMP.POS.TR village-DEF all   wander
      'The old women wandered round the whole village with the baby.'

4.3.2. Applicative Alternation

In the other cases of Object / Oblique Alternation, the object of the transitive construction represents a second participant treated as an oblique in the corresponding intransitive construction. This alternation, designated as *Applicative Alternation* for reasons that will be commented below, has already been illustrated with *teyí* 'cross' – Ex. (4) above. *Selé* 'climb' and *wúlúu* 'give birth' provide additional examples.

(18) a. *Sul-óo   sele-ta   yír-ôo   sánto.*
     monkey-DEF climb-CMP.POS.INTR   tree-DEF on_top
     'The monkey climbed up the tree.'

    b. *Í   búka   yír-óo selé a   jamb-óo   la.*
      2SG   INCMP.NEG   tree-DEF climb 3SG   leave-DEF   OBL
      'One does not climb a tree by the leaves.'

(19) a. *Mus-ôo   wúlúu-tá   (súŋkút-óo   la).*
     woman-DEF give_birth-CMP.POS.INTR   girl-DEF   OBL
     'The woman gave birth (to a girl).'

    b. *Mus-óo   ye   súŋkút-óo le   wúluu.*
      woman-DEF CMP.POS.TR girl-DEF   FOC   give_birth
      'The woman gave birth to a girl.'

This alternation is not very productive. It does not seem possible to propose a semantic feature whose presence would automatically license it. An interesting semantic generalization is however that it is never found with verbs encoding prototypical events in which a patient undergoes a change of state triggered by a manipulation exerted by an agent.

This observation has an interesting consequence for terminology. From a strictly formal point of view, this alternation involves a change in the construction similar to that triggered by applicative as well as antipassive derivations, depending on the choice of one of the two possible orientations. But licensing the presence of an object NP representing a participant that otherwise would not be encoded as a core term of the transitive construction is a typical function of applicative derivations, whereas antipassive derivations are typically used to demote prototypical patients. Consequently, it is consistent to designate as *applicative alternation* a transitivity alternation that does not affect the semantic role of the subject and in which the participant encoded as the object of the transitive construction is never a prototypical patient.

The way the verbs lending themselves to the Applicative Alternation behave with respect to causativization corroborates this analysis, since those of them that have a causative form take the causative suffix *-ndi*, typically used to causativize intransitive constructions, and none of them is compatible with the causative suffix *-(di)rindi* used to causativize transitive constructions.

4.4. Active / Introversive Alternation

In the *Active / Introversive Alternation*, the verb has an intransitive construction and a transitive construction in which it assigns the same semantic role to its subject, but the participant encoded as the object of the transitive construction cannot be expressed in the intransitive construction, which distinguishes this alternation from the Object / Oblique alternation. This Active / Introversive alternation has been found with very few verbs. It is illustrated here by *dásá* 'lack' and *karáŋ* 'learn'.

(20) a. *Jíy-o   dásá-tá   le.*
      water-DEF   lack-CMP.POS.INTR   FOC
      'Water is lacking.'

    b. *Kód-óo   ye   ŋ́   dása.*
       money-DEF   CMP.POS.TR   1SG   lack
       'I lack money.'

(21) a. *Ñǐŋ   kew-ó   ye   Fúlá-káŋ-o   karaŋ.*
      DEM   man-DEF CMP.POS.TR   Fula-language-DEF learn
      'The man learned the Fula language.'

    b. *Ñǐŋ   kew-ó   karán-tá   báake.*
       DEM   man-DEF learn-CMP.POS.INTR very
       'The man is a very learned person.'

4.5. Object / Oblique Permutation

The *Object / Oblique Permutation* involves trivalent verbs that have two constructions with the same argument selected in subject function, but two possible choices for the argument encoded as the object – Ex. (22) & (23).

(22) a. *Kew-ó ye   batáay-ôo sáfée   a   díŋ-o   ye.*
      man-DEF CMP.POS.TR   letter-DEF   write   3SG   son-DEF BEN
      'The man wrote a letter to his son.'

    b. *Kew-ó ye   a   díŋ-o   sáfée   batáay-óo la.*
       man-DEF CMP.POS.TR   3SG   son-DEF write   letter-DEF   OBL
       'The man wrote a letter to his son (lit. wrote his son with a letter).'

(23) a. *Kew-ó ye   tiy-ôo   sóolí   boot-ôo   kóno.*
      man-DEF CMP.POS.TR   peanuts-DEF stuff   bag-DEF   inside
      'The man stuffed the peanuts into the bag.'

b. *Kew-ó ye   boot-ôo   sóolí   tiy-óo   la.*
man-DEF CMP.POS.TR bag-DEF   stuff   peanuts-DEF OBL
'The man stuffed the bag with peanuts.'

4.6. Alternations involving the middle construction

In its canonical use, the middle construction expresses reflexivity, but it can be involved in valency alternations too. Two types can be distinguished.

The first case is that of verbs found in an intransitive construction and in a middle construction in which they assign the same role to their subject. Some of them, for example *bálúu* 'live' – Ex. (24), have no possibility of a transitive use, others, for example *nukúŋ* 'hide' – Ex. (25), also have a transitive use related to their intransitive use via the Causative / Anticausative Alternation.

(24) a. *Baramatôo   tê   bálúu-la.*
injured_person.DEF INCMP.NEG.INTR live-INF
'The injured person will not survive.'

b. *Moo   jáamáa   ka   í   bálúu sen-óo   le   lá   jaŋ.*
person many   INCMP.POS   REFL live   farming-DEF FOC   OBL   here
'Many people live on farming here.'

