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► **To cite this version:**

Denis Creissels, Sylvie Voisin. Valency-changing operations in Wolof and the notion of “co-participation”. Ekkehard König; Volker Gast. Reciprocals and Reflexives: Theoretical and Typological Explorations, 192, De Gruyter, pp.289-306, 2008, Trends in Linguistics. Studies and Monographs, 9783110195941. hal-03205873

HAL Id: hal-03205873

<https://hal.science/hal-03205873>

Submitted on 26 Apr 2021

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Valency-changing operations in Wolof and the notion of “co-participation”

Denis Creissels and Sylvie Nouguiet-Voisin

1. Introduction

In systems of valency-changing devices, a connection between reciprocity and reflexivity is particularly common. However, the frequency of this situation should not lead to a neglect of systems that do not make the affinity between reciprocity and reflexivity apparent, but treat reciprocity as a special case of a more general notion of “co-participation” (cf. Lichtenberk 2000). This applies in particular to Wolof. In this language, an ancient suffix with a basic meaning of “co-participation” is used to encode reciprocity and also seems to have played a role in the creation of verbal suffixes encoding other changes of valency. The relevance of the Wolof data to the topic of this volume thus comes from the fact that Wolof exhibits a system of verbal derivational extensions which reveals possible connections between reciprocity and other types of valency-changing operations involving the notion of “co-participation”.¹

Wolof (the most important language of Senegal, spoken also in Gambia and Mauritania) belongs to the Atlantic branch of the Niger-Congo phylum. Like several other Atlantic languages spoken in Senegal, Wolof differs from most languages of Sub-Saharan Africa in not having tone. Its most salient typological features are:

- a relatively rigid *SVOX* constituent order;
- a distinction between subjects and objects (without any distinction between transitive and intransitive subjects) involving contrasts in both constituent order and indexation of arguments in the verb form, but no case contrast;

1. This paper is based on the analysis of valency-changing operations in Wolof presented in Sylvie Nouguiet-Voisin’s PhD thesis (cf. Nouguiet-Voisin 2002). The analysis we put forward here is an attempt at elaborating and systematizing some hypotheses concerning the possibility of relations between verb suffixes coding distinct valency changes.

- focus marking by means of verbal inflection;
- in comparison to other Atlantic languages (e.g. Fula), a reduced noun class system;
- a complex system of verb suffixes coding valency changes.

In Wolof, the valency changes systematically coded by means of verb suffixes can be classified into six types: middle, causative, applicative, co-participative (including reciprocal), antipassive, and possessive. Those relevant to the questions addressed in this paper are further elaborated in Sections 3 and 4.

This list of valency change types calls for the following remarks:

(i) We call *possessive* a type of valency change systematically coded in Wolof by means of a verbal suffix, whereby an intransitive verb expressing a property attributed to the referent of the subject is converted into a transitive verb attributing the same property to the referent of its object, and assigning to the referent of its subject the role of possessor, as in (1).

(1) Wolof

- a. *Woto bi gaaw na.*
 car DEF be.fast PRF.3SG
 ‘The car is fast.’
- b. *Gaaw-le naa woto.*
 be.fast-POSS PRF.ISG car
 ‘I have a fast car.’

(ii) Strictly speaking, Wolof does not have passives, and regularly uses constructions combining object topicalization and subject focalization with a function similar to that fulfilled by passive constructions in other languages; however, some uses of the middle marker *-u* can be considered as quasi-passives.

(iii) Wolof has a middle derivation, but does not use it to code reflexivity in the narrowest sense of this term; it uses the noun *bopp* ‘head’ plus a possessive suffix or determiner with the function of a reflexive pronoun (for example, in Wolof, as in many languages, ‘I defended myself’ is expressed literally as ‘I defended my head’).

Our concern here is to analyze a puzzling feature of the coding of valency changes in Wolof: as is shown by the following chart, similar valency changes may be coded by different suffixes in this language, and the same suffix may code different valency changes.

