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On the grammatical uses of the HEAD in Wolof: from reflexivity to intensifying uses*

Stéphane Robert

Abstract

In Wolof (Atlantic, Niger-Congo), the grammatical uses of the word for HEAD (bopp) with a possessive modifier range from direct and indirect reflexive pronoun to adnominal intensifier through an intermediary genitival reflexive. This study analyzes the semantic continuity between those different uses, and the various ways they are conditioned by their contexts. With direct and indirect (or oblique) reflexives, the reflexive anaphora has scope over two different semantic roles (agent vs. patient or beneficiary) of the same referent. Being restrictively used for typically other-directed processes, those reflexive constructions imply that alternative (more expected) agents are discarded, producing an emphasis on selfaffectedness or self-benefit. This 'centering' effect on the actual participant is even clearer with the genitive reflexive and the adnominal intensifier due to their adnominal function. In those constructions, the reflexive anaphora creates a re-identification of the referent in the same role, producing an intensive effect by centering on the identity of the referent, discarding again alternative participants. Altogether, the various reflexive constructions in Wolof, emphasizing the agentivity, responsibility or identity of the referent, point to a metonymical use of the HEAD for the PERSON or INDIVIDUAL, which is in accordance with its various lexical uses.

1. Introduction

Numerous studies on grammaticalization have shown that the semantics of a lexical unit shapes its grammaticalized uses. In Tupuri (Adamawa, Cameroun), for instance, two terms can be used as prepositions with the meaning 'in, inside': one $(n\bar{e}n)$ comes from the noun 'eye', the other one (bil), from the noun 'belly' (Ruelland 1998). The same spatial value seems to have been abstracted from the two lexical units. However, the constraints on their grammatical uses reveal that the two terms are not synonymous and rely on two different image-schema abstracted from their lexical meanings (Robert, 2005: 13): in the case of 'eye', the interior is a compact domain, while in the case of the 'belly' it is hollow. Therefore, 'eye' will be used to say 'inside the forest' (compact domain) whereas 'belly' is impossible for this; conversely, 'belly' will be used to say 'in a hole' (hollow interior), where 'eye' is not possible. This semantic conditioning is in accordance with the semantic continuum between grammar and the lexicon postulated by Cognitive grammar (e.g. Langacker 1991, Talmy 2000, Svorou 2002). In the functional theories on grammaticalization, this semantic continuity is analyzed as a Principle of (semantic) Persistence, visible at incipient or intermediary stages of grammaticalization by authors advocating a gradual nature of grammaticalization (e.g. Hopper, 1991: 28).

It is from this perspective that this chapter studies¹ the grammaticalized uses of the word for 'head' (*bopp*) in Wolof, an Atlantic language mainly spoken in Senegal, both as a contribution to understanding the conceptualization of 'head' in this language, and as a typologically oriented study of the grammaticalization of this notion. According to the *World lexicon of*

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¹ The data come from a corpus study of various texts, completed by elicitation. For details, see section on Corpus and data references.

grammaticalization (Heine & Kuteva, 2001: 167-9), there are two major semantic domains for the grammaticalization of the body part noun for HEAD: the spatial domain with locative prepositions for FRONT or UP markers, and the domain of diathesis with the following grammaticalization chain: HEAD > REFLEXIVE > MIDDLE. In Wolof, the grammatical uses of the noun bopp 'head' do not exactly contradict these patterns but do not clearly exemplify them either. Part of the grammaticalized uses of this term do pertain to the domain of diathesis but first, while bopp is used as a reflexive marker, it coexists with a competing middle marker; second, rather than evolving into a middle marker, bopp has developed other kinds of uses along another well-known path for the grammaticalization of HEAD, viz. as an intensifier (ibid. 168). However, when mentioned in the literature, these two types of use are never explicitly correlated, be it in a grammaticalization chain or in a semantic analysis. Furthermore, in Wolof, both types of uses, as a reflexive marker and as an intensifier, have been extended to less typical contexts. It is worth noting that in all its grammatical uses bopp is used with an inflecting possessive modifier. For convenience, the term 'his head' will be used in this study as a generic reference to the bopp-phrase with a possessive modifier.

This chapter is structured as follows. After a quick presentation of *bopp*'s lexical uses and the reasons why it did not grammaticalize into a locative marker (section 2), the next sections are dedicated to the grammaticalized uses of the *bopp*-phrase. Those fall in two main types. In the first type (section 3), the *bopp*-phrase ('his head') functions as a reflexive marker, filling in the syntactic slot of a nominal object in a prototypical reflexive construction (3.1), but also as an oblique reflexive (3.2.) or as a genitive reflexive (3.3). In the second type of uses (section 4), the *bopp*-phrase appears in a prepositional phrase ('in his head') and functions as an intensifier modifying a noun or a pronoun. The various senses of this prepositional phrase are presented in 4.1, 4.2 and 4.3. The last section (4.4) analyzes the semantic continuity between those various senses and its limits.

Through the study of the grammaticalized uses, this chapter will analyze the semantic continuity and discontinuity attested across the different uses, as well as their semantic conditioning and syntactic constraints, and bring to light the semantic persistence of the body part term in the grammatical uses as well as the underlying conceptualization of the HEAD in Wolof.

2. The noun bopp 'head' and why it did not grammaticalize into a locative marker

In its nominal use, *bopp* B² is generally used to refer to a body part as in (1). Only a few extended (metaphorical) uses have been found for referring to a specific part of an object, in genitival noun phrases (2).

- (1) Sama bopp dafa-y metti [D 2003]

 POSS.1SG head FOC.V.3SG-IPFV ache
 'I have a headache' (lit. my head is aching)
- (2) bopp-u gaal [D 2003]
 head-GEN.SG dugout
 'bow of a dugout'
 bopp-u lal

² Wolof is a noun class language with a functional but simplified system: the membership of a noun in a class is visible only in nominal agreement, and agreement morphemes consist of a single consonant, as indicated here in capitals (B), fusing with the agreeing morphemes. For the sake of simplicity, the agreement morphemes in the various determiners or pronouns (such as the definite article, the demonstratives or the relative pronouns) are not glossed. For more details about the grammar of Wolof, see Robert (in press).

head-GEN.SG bed 'bedhead'

Bopp is not used in the paradigm of (compound) locative prepositions. Those are formed with the general locative preposition (ci) combining with various body parts or spatial nouns, as listed in Table 1. This means that, in Wolof, the HEAD is not conceptualized as an inherent dimension or orientation (*FRONT) or as a part of the body with an upper position (*UP/TOP). In contrast to other body parts, its relative location is not viewed as a salient feature.