(25) a. *Díndíŋ-o   nukún-tá   yír-ôo   kóoma.*
child-DEF   hide-CMP.POS.INTR tree-DEF behind
'The child hid behind the tree.'

b. *Díndíŋ-o   ye   í   nukuŋ yír-ôo   kóoma.*
child-DEF   CMP.POS.TR   REFL hide   tree-DEF behind
'The child hid (himself) behind the tree.'

c. *Mus-óo   ye   kód-óo   nukuŋ.*
woman-DEF CMP.POS.TR   money-DEF hide
'The woman hid the money.'

The second case is that of verbs with a middle construction related to a transitive construction of the same verb by a valency operation of the antipassive type. In some cases, for example with *mĭŋ* 'drink' – Ex. (26), the participant encoded as the object of the transitive construction is encoded as an oblique in the middle construction. In other cases, for example with *jé* 'see' – Ex. (27), the participant encoded as the object of the transitive construction cannot be expressed in the middle construction.

(26) a. *Kew-ó ye   jíy-o   miŋ.*
man-DEF CMP.POS.TR   water-DEF drink
'The man drank water.'

b. *Kew-ó ye   í   miŋ jíy-o   la.*
man-DEF CMP.POS.TR REFL drink water-DEF   OBL
same meaning as (a)

(27) a. *Kew-ó ye   kambaan-ôo jé.*
man-DEF CMP.POS.TR boy-DEF   see
'The man saw the boy.'

b. *Fiŋkintéw-o-lu búka   í   je.*
blind-DEF-PL   INCMP.NEG REFL see
'The blind do not see.'

4.7. Subject / Oblique Alternation

The only Mandika verb lending itself to the *Subject / Oblique Alternation* is *tú* 'remain / leave'. *Tú* has transitive and intransitive uses related via the Causative / Anticausative Alternation – Ex. (28a-b), but in addition to that, it is found in an impersonal construction which has no equivalent with any other Mandinka verb, in which the 3rd person pronoun in subject function is a mere place-holder, and the only participant is encoded as an oblique – Ex. (28c).

(28) a. *Mus-óo   ye   díndíŋ-o-lu   tú   súw-o   kóno.*
woman-DEF CMP.POS.TR child-DEF-PL   leave house-DEF   inside
'The woman left the children in the house.'

b. *Musu-kéebáa fula tú-tá   saatéw-o   to.*
woman-old   two remain-CMP.POS.INTR village-DEF LOC
'Two old women remained in the village.'

c. *A   tú-tá   jěe musu-kéebáa   fula (la).*
3SG   remain-CMP.POS.INTR there woman-old   two OBL
'There remained two old women.'

The possible omission of the postposition marking the oblique argument of *tú* used impersonally is exceptional in Mandinka syntax.

Functionally, the impersonal construction of *tú* is identical to English 'there remains *x*' or French 'il reste *x*', but formally, the unique participant is unambiguously in oblique position, whereas in the languages of Europe in which functionally similar constructions have been described, inverted subjects move to object position, and among African languages the same can be observed in the functionally similar constructions found in Bantu and Atlantic languages. This may be related to the fact that the languages of Europe as well as the Bantu and Atlantic languages that have this kind of impersonal construction are SVO languages, whereas Mandinka is an SOVX language.

The existence of a presentational focus construction limited to a single verb meaning 'remain' seems to be an areal phenomenon, since the same exceptional

behavior of a verb meaning 'remain' has been observed in several Atlantic languages, i.e., in languages that have no close genetic relationship with Mandinka but are spoken in the same area, for example Wolof (Sylvie Nouguier-Voisin, p.c.) and Jóola-Banjal (Bassène & Creissels 2011).

5. Valency operations involving a change in the verb stem

5.1. Antipassive Derivation

Mandinka has a suffix *-ri* (with the allomorph *-diri* in combination with stems ending with a nasal) found exclusively with transitive verbs in constructions in which the P argument is left unexpressed, cannot be identified to the referent of a noun phrase included in the same construction, and is interpreted as non-specific. This distribution makes it possible to analyze *-ri* as a valency operator of the antipassive type. However, in other respects, *-ri* has properties quite unusual for an antipassive marker, since with just one exception (*dómó* 'eat'), *ri*-forms cannot be used as the verbal predicate of finite clauses, and the suffix *-ri* can be used only in the following conditions:

– when the verb is used nominally as an event noun, as in (29c);
– when the verb is used in a non-finite form expressing temporal simultaneity, marked by a suffix *-too*, as in (30b);
– in agent nominalization, marked by a suffix *-laa* ∼ *-naa*, as in (31b);
– in instrument nominalization, marked by a suffix *-raŋ* ∼ *-laŋ* ∼ *-daŋ*, as in (32b);
– in causative derivation (see Section 5.2).

(29) a. *Mus-óo   be   maani-túw-o la.*
　　　 woman-DEF COP   rice-pound-DEF OBL
　　　 lit. 'The woman is at the rice-pounding.' → 'The woman is pounding rice.'
　　　 (*maaní* 'rice' saturates the P valency of *tǔu* 'pound', and the subject of the copula is identified to the unexpressed A argument)

　　 b. *Maan-óo be   tuw-ó   la.*
　　　 rice-DEF   COP   pound-DEF   OBL
　　　 lit. 'The rice is at the pounding.' → 'The rice is being pounded.'
　　　 (if none of the arguments of *tǔu* 'pound' is expressed, in the absence of the antipassive suffix, the subject of the copula is identified to the unexpressed P argument)

　　 b. *Mus-óo   be   tuu-r-óo   la.*
　　　 woman-DEF COP   pound-ANTIP-DEF   OBL
　　　 lit. 'The woman is at the pounding.ANTIP.' → 'The woman is pounding.'
　　　 (the antipassive suffix saturates the P valency of *tǔu* 'pound', and the subject of the copula is identified to the unexpressed A argument)

(30) a. *Ŋ́   ŋá   mus-óo   maani-tuu-tôo   jé.*
       1SG   CMP.POS   woman-DEF   rice-pound-SIMULT   see
       'I saw the woman pounding rice.'

   b. *Ŋ́   ŋá   mus-óo   tuu-ri-tôo   jé.*
       1SG   CMP.POS   woman-DEF   pound-ANTIP-SIMULT   see
       'I saw the woman pounding.'