Table 1. Valency changes and possible markers

Type of valency change	Possible markers
middle	<i>-u</i>
causative	<i>-e, -al, -le, -lu, -loo</i>
applicative	<i>-e, -al</i>
co-participative	<i>-e, -oo, -ante, -andoo, -aale</i>
antipassive	<i>-e</i>
possessive	<i>-le</i>

We first note that Wolof does not have a single marker encoding reciprocity, but a group of suffixes, termed “co-participative”, whose uses include various aspects of reciprocity. We also observe that three suffixes (*-e*, *-al*, and *-le*) have a variety of uses: the polysemy of the suffix *-e* is particularly striking. Moreover, only three of the suffixes listed in the table are clearly monomorphemic (*-e*, *-u*, and *-al*). The analysis of each of the other suffixes as being monomorphemic is justified in a strictly synchronic analysis, but we will present evidence that, in a historical perspective, *-le*, *-lu*, *-loo*, *-oo*, *-ante*, *-andoo* and *-aale* should be analyzed as having originated as morphologically complex markers.

We will try to show that several of these markers are related to each other via the notion of “co-participation”, and that the abstract meaning of co-participation interacts with contextual information in a specific way. The discussion presented in the following sections centers on the possibility to find a common semantic motivation underlying the various uses of the suffix *-e*, and to recognize etymological relations between *-e* and some of the other suffixes listed above.

2. General remarks on the notion of “co-participation” and the expression of reciprocity

Before presenting the Wolof data, we devote this section to some clarification concerning the notion of “co-participation”, and to a brief presentation of observations on cross-linguistic manifestations of (different types of) co-participation that we consider relevant to the analysis of the Wolof data.

The notion of “co-participation” can conveniently be defined as applying to constructions that imply a plurality of participants in the event they refer to, without assigning them distinct roles. This definition groups together three types of situations, for which we will use the terms *unspecified co-participation*, *parallel co-participation*, and *reciprocal co-participation*.

In constructions with the meaning of unspecified co-participation, an event involves two or more participants that may assume distinct roles, but the construction itself leaves open the precise role assumed by some of them, and role recognition crucially relies on lexical and/or pragmatic factors. Constructions with a meaning of parallel co-participation (typically expressed by *together* in English) imply that two or more participants share the same role, and constructions with a meaning of reciprocal co-participation imply a plurality of participants interacting in such a way that at least some of them assume two distinct roles in their interaction with the others.

Such definitions are necessary, but the linguistic manifestations of the different types of co-participation are not always easy to identify, and shifts are not rare, from one type of co-participation to another, or from co-participation to types of role assignment in which each participant receives a distinct role.

For example, many languages have markers such as English *with*, which is commonly regarded as polysemous, with a comitative meaning and an instrumental meaning, and *comitative* > *instrumental* is a very common diachronic process. The notion of “comitative” is commonly defined in a way that makes it equivalent to our notion of “parallel co-participation”. By contrast, the notion of “instrumental” implies a representation of the event in which each participant explicitly receives a distinct role, and can consequently not be included in co-participation. Moreover, the notion of “parallel co-participation” is too restricted to cover the variety of non-instrumental uses of *with*. For example, *John came with Peter* can indistinctly refer to situations that could be described in a more precise way by sentences such as *John and Peter came together*, *John came and brought Peter with him*, or *John came in the car driven by Peter*.

In order to account for the variation in the interpretation assigned to a given marker depending on the contexts in which it occurs, we will make a distinction between (i) the *abstract meaning* of a marker, and (ii) the *default interpretation* assigned to this marker in contexts that do not force a particular interpretation.

For example, a possible treatment of the polysemy of English *with* is that this preposition has unspecified co-participation as its abstract meaning, and parallel co-participation as its default interpretation. This definition of the meaning of *with* leaves open the possibility that contextual and/or pragmatic factors force interpretations of *with* in which the noun phrase introduced by *with* represents a participant whose role is more or less distinct from those assumed by the other participants. For example, *A came with B* says nothing about the precise way the entity represented by the term *B* participates in the event. In the absence of any other indication, the default interpretation will therefore be that A and B came together. The construction itself, however, does not necessarily imply a meaning of parallel co-participation, even when A and B represent entities

of the same type (as in *John came with Peter*). And in sentences in which A and B are necessarily assigned distinct semantic roles, such as *Mary came with her baby* (= *Mary brought her baby*) and *Mary came with her bicycle* (= *Mary used her bicycle to come*), it seems reasonable to posit that the difference in the interpretation is determined by the types of entities denoted by the nominal terms of a construction whose abstract meaning is unspecified co-participation.