Table 1. The paradigm of locative prepositional phrases (and adverbs) in Wolof

	locative preposition +	noun		meaning of preposition
FRONT	ci	kanam	'face'	= 'in front (of X)'
UP/TOP	ci	kaw	'summit, top'	= 'on, on the top (of X)'
BEHIND	ci	ginnaaw	'back'	= 'behind (X)'
BESIDE	ci	wet	'side, flank'	= 'beside (X)'

Therefore, the metonymic use of *bopp* in (3) below is probably to be interpreted as referring to the head as the seat of decisional power rather than to the top of a hierarchy. Accordingly, in the few uses, mentioned in (2), where it refers to a part of an object, the "head" of the object is also its *active* part: the bedhead is the place where people put a lamp or other facilities to be used in bed and, even more clearly, the bow of a dugout is not the upper part but the leading part of the (horizontal) boat that guides it. Along the same lines, *bopp* is commonly used to refer to the head as the seat of consciousness or of personal jugdment, as in (4) and (5).

- (3) ñi ñoom la Yàlla teg nga xam ne REL.PL AOR.2SG know COMP PRO.3SG FOC.CMP.3SG God put **bopp**u réew [G] ci mi in head:GEN.SG country DEF 'those that God put in charge of the country' (lit. those which you know that they are the ones that God placed at the head of the country)
- (4) Ñaari jabar, boo leen mënul vor, [...] *xam* can:NEG.3SG hold wife when:AOR.2SG 0.3PLknow two:GEN.PL ko ci bopp, danga leen di fase. [XSW] sa in POSS.2SG head FOC.V.2SG O.3PL IPFV 0.3SGrepudiate 'When one can't afford to have two spouses and is aware of it (lit. if you know it in your head), he must repudiate them.'
- (5) man, yenn yi xéjul ci sama **bopp.** [XSW]
 PRO.1SG ones DEF fit.in:NEG.3SG in POSS.1SG head
 'Me, some things are beyond my comprehension.' (lit. can not be contained in my head)

Before turning to the grammatical uses of *bopp*, two specific verb phrases with *bopp* deserve to be mentioned. First, in combination with the transitive verb *moom* 'to possess, to be the owner of', the phrase 'to own one's head' means 'to be free, independent, without master'. The use of this verb phrase is not restricted to human beings and has also been found in reference to animals, like goats or birds, in our corpus. Second, with the transitive verb *mën* 'to be stronger

than someone' (maybe from a meaning like 'to have power over someone'³), the verb phrase 'to be stronger than one's head' takes on the meaning 'to be well-off, to make one's own way in the world'. In these two cases, the concept HEAD appears to represent an autonomous person (or living creature), either for his free will and or for his mere existence (which he may override). As we will see, these semantic features are clearly present in the semantic background of the grammatical uses of this term, too.

3. The reflexive pronoun

Beside its nominal uses for referring to the body part 'head', bopp has various grammaticalized uses. In all of them, bopp is used as a reflexive marker, along with an inflecting possessive modifier exhibiting person and number agreement with bopp's antecedent. In a first set of grammatical uses, the bopp-phrase ('his head') is used as a pronoun filling the syntactic slot of a nominal argument. Let us take this first type as a starting point. The most salient grammatical use of 'his head' in Wolof is that of a reflexive marker in a prototypical reflexive construction, i.e. indicating the co-reference of a patient object with an agentive subject, as in (7), paralleling (6): 'he loves his head' means 'he loves himself'. The bopp-phrase functions as a reflexive pronoun but this pro-noun retains other syntactic properties of the noun: the postverbal position of the reflexive marker parallels that of the nominal object Marie in (6) and contrasts with the preverbal position of the (clitic) object pronoun in (8).

- (6) Móodu dafa bëgg Marie [D]

 N.PR FOC.V.3SG love N.PR

 'Móodu loves Mary'
- (7) Móodu dafa bëgg bopp-am [D]

 N.PR FOC.V.3SG love head-POSS.3SG

 'Móodu loves himself'
- (8) Móodu dafa **ko** begg [D]

 N.PR FOC.V.3SG 0.3SG love
 'Móodu loves her'

As can been seen in Table 2, the possessive markers in Wolof are mostly preposed to the noun, except for the third person singular where it is suffixed. So in (7), the reflexive "pronoun" is a regular possessive phrase corresponding to 'his head'.

Table 2. Wolof possessive modifiers (example with xarit 'friend')

1.sg	sama ⁴	xarit	xarit 'my friend'		xarit	'my friends'
2.	sa	xarit	'your friend'	sa-y	xarit	'your friends'
3.		xarit	-am 'his/her friend'	а-у	xarit -am	'his/her friends'
1.PL	sunu	xarit	'our friend'	sunu-y	xarit	'our friends'
2.	seen	xarit	'your friend'	seen-i	xarit	'your friends'
3.	seen	xarit	'their friend'	seen-i	xarit	'their friends'

³ This verb is commonly used as an auxiliary with the meaning 'can'.

⁴ Variants: for (1 SG) suma, saa, for (1PL) suñu.

As shown by Schladt (2000), body part terms are overwhelmingly the main source of reflexives in the languages of the world, and almost exclusively in Africa. As confirmed by Heine (2000), in most cases, the nominal source is the noun for BODY or HEAD, but BODY⁵ is much more frequent than HEAD in African languages (20/7 in Heine 2000 and 60/5 in Schladt 2000)⁶. Moreover, Heine and Kuteva (2001: 168) indicate that the latter tends to give rise to a middle marker in a more general grammaticalization chain: HEAD > REFLEXIVE > MIDDLE. This is not the case in Wolof.