(31) a. *maani-tuu-láa*　　　　　　　b. *tuu-ri-láa*
       rice-pound-AGNR　　　　　　　　　pound-ANTIP-AGNR
       'person who pounds rice'　　　　　'person who pounds'

(32) a. *maani-tuu-ráŋ*　　　　　　　b. *tuu-ri-láŋ*
       rice-pound-INSNR　　　　　　　　　pound-ANTIP-INSNR
       'rice-pestle'　　　　　　　　　　'pestle'

With the sole exception of *dómó* 'eat', the antipassive form of Mandinka transitive verbs cannot be used as the verbal predicate of clauses in which the A argument only would be expressed, but it is commonly found in a functionally equivalent antipassive periphrasis, in which the antipassive form of a transitive verb used nominally is the object of *ké* 'do' – Ex. (33).

(33) a. **Mus-óo   ye   Ø tuu.*　　　b. **Mus-óo   tuu-ta*
       woman-DEF   CMP.POS   pound　　　　woman -DEF   pound-CMP.POS
       Intended: 'The woman pounded.' – sentence (a) is absolutely impossible, and the only possible reading of sentence (b) is 'The woman was pounded.'

   c. *Mus-óo   ye   tuu-r-ôo   ké.*
       woman-DEF   CMP.POS   pound-ANTIP-DEF   do
       lit. 'The woman did the pounding.ANTIP.' → 'The woman pounded.'

  Dómó 'eat' is the only Mandinka verb with which *-ri* has the usual behavior of antipassive markers, i.e. yields a form used not only as an active action noun, but also as an intransitive verb whose subject represents the agent – Ex. (34c).

(34) a. *Díndíŋ-o   ye   mbúur-ôo   dómo.*
       child-DEF   CMP.POS.TR   bread-DEF   eat
       'The child ate the bread.'

   b. *Díndíŋ-o   ye   dómó-r-ôo   ké.*
       child-DEF   CMP.POS.TR   eat-ANTIP-DEF   do
       'The child ate.'

   c. *Díndíŋ-o   dómó-rí-ta.*
       child-DEF   eat-ANTIP-CMP.POS.INTR
       same meaning as (b)

The cognates of this atypical antipassive suffix in other Manding varieties have been described as nominalization markers. They yield forms that can never be used as verbs, and they cannot be analyzed as encoding patient demotion, since they may be used to mark the nominalization of intransitive verbs, and their presence with transitive verbs used as action nouns does not block the expression of the patient (see for example Dumestre 2003: 74-5 on Bambara *-li*). However, a canonical antipassive suffix *-ndì* probably cognate with these problematic Manding suffixes is found in Soninke (a language of the Western branch of the Mande family distantly related to Manding): in Soninke, *-ndì* converts transitive verbs into intransitive verbs assigning the same semantic role to their subject, cf. Creissels 1991. Consequently, Mandinka *-ri* and its cognates in other Manding varieties can be analyzed as reflexes of a former antipassive suffix, but Mandinka is the only Manding dialect showing clear evidence supporting this hypothesis.

5.2. Causative Derivation

When the input of Causative Derivation is an intransitive construction, the subject of the non-derived verb is converted into the object of the causative verb, and a causer is introduced in subject function – Ex. (35).

(35) a. *Díndíŋ-o   lá   dendik-ôo nóo-ta.*
      child-DEF   GEN   shirt-DEF   get_dirty-CMP.POS.INTR
      'The child's shirt got dirty.'

   b. *Díndíŋ-o   yé   a   lá   dendik-ôo nó-ndi.*
      child-DEF   CMP.POS.TR   3SG   GEN   shirt-DEF   get_dirty-CAUS
      'The child soiled his shirt.'

When Causative Derivation operates on a transitive construction, the general rule (which allows very few exceptions) is that the subject of the non-derived verb (the causee in the causative construction) takes the object function, and the object of the non-derived verb is converted into an oblique marked by the postposition *lá* – Ex. (36).

(36) a. *Díndíŋ-o   yé   tooñâa   fó.*
      child-DEF   CMP.POS.TR   truth.DEF   tell
      'The child told the truth.'

   b. *Kew-ó   ye   díndíŋ-o   fóo-rí-ndí   tooñáa   la.*
      man-DEF   CMP.POS.TR   child-DEF   tell-ANTIP-CAUS   truth.DEF   OBL
      'The man made the child tell the truth.'

As illustrated by the examples above, Mandinka has two ways of marking causative derivation:

– The simple causative suffix *-ndi* is typically used to causativize intransitive constructions and to express relatively direct causation; it is however also used with a few transitive verbs (the only ones attested in may data are *duní* 'carry on the head', *fútúu* 'marry', *karáŋ* 'learn', *lóŋ* 'know', *mǐŋ* 'drink', *nǐŋ ~ nikíŋ* 'learn', *sáabú ~ sábábú* 'cause', and *sené* 'cultivate').

– The complex suffix *-(di)ri-ndi* , whose first formative can be identified as the antipassive marker *-(di)ri*, is exclusively used to causativize transitive constructions, and can only express indirect causation.