In this perspective, the diachronic shift *comitative* > *instrumental* is analyzed as involving both the loss of the default interpretation of parallel co-participation, and the semanticization (or conventionalization)² of a contextually determined interpretation. This analysis is confirmed by the fact that, cross-linguistically, the use of comitative markers to code participants with specific roles recoverable from the context, and the tendency to semanticize such uses, are not limited to the expression of an instrumental meaning: some languages use comitative markers to retrieve the demoted subject in passive constructions, and the homonymy between causative markers and comitative markers observed in some languages (e.g., in the Mande language Soso)³ can be viewed as a piece of evidence showing that a possible origin of causative constructions is the conventionalization of a particular use of constructions whose original meaning was unspecified co-participation.

It is also interesting to mention at this point some observations on verbal derivations currently identified as “reciprocal” in descriptive grammars: derived verb forms used most commonly in a way compatible with the notion of reciprocity often have also more or less marginal uses that cannot be described as reciprocal. Such “reciprocal” verb forms clearly have reciprocity as their default meaning, but can also be used with a meaning of unspecified or parallel co-participation in contexts that exclude a reciprocal interpretation.

Turkish grammars, for example, usually designate the verbal suffix *-(I)ş* as a “reciprocal suffix”, and define its meaning as indicating a reciprocal or mutual action. For example, this suffix has a reciprocal interpretation in *bak-ış* ‘look at one another’, but with verbs whose argument structure excludes reciprocity, the same suffix indicates parallel co-participation: *koşuş* ‘run together’, *gülüş* ‘laugh together’, etc.

2. We use the term “semanticization” in the sense defined in Hopper and Traugott (1993: 83–85).

3. In this language, *A ra-faa B* ‘A brought B (= made B come)’, with the causative prefix *ra-* attached to the verb *faa* ‘come’, is synchronically distinct from *A faa B ra* ‘A came with B’, with the comitative postposition *ra* taking B as its complement, but diachronically, these two constructions seem to originate from two different arrangements of the same morphological material.

Another case in point is Tswana.⁴ The Tswana verbs derived by means of a suffix *-an* are commonly termed “reciprocal”, and this designation is justified by the fact that, most of the time, they unambiguously convey a reciprocal meaning. But verbs derived by means of *-an* can also be encountered in contexts in which speakers unambiguously interpret them as non-reciprocal. For example, the only possible meaning of *bopag-an-a* (< *bopega* ‘take shape’; *-a* is an inflectional suffix) is ‘fuse together’, and *gan-an-a* (< *gana* ‘refuse’) is commonly interpreted as ‘disobey’. Considering the pair of examples in (2), a reciprocal interpretation of (2a) is not excluded, but this sentence is commonly understood as synonymous with (2b), in which the underived form of *batla* ‘look for’ combines with *lepodisi* ‘policeman’ in the role of subject, and *legodu* ‘thief’ in the role of object.

(2) Tswana

- a. *lepodisi le batlana le legodu*
 5.policeman SM3:5 look.for.RECP with 5.thief
 abstract meaning: ‘*The policeman* and *the thief* refer to two persons participating in an event lexicalized as *look for*’, preferred interpretation: ‘The policeman is looking for the thief.’
- b. *lepodisi le batla legodu*
 5.policeman SM3:5 look.for 5.thief
 ‘The policeman is looking for the thief.’

Such observations can easily be accounted for by positing that:

- (a) reciprocity is the default interpretation of Tswana reciprocal verbs;
- (b) the reciprocal interpretation of Tswana reciprocal verbs can be cancelled by the lexical meaning of the verb, or by pragmatic factors;
- (c) the cancellation of the default interpretation of reciprocity results in activating an instruction to go back to the more abstract meaning of co-participation, and to construct an interpretation compatible with the factors that have led to the cancellation of the default meaning.