3.1. Direct Reflexive vs. Middle construction

Wolof has two distinct strategies for coding a self-affected subject: one of them is using 'his head' as a pronoun in object position for expressing co-reference between the patient and the agentive subject, in a "direct reflexive construction" (Kemmer 1993: 42) as exemplified above in (7); the other one is via verbal derivation with the middle suffix -u, as exemplified below in (10) for the transitive verb (9) sol 'to wear, to put on (a dress)'. In contrast to the reflexive construction, the middle derivation implies valency reduction, i.e. there is no object.

- (9) Ban simis la sol? [D] which shirt FOC.CMP.3SG wear 'Which shirt does he wear?'
- (10) Dafay sol-u [D] FOC.V.3SG:IPFV wear-MID 'He is getting dressed'

What is the division of roles between the two constructions in Wolof? A comparison will help to refine the semantic characterization of the use of *bopp* as a reflexive marker. The characterizations presented here are based on Nouguier Voisin's (2002: 111-126) detailed study of the middle voice in Wolof.

In a majority of cases, depending on the verb, either the reflexive or the middle construction is *obligatory* for the expression of a self-affected agent, so the two constructions are in complementary distribution. Nouguier Voisin (2002: 111sqq) has shown that the middle derivation has autocausative, decausative, and also some quasi-passive functions in Wolof. The term *autocausative function* (from Genušiene 1987: 87), which we are concerned with here, refers to cases where the subject is both Agent and Patient⁷ of the action as in (10) above. For this autocausative function, the use of the middle derivation in Wolof is restricted to situations implying an *intrinsic coreference* of the Agent and Patient, that is with a weak elaboration of the participants, e.g. for actions affecting the body, like 'to dress' in (10), and grooming (e.g. *sang-*

⁵ Wojtylak (this volume) provides another prototypical example of the use of the term for 'body' as a reflexive marker, but also to refer to the broader notion of 'self', in an Amazonian language (Murui). In contrast, Pero (an African language from the Chadic family) shows lesser known usages of the word for 'body', as described by Frajzyngier (this volume): besides its use to encode coreferentiality between arguments inside the clause (as a reflexive pronoun), this term is also used to indicate that "the object of the verb does not undergo a change in form, place or existential status or internal state". For more comments on the grammatical uses of 'body' in Pero compared to 'head' in Wolof, see footnote 25.

⁶ On the other hand, Evseeva and Salaberri (2018: 396) indicate that in their sample of 950 languages (belonging to 123 linguistic families) using "head-reflexives", 72.7 % are spoken in Africa.

⁷ In this case, Genušiene (ibid.: 39) actually indicates that the subject's semantic role changes from that of an Agent to that of an Actor.

u 'to shower' from sang 'to bath someone')⁸. By contrast, the reflexive construction, which has only autocausative uses, is restricted to highly transitive activities with a human agent and to prototypically other-directed processes, be they stative like $b\ddot{e}gg$ 'to love' (7), xam 'to know' (11), $y\acute{e}g$ 'have regards for' (12), or dynamic like $ji\tilde{n}$ 'to accuse' (13), $r\acute{e}y$ 'to kill', $t\grave{a}gge$ 'to announce someone's death' or $t\acute{e}ye$ 'to hold back' (14). With these verbs, the use of the reflexive construction 'his head' is obligatory for the expression of a self-affected subject, and the middle construction (with -u suffix) is impossible (cf. (13)b). These actions are unusually reflexive, that is why Nouguier Voisin (2005: 95) qualifies the reflexive construction as indicating an 'accidental A/P coreference'. For the same reason, the reflexive construction often conveys an intensive value, as in (12).

- (11) xam-al sa bopp. [D 2003] know.IMP POSS.2SG head 'Know yourself'
- (12) ... yég sa bopp [XSW]
 have.regards.for POSS.2SG head
 '...(and you) are full of yourself' (lit. you have regards for yourself)
- (13) a. Sàmba [D] Móodu mu.ngi jiñ PRST.3SG accuse head-POSS.3SG N.PR 'Móodu is accusing Samba' b. *Móodu mu.ngi jiñ**-u** Móodu mu.ngi jiñ bopp-am c. N.PR PRST.3SG accuse head-poss.3sg 'Móodu is accusing himself'
- (14) Mënoo téye sa bopp? [XSW] can:NEG.2SG hold.back POSS.2SG head 'You can't restrain yourself' (lit. you cannot hold back your head')

In the reflexive construction, the syntactic transitivity is preserved via the reflexive pronominal phrase, in accordance with the clear elaboration of the agent and patient roles specific to this construction (in contrast to the middle one). This is why the self-affected patient is maintained as a person or participant through the *metonymic use* of the noun *bopp* 'head': in the examples above, the 'head' clearly stands for the 'person' or 'individual' as a conscious or moral being or, in the last one, as a volitional (thus controlling) agent.

This syntactic structure and its semantic component are is accordance with the emphatic uses of the reflexive construction. For a few verbs (e.g. gaañ 'to hurt, to injure', wat 'to shave'), the two constructions are possible. In such cases, the reflexive one with 'his head' emphasizes the agentive role and the responsibility of the subject ('he did it by himself'), as illustrated in (15) and (16). Note that in (16)c the two constructions cannot combine: the reflexive marker does not reinforce the middle construction, as an intensifying adverb would do. Their semantic and syntactic patterns are different⁹: the patient role is maintained in the reflexive construction through the bopp-phrase, thus putting an emphasis on the responsibility, volitionality or

⁸ There are also a few posture verbs with middle suffixes in Wolof, and those are always deponent (Nouguier Voisin, 2002: 11), e.g. *gapparu* 'to sit cross-legged' (*gappar), *dëfeenu* 'to lie on the belly' (**dëfeen*).

⁹ That is why this reflexive construction with 'his head' in Wolof can be viewed as a 'construction' in the technical sense of Construction grammar (e.g. Goldberg 1995), although it is not fully grammaticalized.

agentivity of the subject in affecting him or herself in a usually *other-directed* process. As stated by Frajzyngier (2000: 128), "the presence of another argument subsumes the control over the event on the part of the subject". This semantic feature of the reflexive construction is also reported for Basque by Evseeva and Salaberri (2018: 402): with verbs that allow both detransitivization and "head-reflexive" pronoun strategies, using the latter adds an intentional meaning.