In the case of *dómó* 'eat', the analysis of the causative form *dómóríndí* as derived from the antipassive form *dómórí* 'eat (intr.)' is obvious, since this decomposition is fully consistent with the syntactic properties of *dómórí* and *dómóríndi*: *-ri* encodes the demotion of the object, making it possible for the initial subject to move to object position when a causer is introduced in subject position.

(37) a. *Díndíŋ-o   dómó-rí-ta.*
　　　 child-DEF   eat-ANTIP-CMP.POS.INTR
　　　 'The child ate.

　　 b. *Kew-ó ye   díndíŋ-o   dómó-rí-ndí   (mbúur-óo la).*
　　　 man-DEF CMP.POS.TR child-DEF   eat-ANTIP-CAUS$_1$ bread.DEF OBL
　　　 'The man made the child eat (bread).'

The analysis of *-(di)ri-ndi* as a complex suffix is less obvious with other verbs, since the causative suffix *-ndi* attaches to verb stems, and *dómó* 'eat' is the only Mandinka verb whose antipassive form can be used in verbal predicate function (see above).

Diachronically, the other Manding varieties provide no evidence helping to solve this puzzle. They mark causative derivation by means of prefixes that are not cognate with Mandinka *-ndi*, and do not have affixes available to encode the causativization of transitive constructions. Moreover, as already commented in Section 5.1, the cognates of Mandinka *-ri* in other Manding varieties show no clear evidence of originating from a former antipassive marker. However, the decomposition of *-(di)ri-ndi* as *-(di)ri* ANTIP + *-ndi* CAUS is strongly supported, in a diachronic perspective, by comparison with Soninke, since this language has a canonical antipassive marker *-ndì* and a causative marker *-ndí* which are probable cognates of Mandinka *-ri* and *-ndi* respectively.

5.3. Postposition Incorporation

In *Postposition Incorporation,* the same argument can be encoded either as an oblique in an intransitive construction, or as the object of a compound verb form incorporating the postposition used to mark the same argument when it is encoded as an oblique – ex. (38).

(38) a. *Bándíy-o-lú   boyi-tá   jul-óo-lu   kaŋ.*
        bandit-DEF-PL   fall-CMP.POS.INTR   merchant-DEF-PL   on
        'The bandits attacked the merchants (lit. fell on the merchants).'

  b. *Bándíy-o-lu   yé   jul-óo-lu   boyiŋ-kaŋ.*
        bandit-DEF-PL   CMP.POS.TR   merchant-DEF-PL   fall-on[10]
        'The bandits attacked the merchants.'

Very few verbs lend themselves to this transformation. For example, it is possible with *nǎa ... tí* 'come with → bring', but not with *táa ... tí* 'go with → carry'.

6. Valency classes

6.1. Class 1 (plain intransitive verbs)

The verbs grouped into this class have only intransitive uses. As a rule, they can be transitivized by means of the causative suffix. *Saa* 'die' seems to be the only exception to this rule. In addition to the verbs already mentioned in Sections 3.1.1 and 3.3.2 as illustrations of the intransitive and extended intransitive frames, this class includes among many others the following verbs:

x **níŋ** y **bĕŋ** $= x$ meets y (niŋ $=$ with)
x **díyáa** $= x$ is pleasant, x is easy, x **díyáa** y yé $= y$ likes x
x **fúntí** $= x$ appears, x **fúntí** $L = x$ goes out from somewhere
x **kúmá** $= x$ speaks / sounds (produces a sound), x **kúmá** y yé $= x$ talks to y
x **nǎa** $L = x$ comes somewhere, x **nǎa** y tí z yé $= x$ brings y to z, x **nǎa** y tí $L = x$ brings y somewhere
x **sawúŋ$_1$** $(L) = x$ jumps (somewhere)
x **sǐi** $(y$ káŋ$) = x$ sits down (on y), x **sii** $(L) = x$ lives somewhere
x **sití$_2$** $= x$ is ill-lucked
x **súmáyáa** $= x$ is cold
x **táa** $L = x$ goes somewhere, x **táa** y tí z yé $= x$ carries y to z, x **táa** y tí $L = x$ carries y somewhere
x **túunéŋ** $= x$ sinks

6.2. Class 2 (plain transitive verbs)

For the verbs belonging to this class, an intransitive construction with a passive reading constitutes the only alternative to the basic transitive (or extended transitive) frame. In addition to the verbs already mentioned in Sections 3.2.1 and 3.3.1 as illustrations of the transitive and extended transitive frames, this class includes among many others the following verbs:

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[10] The epenthetic segment *-ŋ-* has been arbitrarily assigned to the preceding morpheme.

x y **báyi** *L* = *x* chases *y* from somewhere

x y **bǒŋ** *L* = *x* pours *y* somewhere

x y **búŋ** = *x* stings *y*, *x y* **búŋ** *z* lá = *x* aims at *y* with *z*, *x* throws *z* on *y*

x y **bulá**$_2$ = *x* leaves *y*, *x* abandons *y*

x y **búsá**$_1$ = *x* beats *y*, *x* hits *y*

x y **deemá** = *x* hunts *y*

x y **dímíŋ** = *y* feels pain in *x*, *x* causes *y* to feel pain)

x y **fárásí** *z* bálá = *x* tears *y* from *z*

x y **fáyí** *L* = *x* throws *y* somewhere

x y **fítá** = *x* wipes *y*

x y **fútúu** = *x* marries *y* – *x* a man, *y* a woman

x y **karáŋ**$_1$ = *x* reads *y*

x y **ké**$_3$ *L* = *x* puts *y* somewhere

x y **ké**$_4$ *L* = *x* spends *y* somewhere, *x y* **ké**$_4$ *z* tí = *x* spends *y* doing *z* – *y* a time span