For example, a reciprocal interpretation of *bopagana* ‘fuse’ is excluded, since *bopega* ‘take shape’ has only one semantic role to assign, but a meaning of parallel co-participation (*take shape together* → *fuse*) is easy to imagine.

In the case of *ganana* ‘disobey’ < *gana* ‘refuse’, a reciprocal interpretation is not totally excluded, but it is proposals that are usually refused, or things, not persons. This makes a reciprocal interpretation unlikely in such cases.

4. Similar facts have been pointed out for other Bantu languages (cf. Ndayiragiye 2003, Maslova 2007).

Finally, in the case of *batlana* a reciprocal interpretation is, in principle, perfectly possible, and what suggests to cancel it here is that policemen usually look for thieves, while thieves, as a rule, rather try to avoid policemen.

In Tswana, the interpretation of the reciprocal form of transitive verbs in a construction including a comitative adjunct seems to proceed as follows: the subject is assigned the same semantic role as in the transitive construction of the corresponding non-derived verb, and the recognition of the precise way the referent of the subject interacts with the participant represented by the comitative adjunct relies on lexical, contextual and pragmatic factors, the reciprocal interpretation being only the default interpretation. The example of *batlana* shows that interpretations of reciprocal verbs in which a comitative adjunct is assigned the same semantic role as the object of the corresponding non-derived verb are not excluded. This results in uses of the reciprocal derivation of Tswana that are not too different from those considered typical of antipassive derivations: the only difference between (2a) and a typical antipassive construction is that the antipassive interpretation of (2a) does not entirely rely on the presence of a particular marker: it is the consequence of a combination of morphological, syntactic and pragmatic factors.

3. Valency changes coded by the suffix *-e* in Wolof

3.1. Causative *-e*

The causative use of the suffix *-e* is limited to a handful of intransitive verbs, for example *génn* ‘go out’ > *génn-e* ‘take out’:

(3) Wolof

- a. *génn na ci diggu kër*
 go.out PRE.SBJ.3SG LOC yard
 ‘He/she went out in the yard.’
- b. *génn-e na guro yu sànkàr yépp*
 go.out-CAUS PRE.SBJ.3SG cola.nut LNK be.with.worms all
 ‘He/she took out all the cola nuts that had worms.’

A productive way of deriving causative forms from intransitive verbs in Wolof is to add *-al* (limited to intransitive verbs, and implying a direct involvement

of the causer in the event caused) or *-loo* (compatible with both transitive and intransitive verbs, and carrying a meaning of indirect causation).⁵

3.2. Applicative *-e*

In its applicative use, the suffix *-e* licenses objects with a semantic role of instrument, manner, or location. The other applicative suffix *-al* is used to license objects with a semantic role of recipient, beneficiary, or companion.⁶ (4) illustrates the instrumental use of applicative *-e*, and (5) illustrates the comitative use of *-al*.⁷

(4) Wolof

- a. *añ nañu ak ceebu jën*
 lunch PRF.SBJ.3PL with rice.CSTR fish
 ‘They lunched with fish and rice.’
- b. *cee bu jën lañu añ-e*
 rice.CSTR fish FOC.SBJ.3PL lunch-APPL
 ‘It is fish and rice that they had for lunch.’

(5) Wolof

- a. *mu séy ak doomu nijaayam*
 3SG.SBJ get.married with child.CSTR uncle.3SG
 ‘He married his cousin.’
- b. *doomu nijaayam la séy-al*
 child.CSTR uncle.3SG FOC.SBJ.3SG get.married-APPL
 ‘It is his cousin that he married.’

5. The difference in meaning between *-al* and *-oo* can be illustrated by minimal pairs such as *toog* ‘sit (down)’ → *togg-loo* ‘invite to sit down’ / *toog-al* ‘make sit down, help to sit down’: *toog-loo* is appropriate for situations of indirect causation, whereas *toog-al* implies a physical involvement of the causer in the caused event (for example, when someone handles a chair to another person [s]he invites to sit down).