- (15) a. *Mu.ngi* sang-u.

 PRST.3SG bath-MID

 'He is taking a shower'
 - b. Léegi mag nga, mën sang bopp. nga, sa now be.big PRF.2SG can PRF.2SG bath POSS.2SG head 'You are grown up now, you can take shower by yourself' (Nouguier Voisin, 2002:100)
- (16) a. *Móodu gaañ-u na* [D]

 N.PR injure-MID PRF.3SG

 'Móodu has injured himself' ~ 'Móodu has been injured'

 (One does not know whether he was injured by someone or by himself)
 - b. *Móodu gaañ na bopp-am*¹⁰

 N.PR injure PRF.3SG head-POSS.3SG 'Móodu has injured himself (i.e. by himself)'

 c **Móodu gaañ-u na bopp-am*

3.2. Oblique reflexives

The use of the reflexive pronoun (or pronominal phrase) is not limited to indicating coreference between an agentive subject and a patientive object but can be extended to an oblique complement. This is what Nouguier Voisin (2002: 97), following Kemmer (1993: 74 sqq), calls the "indirect reflexive", Geniušiené a "Dative transitive reflexive" (1987: 230), and which I call an "oblique reflexive". In Wolof, this is made possible by the use of an applicative suffix (-al), which changes an oblique argument into an object with the semantic role of beneficiary, recipient or comitative. In (17), for instance, the applicative suffix introduces an additional object to the transitive verb *jënd* 'to buy', with the semantic role of a beneficiary, and the reflexive pronoun ('his head') indicates coreference between this beneficiary and the agentive subject.

(17) Jënd-al na bopp-am woto [D] buy-APPL PRF.3SG head-POSS.3SG car 'He bought (for) himself a car'

The next example (18) is remarkable, because here the *bopp*-phrase appears four times in the same sentence. In this utterance, the second person has a generic use. In the first proposition, the oblique reflexive co-occurs (as a benefactive) with the first and then with the second lexicalized verb phrase using 'his (here your) head' as a patientive object, as mentioned above (§ 2.). Moreover, in the last occurrence, 'your head' appears in a prepositional phrase (introduced by

¹⁰ In Wolof, the middle and the reflexive construction are not used along with the affected body part in object position (as is the case, for instance, in French, e.g. *je me suis cassé la jambe* lit. 'I broke myself the leg' for 'I broke my leg'). In this case, two constructions are possible, one with a prepositional phrase for the affected body part ('he injured himself at the leg'), the other one with an active form (with no middle or reflexive marker) and the affected body part in subject position ('his leg broke').

the general locative preposition *ci*), without the applicative derivation on the verb, conveying apparently the same benefactive meaning. This equivalence between the prepositional complement and the applicative object follows the general rule for the applicative derivation in Wolof. This use of the oblique reflexive pronoun in a prepositional phrase is, however, rare in our corpus.

(18)Ndax boomoom**-al**-ee sa bopp sa bopp te if:AOR.2 SG head head because own-APPL-ANT POSS.2SG POSS.2SG and mën-oo bopp, dënga wut loo def, sa FUT.2SG be.stronger-NEG.2SG POSS.2SG head search REL:AOR.2SG do loodef ci danga jóg di wër sa bopp FUT.2SG get.up IPFV go.around.for REL:AOR.2SG do in POSS.2SG head 'Because, if someone is free of any tie (lit. owns his head for his head) without being well-off (lit. and is not stronger than his head), he will search what to do, he will get up and look for something for himself (lit. in his head)' [F]

In Kemmer's definition (ibid.), a prototypical 'indirect reflexive situation' comprises three participants, namely an Agent, a Patient and a Recipient or Beneficiary, and the Agent and Recipient/Beneficiary are coreferential, as exemplified above. Moreover, according to this author, among the various semantic roles of oblique participants, "the only oblique roles that are relevant from the point of view of both reflexive and middle marking are the Recipient and the Beneficiary". As indicated by Nougier Voisin (2002: 101-2), in Wolof, the reflexive construction is used only to indicate coreference between the Agent and the Beneficiary, and not with the Recipient, since for ditransitive verbs involving a patient and a recipient, like *may* 'to offer, to give', the (indirect) reflexive construction cannot be used. However, I have found interesting oblique reflexive constructions in my corpus that do not correspond to Kemmer's prototype in two possible ways: either there is no patient in the reflexive clause, or the oblique reflexive refers to other semantic roles than those of beneficiary or recipient. Furthermore, some ditransitive verbs have been found in oblique reflexive constructions.

In (19), the oblique reflexive pronoun has the semantic role of a *comitative*, as indicated by the use of the preposition $ag \sim ak$ in the parallel (nonreflexive) clause in apodosis. But in the vast majority of cases, the oblique reflexive pronoun appears as an additional object with a semantic role that seems to be that of an agent, as in (20) with the transitive verb def 'to do, to make'. This sense has been found only for human (or animate) subjects.

- (19) Bopp-am lay wax-al, wax-ul ak ken. head-POSS.3SG FOC.CMP.3SG:IPFV speak-APPL speak-NEG.3SG with somebody 'He speaks to (with) himself, he does not speak to (with) anyone.' [F]
- (20) Moo defar-al bopp-am gaal-am [D 2003] FOC.S.3SG manufacture-APPL head-POSS.3SG dugout-POSS.3SG 'He built his boat (by) himself'

At first, this agentive sense is surprising because it does not belong to the semantic roles usually added by the -al applicative suffix¹¹. The closest semantic role in Wolof is that of instrument (or manner), usually introduced by the other applicative suffix -e. By contrast to -al, which is used

¹¹ Furthermore, in Wolof, it is impossible to overtly express the agent in a passive construction. That is why there is no passive *stricto sensu* in this language: the middle voice may functions as a quasi-passive with this restriction.

exclusively for adding human semantic roles (beneficiary, recipient or comitative), -e introduces mostly non-human obliques (with the semantic roles of instrument, manner or location). So we may consider that, in this oblique reflexive construction, the applicative suffix is used for introducing an agent as a human instrument of the action, and that -al is required because of this human component. In this case, the coreference of the oblique pronoun with the agentive subject, conveying the same semantic role, produces an emphatic effect, close to the intensifying uses of the bopp-phrase presented in 4.1 infra. It is worth noting that in most of our examples where the oblique reflexive does add another role than beneficiary, the reflexive construction appears with a focusing verbal inflection which certainly contributes to its particular meaning (namely complement focus for the comitative, and subject focus for the agentive role). This agentive semantic role of the oblique reflexive is confirmed in (21) by the parallel with the first clause where the same verb is derived with the causative suffix -lu, used to express a causative event in which the agentive causee is not expressed (Robert 2017).