x y **kíi** *z* yé = *x* sends *y* to *z*, *x y* **kíi** *L* = *x* sends *y* somewhere

x y **kóŋkóŋ** *L* = *x* wipes *y* from somewhere

x y **kúmándí** = *x* calls *y*, *x y* **kúmándí** *z* lá = *x* calls *y* a *z*

x y **kuntú** (*z* lá) = *x* cuts *y* (with *z*)

x y **láa**$_2$ (*z* yé) = *x* tells *y* (to *z*) – *y* a story

x y **mǎa** (*z* lá) = *x* touches *y* (with *z*)

x y **múurá** *z* lá = *x* covers *y* with *z*

x y **sambá** *z* yé = *x* brings *y* to *z*, *x* carries *y* to *z*, *x y* **samba** *L* = *x* brings *y* somewhere, *x* carries *y* somewhere

x y **sití**$_1$ (*z* bálá) = *x* ties *y* (to *z*)

x y **sǒo** *z* kónó = *x* pours *y* into *z*

x y **tǎa** (*z* búlú) = *x* takes *y* (from *z*)

x y **teyí**$_1$ (*z* lá) = *x* cuts *y* (with *z*)

x y **tóoláa** *z* lá = *x* names *y z*

6.3. Class 3

The verbs grouped into this class differ from those of Class 2 by the possibility of two transitive constructions related via the Object / Oblique Permutation:

x y **bítí** *z* lá ∼ *x z* **bítí** *y* tó = *x* covers *y* with *z*, *x* puts *z* on *y* – *y* an opening

x y **dáaní** *z* búlú ∼ *x z* **dáaní** *y* lá = *x* asks *z* for *y*

x y **kara-ndí** *z* yé ∼ *x z* **kara-ndí** *y* lá = *x* teaches *y* to *z*

x y **sáfée** *z* yé ∼ *x z* **sáfée** *y* lá = *x* writes *y* to *z*

x y **sóolí** *z* kónó ∼ *x z* **sóoli** *y* lá = *x* crams *y* into *z*, *x* stuffs *z* with *y*

x y **suuñáa** *z* búlú ∼ *x z* **suuñáa** *y* lá = *x* steals *y* from *z*

6.4. Class 4 (plain P-labile verbs)

The verbs grouped into this class have an intransitive construction and a transitive construction related via the Causative / Anticausative alternation. They cannot take the causative suffix used to causativize intransitive constructions, but

their transitive construction may be causativized by means of the complex suffix *-(di)ri-ndi* (*faa-rindí* 'make kill', *jani-rindí* 'make burn', etc.).

x **făa** = *x* dies ~ *x y* **făa** = *x* kills *y*
x **janí** = *x* burns ~ *x y* **janí** = *x* burns *y*
x **kátí** = *x* breaks ~ *x y* **kátí** = *x* breaks *y*
x **ké₁** = *x* happens, *x* occurs ~ *x y* **ké₁** = *x* does *y*
x **tará** *L* = *x* is found somewhere, *x* **tará** *y* lá = *x* is affected by *y* ~ *x y* **tará** *L* = *x* finds *y* somewhere
x **teyí₃** = *x* breaks ~ *x y* **teyí₃** = *x* breaks *y*
x **tú** *L* = *x* remains somewhere; *x y* **tú** *L* = *x* leaves *y* somewhere

The last verb of this list (*tú* 'remain / leave') has the particularity of being the only Mandinka verb having the ability to occur in an impersonal construction with a subject de-topicalizing function – see 4.7.

6.5. Class 5 (plain A-labile verbs)

The verbs grouped into this class have an intransitive construction and a transitive construction in which they assign the same role to their subject. Those of them which lend themselves to causativization take the causative suffix typically used to causativize intransitive verbs.

In most cases, the alternative constructions of the verbs of Class 5 are related via the Object / Oblique alternation, but a minority of them are involved in the Active / Introversive alternation:

x **baláŋ** *y* má *z* lá ~ *x z* **baláŋ** *y* má = *x* refuses *y z*, *x* denies *y z*
x **búsá₂** *y* káŋ ~ *x y* **búsá₂** = *x* falls violently on *y*
x **diyaamú** = *x* speaks, *x* **diyaamú** *y* lá ~ *x y* **diyaamú** = *x* discusses *y*
x **jélé** = *x* laughs, *x* **jélé** *y* lá ~ *x y* **jélé** = *x* laughs at *y*
x **kumbóo** = *x* cries, *x y* **kumbóo** = *x* laments the loss of *y*
x **sárí** = *x* screams, *x* **sárí** *y* káŋ = *x* shouts at *y*, *x* **sárí** *y* tí ~ *x y* **sárí** = *x* shouts *y*
x **selé** *y* sánto ~ *x y* **selé** = *x* climbs up *y*
x **teyí₂** *y* lá ~ *x y* **teyí₂** = *x* crosses *y*
x **túlúŋ** = *x* plays, *x* **túlúŋ** *y* lá ~ *x y* **túlúŋ** = *x* does not take *y* seriously, *x* behaves frivolously towards *y*
x **wúlúu** *y* lá ~ *x y* **wúlúu** = *x* gives birth to *y*

x y **karáŋ₂** = *x* learns *y*, *x* **karáŋ₂** = *x* learns a lot
x y **lóŋ** = *x* knows *y*, *x* **lóŋ** = *x* knows a lot
x y **mutá₂** = *x* acts on *y*, *x* **mutá₂** = *x* takes effect

6.6. Class 6

This class is characterized by two possible transitive constructions, one related to the intransitive construction according to the Object / Oblique Alternation

(characteristic of A-labile verbs), and the other related to the intransitive construction according to the Causative / Anticausative Alternation (characteristic of P-labile verbs). *Míníŋ* 'wind' is the only verb I have found in this class.