6. Comparison with Buy (an Atlantic language belonging to the same subgroup as Wolof) suggests a merger between two originally distinct suffixes, since Buy distinguishes *ar* ‘benefactive’ from *al* ‘comitative’ (cf. Doneux 1991: 63–64).

7. In these examples, the function of applicative derivation is to make it possible to use a focalizing device from which adjuncts introduced by the preposition *ak* are excluded, but Wolof also has obligatory applicatives, i.e. cases in which the object licensed by applicative derivation has absolutely no possibility to be constructed as an adjunct of the non-applicative form of the same verb. This occurs in particular with beneficiaries.

3.3. Antipassive *-e*

The identification of an antipassive derivation in Wolof may be surprising, since antipassive derivation is commonly considered a characteristic of ergative languages. The antipassive function of *-e* in Wolof is certainly not entirely comparable to that assumed by antipassive derivations in ergative languages, but in its antipassive use, the suffix *-e* makes it possible to omit the object of transitive verbs, or the object representing the recipient of ditransitive verbs, without modifying the semantic role assigned to the subject, as in *màtt* ‘bite someone’ > *màtt-e* ‘bite’ (without mentioning a specific patient), or *jox* ‘give something to someone’ > *jox-e* ‘give something’ (without mentioning a specific recipient). This is a function typical of antipassive derivations:

(6) Wolof

- a. *xaj bii du màtt-e*
 dog DEM NEG.SBJ.3SG bite-APSV
 ‘This dog does not bite.’
- b. *alal du jox-e màqaama*
 wealth NEG.SBJ.3SG give-APSV prestige
 ‘Wealth does not give prestige.’

This use of *-e* is possible only with a limited number of transitive verbs taking a single object, but it is fully productive with ditransitive verbs, in particular with ditransitive verbs derived by means of the applicative marker *-al*, as in (7):

(7) Wolof

- a. *togg naa yàpp wi*
 cook PRF.SBJ.ISG meat DEF
 ‘I have cooked the meat.’
- b. *togg-al naa la yàpp wi*
 COOK-APPL PRF.SBJ.ISG OBJ.2SG meat DEF
 ‘I have cooked the meat for you.’
- c. *togg-al-e naa yàpp wi*
 COOK-APPL-APSV PRF.SBJ.ISG meat DEF
 ‘I have cooked the meat for people.’

When reconstructing the history of the suffixes coding valency changes in Wolof, it is important to keep in mind that, cross-linguistically, specialized antipassive markers are not common in accusative languages. However, irrespective of the distinction between accusative and ergative alignment, middle forms orig-

inating from reflexives very commonly develop antipassive as well as passive uses, and derived verb forms interpreted by default as reciprocal may also have antipassive-like uses, as mentioned in Section 2.

3.4. Reciprocal *-e*

With some verbs, the form derived by means of *-e* expresses a reciprocal meaning. However, this use of *-e* is not very productive, and can be characterized as being limited to the expression of naturally reciprocal events (i.e., two participant events in which the exchange of roles is not absolutely obligatory, but nevertheless constitutes the normal situation), as in *gis* ‘see’ → *gis-e* ‘meet’, or *nuyu* ‘greet’ → *nuyoo* (< *nuyu* + *e*)⁸ ‘exchange greetings’:

(8) Wolof

- a. *nuyu naa ko*
greet PRF.SBJ.ISG OBJ.3SG
‘I greeted him/her.’
- b. *nuyoo naa ak moom*
greet.RECP PRF.SBJ.ISG with PRON.3SG
‘I exchanged greetings with him/her.’

In (9), the meaning carried by *-e* cannot, strictly speaking, be characterized as reciprocal, but it is nevertheless very close to the use of *-e* to code naturally reciprocal events, since in this example, *-e* combines a decausative meaning with a meaning of parallel co-participation: *rax* ‘mix’ (transitive) → *rax-e* ‘mix together’ (intransitive).