(21)Duma yar**-lu** doom, kov sama maa O.3SG:IPFV NEG.IPFV.1SG raise-CAUS.4 POSS.1SG child FOC.S.1SG var**-al** sama bopp. [D 2003] raise-APPL POSS.1SG head 'I don't have my child educated (by anyone), I educate him (by) myself.'

The second finding is that the oblique reflexive pronoun is possible with ditransitive verbs. In this case, however, the applicative suffix does not add a new object but changes the semantic role of the second object, from that of a beneficiary into that of an agent (or "human instrument") coreferent with the (agentive) subject, here again. This change of semantic role is illustrated in (22) and (23), (a) vs. (b).

- Wax^{12} (22) a. soxla. [D 2003] ma sav tell 0.1sgPOSS.2SG:PL need 'Tell me your needs' Wax-al [D 2003] b. ko sa bopp. tell-APPL 0.3sgPOSS.2SG head 'Say it (by) yourself.'
- (23) a. Ku la ko nettali? [D 2003] 0.2sg0.3sgrecount.to who 'Who told you that?' b. Moo ma ko nettali**-l** boppam. [F] FOC.S.3SG 0.1SG 0.3SGrecount.to-APPL head-POSS.3SG 'He himself told me that.'

Finally, the Wolof oblique reflexive differs from Kemmer's protopical "indirect reflexive situation" in that the oblique reflexive construction is possible without Patient, that is with intransitive verbs. In (24), *léeb* is an intransitive verb with an internal patient in its semantic background, meaning 'to tell a tale or a story'. Here the oblique reflexive refers to the agentive

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¹² The verb wax is ditransitive here and means 'to tell/say something (to) someone'. This example can be compared with (19) where wax in absolute use means 'to speak'. Depending on the construction the oblique reflexive takes on different meanings.

subject with the semantic role of recipient¹³. In (25), dem is a motion verb and there is no patient in the semantic frame of this verb. The oblique reflexive takes on a remarquable meaning: the reflexive construction emphasizes not only the agentive role but more specifically the volitionality (or free will) of the Subject. This sense is reminiscent of the use of 'head' as the seat of volition and consciousness mentioned among the lexical uses of bopp (\S 2.), and indicates again that the original meaning of this noun is still present in this grammatical use through metonymic extension.

- (24)léeh**-al** ndax ... ma sama bopp tàmbalee nelaw та tell.a.tale POSS.2SG head because AOR.1SG begin:LINK sleep AOR.1SG '... je me raconte (une histoire) pour m'endormir' [Nouguier Voisin 2002: 101] "... I tell myself (a story) in order to fall asleep"
- (25) Moo dem-al bopp-am. [D 2003] FOC.S.3SG go-APPL head-POSS.3SG 'She left on her own accord.'

To sum up, in Wolof, the oblique reflexive is possible with intransitive, transitive or ditransitive verbs provided that the -al applicative derivation is used in this construction (or sometimes alternatively the preposition ci). In the oblique reflexive construction, the -al applicative derivation does not necessarily follow the same patterns as in the active construction, concerning both the semantic roles added by the applicative derivation (not only recipient, beneficiary or comitative) and the transitivity requirements. Through this derivation, the reflexive pronoun can express coreferentiality of the agentive Subject with a recipient, comitative or beneficiary role, and most often with a "human instrument" ('by him or herself'). As a result, since the Subject is already agentive, in the last case the reflexive construction emphasizes the agentive role as well as the volitionality (or will) of the Subject in the process. This meaning is very close to the use of the prepositional phrase presented in 4.1.

3.3. Genitive (possessive) reflexives

The coreference expressed by the reflexive pronoun can be extended to even more peripheral components, namely to the possessor in a genitive phrase. Semantically, the *bopp*-phrase corresponds here to a possessive (intensive) reflexive, 'his X of head' meaning 'his own X'. Here again, the *bopp*-phrase functions as a "pro-noun", in as far as it occupies the syntactic slot of a noun, but this time not as an argument of the verb but as an "argument" of a noun, in a regular genitival phrase with a head-modifier order: [NP1-GEN NP2]. I have labeled this construction "genitive reflexive" in order to draw a parallel with the oblique reflexive and to explicitly refer to the genitival construction involved in Wolof.

Before illustrating this genitive reflexive, some morphosyntactic remarks are in order, both on the genitival phrase and on the possessive modifiers. The connective morpheme for the genitive construction is -u vs. -i for the singular vs. plural of the (possessed) head noun. As indicated previously (see Table 2), the Wolof possessive modifiers are preposed to the noun, except for the third person singular where it is suffixed. In a genitival phrase, when a possessive marker is needed (as is the case for the bopp-phrase), in the majority of cases the possessive modifier is placed before the head noun N1 (for all persons, but the third singular of course)

¹³ Interestingly, in her discussion of the use of applicative derivation in non-reflexive constructions, Nouguier Voisin (2002: 218) indicates that the Patient-Object of a transitive verb may not be expressed: in this case the verb remains transitive (instead of becoming ditransitive) and the semantic role of the object is changed from a patient to a recipient.

whatever its semantic scope, on N1 ('our relative from the Gambia') or on N2 (lit. 'our names of ancestors' for 'the names of our ancestors'), as illustrated in (26) (a) and (b). Though less frequent, a syntactic order mirroring the semantic scope of a possessive modifier on a N2 ('the names of our ancestors') is also possible, as illustrated in (26)c. For the third singular suffix, since the N1 bears the genitive suffix, the possessive marker is always suffixed to N2 and cannot move to N1, thus always generating an ambiguous structure with regard to the scope of the possessive marker (27).