x **míníŋ** y lá ~ x Refl **míníŋ** y lá = x hugs y, x winds around y, x y **míníŋ** = x surrounds / encircle y, x y **míníŋ** z lá = x winds y around z

6.7. Class 7

The verbs in this class can be labeled 'semi-labile'. They participate in the Causative / Anticausative Alternation, but to a limited extent only, since in the transitive construction, their non-derived form is in competition with a morphologically marked causative form. The precise conditions on the use of the causative form vary according to the individual verbs, and it is impossible to formulate a general rule accounting for all of them with precision, but the general tendency is that the morphologically marked causative form tends to be preferred if the agent exerts a relatively indirect manipulation, or if the patient has the ability to control the process.

x **bó** L = x leaves a place, x y **bó** L ~ x y **bó-ndí** L = x takes off / removes y from somewhere
x **boyí** = x falls, x y **boyí** ~ x y **boyi-ndí** = x makes y fall
x **bulá$_1$** L = x settles oneself / boards somewhere, x y **bulá$_1$** L ~ x y **bula-ndí** L = x puts y somewhere
x **dŭŋ$_1$** L = x enters somewhere, x y **dŭŋ$_1$** L ~ x y **du-ndí** L = x slips y somewhere, x makes/lets y enter somewhere
x **fáa** y lá = x is full of y, x y **fáa** z lá ~ x y **fá-ndí** z lá = x fills y with z
x **ké$_2$** y tí = x becomes y, x is y, x y **ké$_2$** z tí ~ x y **ké-ndí** z tí = x makes z out of x, x transforms y into z
x **ñorí** = x moves, x y **ñorí** = x pushes y, x y **ñori-ndí** = x causes y to move
x **sawúŋ$_2$** y lá = y is infected by x – x an illness, x y **sawúŋ$_2$** z lá ~ x y **sawu-ndí** z lá = x infects z with y – y an illness
x **sotó** L = x is available somewhere, x y **sotó** = x gets y, x has y, x y **sotó** z búlú = x gets y from z, x y **soto-ndí** z yé = x makes y available to z
x **sunú** = x is sad, x y **sunú** ~ x y **sunu-ndí** = x makes y sad

6.8. Class 8 (media tantum)

This class includes a few verbs occurring exclusively in the middle construction, or having other constructions in marked contexts only, as discussed for *súmúnáa* in Section 2.6 (media tantum).

x Refl **fóñóndí** = x rests
x Refl **lákúrá** y lá = x finishes y
x Refl **súmúnáa** = x urinates

6.9. Class 9

The few verbs grouped into this class are used intransitively or in the middle construction, but have no transitive use.

x **bálúu** $=$ *x* lives / survives, *x* Refl **bálúu** *y* lá $=$ *x* lives on *y*

6.10. Class 10

The verbs grouped into this class, like those of class 9, participate in the Intransitive / Middle Synonymy. In addition to that, like the semi-labile verbs grouped into class 7, they also participate in the Causative / Anticausative Alternation, but only to a limited extent, having transitive uses in which the causative form is required.

x **borí** $\sim$ *x* Refl **borí** $=$ *x* runs / moves quickly; $=$ *x* runs; *x y* **borí** $=$ *x* rides/drives *y*; *x y* **bori-ndí** $=$ *x* rides/drives *y*, *x* makes *y* run

x **láa$_1$** (*y* káŋ) $\sim$ *x* Refl **láa$_1$** (*y* káŋ)$=$ *x* lies down (onto *y*); *x y* **láa$_1$** (*z* káŋ) $=$ *x* lays / loads / puts *y* (onto *z*); *x y* **lá-ndí** (*z* káŋ) $=$ *x* lays *y* (onto *z*)

x **lǒo** $\sim$ *x* (Refl) **lǒo** $=$ *x* stands, *x* stops; *x y* **lǒo** $\sim$ *x y* **lo-ndí** $=$ *x* builds *y*, *x* erects *y*, *x* puts *y* in standing position

x **máabó** *y* má $\sim$ *x* Refl **máabó** *y* má $=$ *x* hides from *y*; *x y* **máabó** *z* má $\sim$ *x y* **máabó-ndí** *z* má $=$ *x* hides *y* from *z*

6.11. Class 11

The verbs grouped into class 11 differ from plain transitive verbs by their ability to occur in a middle construction expressing a valency operation of the antipassive type.

x y **dǔŋ$_2$** *z* lá $=$ *x* dresses *z* in *y*, *x* puts *y* on *z* – *y* a piece of clothing; *x y* **dǔŋ$_2$** $=$ *x* dresses in *y* ; *x* Refl **dǔŋ$_2$** $=$ *x* dresses

x y **jé** $=$ *x* sees *y*; *x* Refl **jé** $=$ *x* sees

x y **míirá** $\sim$ *x* Refl **míirá** *y* tó $=$ *x* thinks about *y*

x y **mǐŋ** $\sim$ *x* Refl **mǐŋ** *y* lá $=$ *x* drinks *y*

7. Conclusion

The following aspects of Mandinka morphosyntax play a crucial role in the organization of the valency properties of Mandinka verbs and in their analysis:

– a particularly clear-cut distinction between transitive and intransitive predications, and between core syntactic terms and obliques;
– a strict limitation of the number of core nominal terms in predicative constructions to two;

– a total ban on null core arguments, either with an anaphoric or an arbitrary reading, which makes equally unproblematic the recognition of A-labile and P-labile verbs.