(9) Wolof

- ceeb bi dafa rax-e*
rice DEF FOC.SBJ.3SG mix-RECP
‘The rice is mixed.’ (i.e., there are both broken seeds and whole seeds in it)

8. In Wolof, a morphophonological process $u + e \rightarrow oo$ regularly occurs at morpheme boundaries.

4. Other suffixes possibly related to *-e*

4.1. Causative *-le*

Among the causative suffixes of Wolof, *-le*, homonymous with possessive *-le* that will be dealt with in Section 4.2, is specialized to the expression of a particular type of causation, namely sociative causation, in which the causer is not the only initiator or controller of the event, but crucially contributes to the realization of an event in which the causee takes an active part (‘help someone do something’). Consequently, in sociative causation, the causee is more agent-like than in prototypical causation, and (s)he can equally be viewed as a beneficiary. For example, *xuloo-le* ‘take someone’s side’ < *xuloo* ‘quarrel’ can be paraphrased as ‘take part in a quarrel to the benefit of one of the persons who are quarrelling’:

(10) Wolof

- a. *xuloo nañu*
 quarrel PRF.SBJ.IPL
 ‘We quarrelled.’
- b. *ba ñu ko tooñee, xuloo-le*
 when SBJ.3PL OBJ.3SG wrong.SUBORD quarrel-SCAUS
nañu ko
 PRF.SBJ.3SG OBJ.3SG
 ‘When they wronged him/her, we took his/her side.’

In a number of unrelated languages, the same derived forms of the verb are used to express ‘make someone do something’ and ‘help someone do something’. In Wolof too, the causative suffixes *-al* and *-lu* can occasionally be found in constructions representing events analyzable in terms of sociative causation, but this is not their central meaning. By contrast, the only possible interpretation of causative *-le* is sociative causation.

Given the semantic complexity of the role of causee in sociative causatives, causative affixes specialized to the expression of sociative causation, such as Wolof *-le*, can be expected to be complex markers, at least from an etymological point of view. More precisely, the semantic analysis of sociative causation suggests regarding causative *-le* as a complex marker with applicative *-al* as its first component, since an important function of applicative *-al* is to license direct objects with the semantic role of beneficiary.

From a strictly synchronic point of view, this analysis can hardly be maintained, since *-e* does not have a use that could directly provide an explanation of causative *-le* as resulting from a combination of applicative *-al* with *-e*. Still, it

is plausible, at least from a diachronic point of view, that causative *-le* has originated from a combination of applicative *-al*, emphasizing the characterization of one of the protagonists as the beneficiary, with a second formative **-e* carrying the meaning of co-participation, since such a decomposition reflects a possible semantic analysis of sociative causation. The point is that, in situations that can be analyzed in terms of sociative causation, the causee can be considered as a beneficiary, but as a beneficiary that departs from prototypical beneficiaries by his/her active involvement in the event. Consequently, since Wolof can use the suffix *-e* to code a particular variety of reciprocal situations (see Section 3.4), it seems reasonable to assume that this reciprocal *-e* results from the specialization of an ancient marker **-e* conveying a more general meaning of co-participation, whose amalgamation with *-al* gave rise to causative *-le*.

4.2. Possessive *-le*

The possessive verb forms of Wolof are transitive verb forms derived from intransitive verbs. They occur in transitive constructions in which the object receives the semantic role assigned by the non-derived form of the same verb to its subject, and the subject represents the possessor of the referent of the object, as in (1), repeated here as (11).

- (11) Wolof
- a. *woto bi gaaw na*
 car DEF be.fast PRF.SBJ.3SG
 ‘The car is fast.’
- b. *gaaw-le naa woto*
 be.fast-POSS PRF.SBJ.ISG car
 ‘I have a fast car.’

To the best of our knowledge, Wolof and Serer (another Atlantic language of Senegal) are the only languages that have been identified as coding this type of valency change by means of a specialized and unanalyzable marker. But the same result is commonly obtained by means of a combination of applicative derivation and passive derivation: starting from an intransitive construction, applicative derivation can produce a transitive construction in which the noun phrase with the syntactic role of object represents a second participant in the event, and this object can be subsequently promoted to the role of subject by passive derivation, as in the following example from Tswana:

(12) Tswana

- a. *ngwana o lwala thata*
 1.child SM3:1 be.sick very
 ‘The child is very sick.’
- b. *mosadi yo o lwalelwa ke ngwana*
 1.woman 1.DEM SM3:1 be.sick.APPL.PSV by 1.child
 lit. roughly ‘This woman is sick-concerned by a child.’, hence
 ‘This woman has a sick child.’