- (26) a. suñu mbokk-u Gàmbi [H]Gambia POSS.1PL relative-GEN.SG 'our relative from Gambia' b. suñu-v tur-i [D] maam vi POSS.1PL-PL name-GEN.PL ancestor DEF.PL 'the names of our ancestors' (lit. our names of ancestors)
 - c. tur-i suñu-y maam yi [D] name-GEN.PL POSS.1PL-PL ancestor DEF.PL 'the names of our ancestors'
- (27) xarit-u dëkk-am bi [D] friend- GEN.SG village-POSS.3SG DEF 'the friend from his village' ~ 'his friend from the village'

Remarkably, when the reflexive construction with 'his head' is used in a genitival phrase as in (28), the possessive modifiers must be preposed to N1 (so the literal translation of 'my own house' in this example would be 'my house of head') and *cannot* move to N2, as it is possible for an ordinary genitival phrase such as (26)c. This fixed position of the possessive modifier seems to indicate that the *bopp*-construction has grammaticalized in this genitival reflexive. In addition, from a semantic point of view, (i) the possessive modifier has scope both on N1 and N2 (*bopp*), and (ii) *bopp* in N2 indicates coreference with the possessor indexed on the possessive modifier. This is probably why the possessor must be located on a different constituent than *bopp* (namely on N1) in order to allow the reflexive *anaphora*¹⁴ expressed by *bopp*.

(28) sama kër-**u** bopp màbb na. [D]
POSS.1SG house-GEN.SG head fall-down PRF.3SG
*kër-u sama bopp màbb na
'My own house has fallen down' (lit. my house of head has fallen down)

Note that in this genitive reflexive construction, the (same) "possessor" is indexed twice: with the possessive modifier and with the word for 'head', hence its intensive meaning (see 4.1 below for the analysis). Another interesting point in the genitive reflexive construction is that, since the reflexive anaphora has not scope over the predicate, there are no more restrictions on the nature of the subject (agentive or volitional) or on the (typically other-directed) predicate, as was the case in the direct reflexive construction: in (28), the subject 'house' is inanimate and the process has a decausative meaning 'to fall down'. Moreover, the genitive reflexive can modify a noun in any syntactic function: subject as in (28) above, object as in (29), and also adjunct such as in the

¹⁴ Although it applies to different constructions, the semantic structure of this genitive reflexive can be paralleled with the "Possessor or Total (Object) Patient" semantic role defined by Geniušiené as a construction where the Semantic Object is split into the Patient undergoing the situation and the Possessor (Geniušiené 1987: 41). According to the author, this construction is involved in some Dative Transitive reflexives (ibid. 290-295).

locative prepositional phrase in (30). In all those sentences, however, the possessor indexed on the possessive modifier refers to the subject NP.

- (29) Yàlla mey na ko tey mu am nag-i **boppam**God offer PRF.3SG 0.3SG today AOR.3SG have cow-GEN.PL head:POSS.3SG
 'God has allowed him today to have cows of his own' [C]
- (30)bu ñи nekk-oon ci seen kër**-i** bopp va if AOR.3PL be.located-PAST in POSS.3PL house-GEN.PL head DEF 'if they were in their own houses' [H]

When modifying the object of a dependent predicate, the plain possessive modifiers are ambiguous with regard to their antecedent (here Sàmba or Musaa), as illustrated in (31)a. In such a construction, the reflexive genitive can only refer to the closest participant, viz. the argument controlling the dependent predicate as in (31)b, and there is no way to disambiguate by referring to the subject of the main verb (Sàmba) as the possessor, unless a complex periphrasis is used (i.e. 'Sàmba saw Musaa selling a sheep whom you know that this one, Sàmba owns it'). This means that the scope of this reflexive anaphor is predicate-internal.

- (31) a. Sàmba gis na Musaa di jaay xar-am [D]

 N.PR see PRF.3SG N.PR COP sell sheep-POSS.3SG

 'Sàmba saw Musaa selling his sheep' (ambiguous: Sàmba's ou Musaa's sheep)
 - b. *Sàmba* Musaa_i di bopp-ami gis na jaay xar-u N.PR PRF.3SG N.PR COP sell sheep-GEN.SG head-POSS.3SG see 'Sàmba saw Musaa; selling his own; sheep' (Musaa's sheep)

In Wolof, the possessive reflexive is not obligatory (unlike the third person reflexive possessive *suus* in Latin for instance). The genitive reflexive may be added for disambiguization, as in (31)b and (32)b, or for emphasis on the (personal) possession, as in (29). Being an optional modifier always conveying emphasis on the possession, the genitival reflexive functions as an intensive possessive "pro-noun" ('his/her own', 'of its own'), because of the double marking of the possession (on the possessive modifier and in the reflexive anaphor present in the genitival phrase). Concerning the semantics of this intensive possessive reflexive, one has to keep in mind a comment of one consultant about (32)b: "this sentence means that Sàmba has damaged his (own) dugout, *not the one of somebody else*". The genitival phrase should be actually more appropriately translated as 'his dugout of his own (and not of somebody else)', accounting also for the double scope of the possessive modifier on the genitive reflexive, on the possessed N1 and on *bopp* in N2. Therefore, this genitive reflexive does not only convey explicit (reflexive) co-reference between the subject and the possessor but also evokes alternatives possessors that are discarded at the same time.

- (32) a. Sàmba yàq na gaal-am [D]

 N.PR ruin PRF.3SG dugout-POSS.3SG

 'Sàmba_i has damaged his_i dugout' (co-referential : Sàmba's dugout)

 'Sàmba_i has damaged his_i dugout' (somebody else's dugout)
 - b. Sàmba yàq na gaal-u bopp-am

 N.PR ruin PRF.3SG dugout-GEN.SG head-POSS.3SG

 'Sàmba has damaged his own dugout' (lit. the dugout of his head)

A remarkable constraint has been observed, sheding a converging light on the semantics of this genitive reflexive. This construction cannot be used with kinship terms, such as baay 'father', jabar 'wife' to express a (true) possessive reflexive. While the genitive reflexive was possible to disambiguate 'his (own) sheep' in (31), the reflexive construction is strictly impossible with 'his wife' in a sentence like (33) with the same clause pattern. According to my consultant's previous comment, I consider that this restriction of use is due to the fact that with a kinship term, as soon as the possessive modifier is present, no alternative possessors can be evoked and discarded by the reflexive anaphora in the genitive phrase (*my wife of myself): my father is my father, my wife is my wife. Interestingly, the genitive reflexive is still possible with jabar but only in a figurative use, that is when this term is used humorously to designate as 'his spouse' a woman someone likes very much (not his real spouse or lover). In this case, the genitival reflexive can be used as an intensifier, discarding (figuratively) other husbands and designating this woman as "his special one". This figurative and affective meaning is the only possible interpretation of (33)b. Interestingly, as illustrated in (33)c, the only way to disambiguate (33)a is to replace the possessive modifier by the plain definite article, 'the wife'. In this case, the woman who was kissed is unambiguously Musaa's wife.