Mandinka has a middle construction whose relationship to transitive and intransitive constructions involves cross-linguistically common mechanisms (such as the ability to encode valency operations of the antipassive type), and the way causativization is organized in Mandinka conforms to well-established cross-linguistic regularities, but Mandinka shows an undeniable originality in some aspects of valency grammar:

– In Mandinka, A-lability and P-lability are not mutually exclusive, since some verbs can be used intransitively, without any morphological marking, with a subject corresponding to any of the two core terms of the corresponding transitive construction.
– Mandinka has many pairs of etymologically related verbs differing in their behavior with respect to transitivity alternations and/or causativization. Pairs such as *teyí* 'cut' / *teyí* 'cross', *mutá* 'catch' / *mutá* 'act on', *karáŋ* 'read' / *karáŋ* 'learn', *búsá* 'hit' / *búsá* 'fall violently on' provide particularly clear evidence of the relevance of prototypical transitivity as discussed by Næss 2007, since the member of the pair standing closer to the transitive prototype is a plain transitive verb, whereas the other is A-labile.
– Two semantic types of P-lability must be distinguished in Mandinka, manifested in the Causative / Anticausative Alternation and in the Active / Passive Alternation respectively; the Active / Passive Alternation applies across the board to verbs that have the ability to occur in a transitive construction, whereas the Causative / Anticausative alternation is a lexical property of individual verbs, and is in competition with morphologically encoded Causative Derivation for a class of 'semi-labile' verbs.
– Mandinka has a suffix encoding a valency operation which is clearly of the antipassive type, but with the only exception of *dómó* 'eat', it yields forms that can be used as action nouns but not as verbal predicates.
– The suffix encoding the causativization of transitive constructions is a complex suffix whose first formative can be identified as the antipassive suffix.
– Mandinka has an impersonal construction similar to the 'presentational focus' constructions attested in Romance and Bantu languages among others (Creissels (2010), Creissels (2011)), which is however limited to a single verb: *tú* 'remain'.

Abbreviations

AGNR: agent nominalizer, ANTIP: antipassive, BEN: benefactive postposition, CAUS: causative, Cl: clause, CMP: completive aspect, CTRP: centripetal, DEF: definite, DEM: demonstrative, FOC: focalization, GEN: genitive, ID.COP: identificational copula, INCMP: incompletive aspect, INF: infinitive, INSNR: instrument nominalizer, L: noun phrase, postposition phrase or adverb encoding the ground in a spatial relationship,

LOC: locative postposition, LOC.COP: locative copula, N: noun phrase, NEG: negative, O: object, OBL: postposition in oblique marker function, PL: plural, POS: positive, Postp: postposition, POT: potential, PSPH: postposition encoding the meaning 'within the personal sphere of', PST: past, Q: interrogative particle; QUOT: quotative, REFL: reflexive pronoun, REL: relativizer, RES: resultative, RU: reported utterance, S: subject, SG: singular, SIMULT: non-finite verb form encoding simultaneity, TAM: tense-aspect-mood, V: verb, X: oblique.

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Appendix: The Mandinka equivalents of the 70 verb meanings

In this chart, each Mandinka verb is given with the coding frame corresponding to the role frame put forward in the questionnaire, with the indication of its behavior with respect to the causative/anticausative and object/oblique alternations, and with some precisions about its behavior with respect to causativization / antipassivization and in the middle construction.

The column 'caus., antip.' specifies the possibility to attach directly to the verb stem taken with the meaning indicated, either the causative suffix *-ndi* (typically

used to causitivize intransitive constructions) or the antipassive suffix *-(di)ri* (excllusively used with transitive verbs). It will be recalled that the verbs that have an antipassive form can be causativized by attaching the causative suffix to the antipassive form.

In the column 'mid.', '= intr.' indicates the possibility of a middle construction synonymous with the intransitive construction of the same verb, whereas 'antip.' indicates the possibility of a middle construction with an antipassive function.

	meaning label	Mandinka verb	caus. /antic.	obj. /obl.	caus., antip.	mid.
(1)	RAIN	no equivalent Mandinka verb				
(2)	BE DRY	x **jǎa** = x is dry	–	–	caus.	
(3)	BURN	x **janí** = x burns	+	–	antip.	
(4)	SINK	x **túunéŋ** = x sinks	–	–	caus.	
(5)	ROLL	same as RUN (22)				
(6)	BE A HUNTER	no equivalent Mandinka verb				
(7)	BE HUNGRY	x **kóŋkó** = x is hungry	–	–	caus.	
(8)	BE SAD	x **sunú** = x is sad	+	–	caus.	
(9)	DIE	x **sǎa** = x dies x **fǎa** = x dies	– +	– –		
(10)	FEEL COLD	no equivalent Mandinka verb				
(11)	FEEL PAIN	x y **dímíŋ** = y feels pain in x	–	–		
(12)	SCREAM	x **sárí** = x screams	–	–	caus.	
(13)	LAUGH	x **jélé** (y lá) = x laughs (at y)	–	+	caus.	
(14)	PLAY	x **túlúŋ** (y lá) = x plays (with y)	–	+	caus.	
(15)	LIVE	x **sǐi** L = x lives somewhere	–	–	caus.	
(16)	LEAVE	x y **bulá** = x leaves y	–	–	antip.	
(17)	GO	x **táa** L = x goes somewhere	–	–	caus.	