This strongly suggests that possessive *-le* originated in Wolof as a complex marker, with applicative *-al* as its first component, and with a second formative **-e*, at a stage of evolution when passive was coded by a suffix **-e*. Wolof has no direct trace of an ancient suffix **-e* being used in passive constructions, but evidence supporting this hypothesis can be found in the related language Buy, which does have a passive marker *-e* (Doneux 1991: 62).

4.3. Causative *-loo*

Causative verbs derived by means of the suffixes *-al* and *-loo* have in common that they occur in typical causative constructions, with the causee in the syntactic role of object. As indicated in Note 3, the difference is that *-al* is used only to derive causative forms of intransitive verbs, and is semantically limited to direct causation (as in *fees* ‘be full’ → *fees-al* ‘fill’) or joint action, whereas *-loo* is not limited to intransitive verbs, and semantically implies indirect causation (as in *jooy* ‘cry’ → *jooy-loo* ‘make cry’, or *raxas* ‘wash (tr.)’ → *raxas-loo* ‘make wash’).

Wolof has another causative suffix *-lu*, used exclusively with transitive verbs, in constructions in which it is impossible to mention the causee. In other words, formally, the verbs derived by means of *-lu* have the same construction as the transitive verbs from which they derive, but semantically, they differ in that the referent of their subject is presented as having another participant (not mentioned in the construction) acting as the immediate agent, as can be seen from (13).

(13) Wolof

- a. *ñaw naa roob*
 sew PRF.SBJ.ISG dress
 ‘I sewed a dress.’
- b. *ñaw-lu naa roob*
 sew-CAUS PRF.SBJ.ISG dress
 ‘I had a dress sewn.’

- c. *ñaw-loo naa ko roob*
 sew-CAUS PRF.SBJ.ISG OBJ.3SG dress
 ‘I had him/her sew a dress.’

The form of these three causative suffixes makes it possible to imagine a decomposition of *-lu* into *-al* + *-u*, and a decomposition of *-loo* into *-lu* + *-e*.

Several authors have proposed to analyze causative *-lu* as *-al* ‘applicative-benefactive’ + *-u* ‘middle’. The validity of this explanation is not obvious, however, since it would imply a semantic shift from ‘do something for oneself’ to ‘manage to have something done’. Some uses of the so-called “pronominal forms” of Romance verbs suggest the possibility of such a shift,⁹ but we will not discuss this question further, since it has no direct impact on the matters discussed in this paper.

By contrast, whatever the origin of *-lu*, there is no difficulty analyzing causative *-loo* as *-lu* ‘causative’ + *-e* ‘applicative’. This hypothesis is fully consistent with the fact that the construction of verbs suffixed with *-loo* includes one more term (the causee) than the construction of verbs suffixed with *-lu*; it is also consistent with the instrumental use of applicative *-e*, since a causee can often be viewed as a kind of instrument: *A has B sew a dress* can be analyzed as *A has a dress sewn owing to B’s work*.

4.4. Co-participative *-aale*

The meaning carried by the suffix *-aale* is sometimes a meaning of co-participation that can be rendered in English by *together* (*nekk* ‘be somewhere’ > *nekk-aale* ‘live together’), but this use of *-aale* is marginal and can be considered as lexicalized. In its productive use, this suffix rather expresses a relation of simultaneity between the event represented by the verb and another event (‘at the same time’), and has no obvious relation to verb valency. We have no hypothesis concerning a possible relation between this suffix and the other suffixes examined in this paper.