- (33) a. Sàmba gis na Musaa di fóoñ jabar-am [D]

 N.PR see PRF.3SG N.PR COP kiss wife-POSS.3SG

 'Sàmba saw Musaa kissing his wife' (ambiguous: Sàmba's ou Musaa's wife)
 - b. Sàmba gis na Musaa di fóoñ jabar-u **bopp-am**N.PR see PRF.3SG N.PR COP kiss wife-GEN.SG head-POSS.3SG
 *'Sàmba_i saw Musaa kissing his_i own wife'
 - ?'Sàmba saw Musaa kissing his favourite girl' [joke]
 - c. Sàmba gis na Musaa di fóoñ jabar **ji**N.PR see PRF.3SG N.PR COP kiss wife DEF
 'Sàmba saw Musaa_i kissing his_i wife' (Musaa's wife)

The same restriction of use of the genitive reflexive (with the sole possible figurative interpretation) holds for *baay* 'father' 15, and actually for all terms for which the possessive modifiers select one referent as a "possessor" compared to which *other possible possessors cannot be discarded* by the reflexive anaphora in the genitive phrase, that is, in all likehood, for human beings 16. This incompatibility with humans is due to the semantic contribution of the reflexive construction in the compositional semantics of this construction. So, with the word *xarit* 'friend', the genitive reflexive is impossible as a true possessive reflexive not because one has only one friend but because one's friend might be the friend of other people as well, without changing one's personal relation to him: your friend is still you friend, those other people cannot be discarded. In (34), the genitive reflexive does not mean "my own friend" but suggests that this friend of mine is my "exclusive" friend (i.e. my "real" friend), discarding figuratively the other people who could have this person as a friend. For a true possessive reflexive ('my own friend'), Wolof nicely makes use of another body part term in the genitival construction, namely *bakkan* 'nose', used here in its figurative sense of 'life' 17 as in (35). So here 'my own friend' is literally

¹⁵ For expressing a true intensive possessive ('my own father'), one has to use a relative clause meaning 'my father who gave me life' (*sama baay ji ma jur*).

¹⁶ For persons (which cannot be owned by someone else), the genitival construction does not indicate a possessive relation but rather a specification of N1 by N2: the relation between N1 and N2 (e.g. 'the father/friend-of Sàmba') contributes to narrow down the set of possible referents of N1 ('father/friend') like a qualifying phrase.

¹⁷ This polysemy ('nose', 'life') is widespread in African languages and relies probably on a double metonymy: the nose as the organ for breathing and breathing as the manifestation of life.

'my friend of the same (one) life'. This restriction of use with human beings possibly indicates that the noun 'head' in this genitival construction has not fully grammaticalized as a mere reflexive pronoun but still stands for the *person*.

- (34) sama xarit-u bopp [D]
 POSS.1SG friend-GEN.SG head
 'the friend of myself, not of others' [figuratively] ~ 'my best/real friend'
- (35)Sama bakkan [D] xarit-u benn wor na ma. POSS.1SG friend-GEN.SG one nose betray PRF.3SG 0.1sg'My own friend has betrayed me.'

Formally the genitive reflexive is a genitival construction in which *bopp* stands for a pronoun; from the semantic point of view, however, we are dealing here with an optional possessive reflexive used for disambiguation and which always conveys an emphasis on the *identity* of the possessor discarding alternative possessors. Thus, this genitive reflexive shares the following properties with the use of the *bopp*-phrase as an intensifier that will be discussed in the next section: a non-argument position and modifying function, and an emphatic component. The semantic continuity between the different uses of the noun *bopp*, is also illustrated by the following examples: (36) illustrates the semantic continuity between the genitive reflexive and the lexical (and metonymic) use of 'the head' as the seat of personal judgment; (37), with a prepositional (locative) reflexive, was given as an alternative to the genitive reflexive which cannot be used with a human being in N1, thus illustrating the semantic continuity between the genitive reflexive and the use of the locative *bopp*-phrase that will be discussed in the next section (4.).

- (36) sama xalaat-i bopp la. [H]
 POSS.1SG thought-GEN.PL head FOC.CMP.3SG

 'It's only my personal opinion ~ my own thoughts.' (lit. that is my thoughts of head)
- (37) a. baav ci bopp-am, fen [D] sama na. POSS.1SG father in head. POSS.3SG lie PRF.3SG b. *sama baay-**u** bopp, fen 'My own father has lied.' (lit. my father in his head, i.e. himself, has lied)

In all these reflexive uses, as direct, oblique or genitive reflexive, the *bopp*-phrase 'his head' functions as a "pro-noun", filling the slot of a noun phrase in the syntactic pattern of the clause. The direct and oblique reflexives indicate coreference between an argument of the verb and the subject of the clause. With the genitive reflexive, however, these conditions do not hold, the reflexive pronoun is not an argument of the verb but a noun modifier and the reflexive anaphora can scope over a noun in any syntactic function. For these reasons, the genitive reflexive appears as an intermediary stage between the reflexive uses of the *bopp*-phrase and the modifying uses of the prepositional phrase that will be presented now.

4. The prepositional reflexive as an adnominal intensifier

In another type of uses, the *bopp*-phrase is introduced by the general locative preposition *ci* (*ci boppam* lit. 'in his head'). What is the syntactic scope and the semantic contribution of the reflexive anaphora in this case? Actually, except for a few cases in which the prepositional phrase

is used to introduce a real oblique complement (as in (18)), in the plentiful occurrences found in our corpus, this "locative" reflexive is used as an adnominal intensifier.