(18)	SING	x y **láa** = x sings y	–	–		
(19)	JUMP	x **sawúŋ** = x jumps	–	–	caus.	
(20)	SIT DOWN	x **sǐi** (y káŋ) = x sits down (on y)	–	–	caus.	
(21)	SIT	same as SIT DOWN (20)				
(22)	RUN	x **borí** = x runs	+	–	caus.	= intr.
(23)	CLIMB	x **selé** (y sánto) = x climbs (up y)	–	+	caus.	
(24)	COUGH	x **tootóo** = x coughs	–	–	caus.	
(25)	BLINK	no equivalent Mandinka verb				
(26)	SHAVE	x y **líi** = x shaves y	–	–	antip.	
(27)	DRESS	x y **dǔŋ** z lá = x dresses z in y, x puts y on z	–	–	antip.	
(28)	WASH	x y **kǔu** = x washes y	–	–	antip.	
(29)	EAT	x y **dómó** = x eats y	–	–	antip.	
(30)	HELP	x y **máakóyí** = x helps y	–	–	antip.	
(31)	FOLLOW	x y **báyíndí** = x follows y	–	–	antip.	
(32)	MEET	x níŋ y **běŋ** = x meets y (niŋ = with, and)	–	–	caus.	
(33)	HUG	x **míníŋ** y lá = x hugs y	+	+		= intr.
(34)	SEARCH FOR	x y **ñíní(ŋ)** = x searches for y	–	–	antip.	
(35)	THINK	x y **míirá** = x thinks about y	–	–	caus.	antip.
(36)	KNOW	x y **lóŋ** = x knows y	–	–[11]	caus.	
(37)	LIKE	x y **kanú** = x likes y	–	–	caus.	

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[11] *Lóŋ* 'know' is not involved in the object/oblique alternation, but accepts a less common type of transitivity alternation maintaining the semantic role of the subject: the active/introversive alternation.

		x **lafí** *y* lá = *x* likes *y* *x* **díyáa** *y* yé = *y* likes *x*	– –	– –	caus. caus.	
(38)	FEAR	*x* **síláŋ** *y* lá = *x* fears *y*	–	–	caus.	
(39)	FRIGHTEN	*x y* **sílá-ndí** = *x* frightens *y* (caus. < *síláŋ* 'fear')	–	–	antip.	
(40)	SMELL	*x y* **súmbú** = *x* smells *y*	–	–	antip.	
(41)	LOOK AT	*x y* **félé** = *x* looks at *y*	–	–	antip.	
(42)	SEE	*x y* **jé** = *x* sees *y*	–	–	antip.	
(43)	TALK	*x* **kúmá** *y* yé = *x* talks to *y*	–	–	caus.	
(44)	ASK FOR	*x y* **dáaní** *z* búlú ~ *x z* **dáaní** *y* lá = *x* asks *z* for *y*	–	–	antip.	
(45)	SHOUT AT	*x* **sárí** *y* káŋ = *x* shouts at *y*			caus.	
(46)	TELL	*x y* **fó** *z* yé = *x* tells *y* to *z* *x y* **láa** (*z* yé) = *x* tells *y* (to *z*) – *y* a story	– –	– –	antip.	
(47)	SAY	*x* **a fó** *y* yé **kó** '...' = *x* says '...' to *y* [12]	–	–	antip.	
(48)	NAME	*x y* **tóoláa** *z* lá = *x* names *y z*	–	–	antip.	
(49)	BUILD	*x y* **lǒo** = *x* builds *y*	+	–	antip.	
(50)	BREAK	*x y* **kátí** = *x* breaks *y* *x y* **teyí** = *x* breaks *y*	+ +	– –	antip. antip.	
(51)	KILL	*x y* **fǎa** = *x* kills *y*	+	–	antip.	
(52)	BEAT	*x y* **búsá** = *x* beats/hits *y*	–	–	antip.	
(53)	HIT	same as BEAT (52)				
(54)	TOUCH	*x y* **mǎa** (*z* lá) = *x* touches *y* (with *z*)	–	–		

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[12] *a* is a cataphoric pronoun in object role, *kó* is the quotative marker.

(55)	CUT	x y **kuntú** (z lá) = x cuts y (with z)	–	–	caus.	
(56)	TAKE	x y **tǎa** (z búlú) = x takes y (from z)	–	–		
(57)	TEAR	x y **fárásí** z bála = x tears y from z	–	–	antip.	
(58)	PEEL	x y **wóto** = x peels y	–	–	antip.	
(59)	HIDE	x y **máabó** z má = x hides y from z	+	–	antip. [13]	
(60)	SHOW	x y **yita(ndí)** z lá = x shows y to z	–	–	antip.	
(61)	GIVE	x y **díi** z lá = x gives y to z x y **só** z lá = x gives z to y	– –	– –	antip. antip.	
(62)	SEND	x y **kíi** z yé = x sends y to z	–	–	antip.	
(63)	CARRY	x **táa** y tí z yé = x carries y to z	–	–	caus.	
(64)	THROW	x y **búŋ** z lá = x aims at y with z, x throws z on y x y **fáyí** L = x throws y somewhere	– –	– –	antip. antip.	
(65)	TIE	x y **sití** (z bála) = x ties y (to z)	–	–	antip.	
(66)	PUT	x y **ké** L = x puts y somewhere x y **bulá** L = x puts y somewhere x y **láa** (z káŋ) = x puts y (onto z)	– + +	– – –	antip. antip. antip.	
(67)	POUR	x y **bǒŋ** L = x pours y somewhere x y **sǒo** z kónó = x pours y into z	– –	– –	antip. antip.	
(68)	COVER	x y **múurá** z lá = x covers y with z	–	–	antip.	

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[13] *Máabó* as a transitive verb is compatible with the antipassive suffix, but *máabó* as an intransitive verb expressing 'hide (oneself)' has a causative form more or less synonymous with *máabó* (transitive).

		x y **bítí** *z* lá ~ *x z* **bítí** *y* to = *x* covers *y* with *z*	–	–	antip.	
(69)	FILL	*x y* **fá-ndí** *z* lá = *x* fills *y* with *z* (caus. < *fáa* 'be full')	–	–	antip.	
(70)	LOAD	same as PUT (onto) (66)				