4.5. Co-participative *-andoo*

Parallel co-participation is the central meaning of *-andoo*; this suffix implies a plurality of participants involved in the same event with the same role, as in (14). A plausible origin of this suffix is the verb *ànd* ‘go together’, ‘act together’, with

9. For example, in Spanish, the literal meaning of a sentence such as *Me reparé el coche* is ‘I repaired my car’, but it is more commonly interpreted as ‘I had my car repaired’.

a second formative *-oo* probably identifiable as the suffix *-oo* presented in the following section.

(14) Wolof

- a. *mu toog ci laal bi*
 SBJ.3SG sit LOC bed DEF
 ‘He/she sat on the bed.’
- b. *ñoom ñaar ñepp toog-andoo ci laal bi*
 PRON.3PL two all sit-COPART LOC bed DEF
 ‘They both sat on the bed together.’

4.6. Reciprocal *-oo*

This suffix is sometimes encountered in contexts that force an interpretation of parallel co-participation, but it is more commonly used to express a reciprocal meaning, as in (15).

(15) Wolof

- a. *wor na xaritam*
 betray PRF.SBJ.3SG friend.3SG
 ‘He/she betrayed his/her friend.’
- b. *seen wax yi wor-oo nañu*
 POSS.2PL word DEF betray-RECP PRF.SBJ.3PL
 ‘Your declarations are contradictory.’ (lit. ‘betray one another’)

Wolof has a middle marker *-u*, and other languages also provide evidence for the possibility to code reciprocity by combining a middle marker with a marker of co-participation (or at least with a morphological device typically used cross-linguistically to code a plurality of participants). For example, in Amharic (cf. Amberber 2000), reciprocity is expressed by a combination of the mediopassive prefix plus a special reduplicative stem. A plausible origin of reciprocal *-oo* in Wolof is, therefore, the combination of middle *-u* with the ancient marker of co-participation **-e*, which we have identified as a probable formative of causative *-le*, and whose direct reflex would be the suffix *-e* coding naturally reciprocal events.

4.7. Reciprocal *-ante*

The suffix *-ante* provides the most productive way of expressing prototypical reciprocal events in Wolof, in the sense defined by Kemmer (1993: 95–127). This is illustrated in (16):

(16) Wolof

- a. *rey nañu góor gi*
 kill PRF.SBJ.3PL man DEF
 ‘They killed the man.’
- b. *rey-ante nañu*
 kill-RECP PRF.SBJ.3PL
 ‘They killed one another.’

Given the amount of evidence pointing to an ancient marker of co-participation **-e*, it seems plausible that this suffix originated as a complex marker with the same suffix **-e* coding co-participation as its second formative. Unfortunately, we have no proposal as to the origin of the first component of *-ante*.

5. Conclusion

The data presented in Sections 3 and 4 provides evidence that reciprocal *-e* may be the reflex of an ancient suffix **-e* whose possible uses included several varieties of co-participation, and that the amalgamation of this suffix **-e* with other markers may have given rise to **-le* coding sociative causation, to reciprocal **-oo*, and to reciprocal **-ante*. Moreover, comparison with other languages in which derived verb forms that generally convey a reciprocal meaning also have antipassive-like uses suggests that antipassive *-e* may well be a reflex of the same suffix **-e*. If our hypothesis concerning possessive *-le* is correct, a possible relationship between an ancient marker of co-participation **-e* and an ancient passive **-e* should also be considered, since many languages attest the possibility of middle markers developing both passive and antipassive uses.

A relationship with causative *-e* should perhaps be considered too, given that comitative constructions are a possible source of causative constructions.

Unfortunately, at the present state of the comparative study of Atlantic languages, it is not possible to assess these proposals on the basis of a reconstruction of verbal derivation at the Atlantic level. Moreover, Wolof is relatively isolated within the subgroup of Atlantic to which it belongs, so a comparison limited to Wolof and some closely related languages is not possible either. However, it is difficult to imagine that chance alone could have resulted in extensive homonymy between so many markers whose meanings suggest that semantic developments from a common source are very plausible. Consequently, it is reasonable to think that at least some of the hypotheses presented in this paper are historically valid, and it would certainly be worth reconsidering this question

on the basis of a systematic collection of comparative data on verbal derivation and valency changes in Atlantic languages.

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