The use of reflexive markers as intensifiers is mentioned in Heine and Kuteva (2001: 167) under the label 'intensive reflexive' and has been well studied by König and Siemund (2000). These authors have shown that in a wide variety of languages, intensifiers and reflexive pronouns are identical in form, though not in distribution, and develop from the same body part terms as reflexives. They propose a refined analysis of the semantics of these intensifiers, distinguishing two main uses. In the adnominal use, the intensifier is an adjunct to a NP (e.g. *The work of Picasso itself / himself*); in the adverbial use, the intensifier is adjoined to a VP and fills the position of an adverbial (e.g. *I have swept this court myself*), taking on a meaning roughly paraphrasable by *alone, without help* (ibid.: 43-4). In Wolof, these distributional criteria do not hold for the accounting of the various senses of this intensifier, since the prepositional reflexive is always (syntactically) *adnominal*, that is at the right periphery of a NP, as most noun determiners and modifiers: Wolof is a head-initial language. ¹⁹ Different senses can be distinguished for the use of this reflexive locative phrase in Wolof.

4.1. Emphasizing agentivity ('by him or herself')

In the first type of use as a noun modifier, the prepositional reflexive takes on a meaning close to that described by König and Siemund (ibid.) for adverbial intensifiers. In (38)a, the prepositional phrase 'in his head' is an adjunct to the subject noun (Sàmba), but the semantic scope of this noun phrase is the whole predicate, emphasizing Sàmba's agentive role in the process of breaking his dugout. This example can be contrasted with the genitive reflexive in (32)b, and paralleled with all the examples where the oblique reflexive emphazises the agentive role of the subject in the process through an additional instrumental semantic role (e.g (20), (21), (22)). In fact, the oblique reflexive construction with an applicative derivation was given by speakers as a possible equivalent to the prepositional one, as illustrated in (38)b, indicating a semantic continuity between the different uses of the reflexive phrase in Wolof. The semantic equivalence between prepositional and applicative constructions is a common phenomenon in Wolof, but nevertheless remarkable here because the prepositional phrase with the reflexive pronoun is not an adjunct to the verb (as usual) but an adjunct to the subject NP. Interestingly enough, although it is not obligatory, the speaker spontaneously chose the subject-focusing verbal inflection for both versions of this sentence: this verb form focuses on the subject as the person who realized the process, thus favoring the emphasis on his agentive role in the process.

(38) a. Sàmba gaal-am ci bopp-am yàq moo dugout-POSS.3SG N.PR head.POSS.3SG FOC.S.3SG damage in b. Sàmba yàq**-al** bopp-am gaal-am moo head.POSS.3SG N.PR FOC.S.3SG damage-APPL dugout-POSS.3SG 'Sàmba broke his dugout (by) himself'

However, some syntactic constraints on placement reveal that this reflexive locative phrase has (at least partly) grammaticalized in this use. The prepositional reflexive cannot move to the post-predicate position (as a prepositional circumstant would do), unless a coreferential independent pronoun is introduced after a pause, in order to make it an antitopic. This is illustrated in (39). This constraint on subject adjacency (or adjacency to its coreferent independent pronoun) indicates that, in spite of its prepositional structure, this prepositional

¹⁸ "(with) one's head > reflexive pronoun used to strengthen or emphasize the identity of the concept concerned" (ibid.).

¹⁹ For more details, see Robert (in press).

reflexive has grammaticalized as a noun modifier²⁰. Note that the movement of the reflexive pronoun after the predicate (including the patientive object) is strictly impossible with the applicative construction in (38)b, even with a pronominal antitopic, this time because the reflexive pronoun is an argument of the verb in this applicative construction and has to follow the constituents order.

(39) Sàmba moo yàq gaal-am, | **moom** ci bopp-am

N.PR FOC.S.3SG damage dugout-POSS.3SG PRO.3SG in head.POSS.3SG

'Sàmba broke his dugout (by) himself' (lit. Sàmba broke his dugout, he by himself) [D]

Furthermore, the genitive reflexive can combine with this locative reflexive, when it is necessary to disambiguate the possessor as in (40).

(40) *Sàmba* moo yàq gaal**-u** bopp-am, moom head.POSS.3SG N.PR damage dugout-GEN.SG PRO.3SG FOC.S.3SG ci bopp-am head.poss.3sg in 'Sàmba broke (by) himself his own dugout' [D]

In these examples, the prepositional reflexive modifies the subject (or its co-referential pronoun) and emphasizes its agentive role in the event. This use is, of course, possible only for an agentive subject or, more precisely, for a participant acting as an agent in an intentional process. As it is, the same meaning and constraints of placement hold when the prepositional reflexive modifies the object of the (main) verb to emphasize its agentive role in a dependent predicate, as illustrated in (41).

(41) Gis bopp-am gaal-am Sàmba ci di yàq naa head.POSS.3SG dugout-POSS.3SG see PRF.1SG N.PR in COP damage 'I have seen Sàmba breaking his dugout (by) himself' [D]

Here again, as for the genitive reflexive (see § 3.3) i.e. when the reflexive pronominal phrase is not an argument but an argument modifier, an emphatic value is perceptible and has to be related to the elimination of possible alternatives in the background of this construction: Sàmba and no one else (as it would be expected) broke his (own) dugout. This emphatic value can be paralleled with that mentioned for the genitive reflexive in (32)b, 'Sàmba broke his own dugout and not somebody else's'. Actually, the same contrastive meaning in the background of the uses of the reflexive pronoun was also present in the use of the direct reflexive, this time because the agent applies to himself a process that is prototypically other-directed (see § 3.1). So, the expected (and discarded) alternatives are also in the background of this direct reflexive construction.

This emphatic component based on the elimination of expected alternatives is in line with the semantic analysis proposed by König and Siemund (2000: 44) for the adnominal intensifiers, that was very enlightening to me: "Adnominal intensifiers evoke alternatives to the referent(s) of the NP to which they are adjoined and characterize these alternatives (Y) as periphery or entourage of the referent(s)". How is this meaning produced by the use of the reflexive pronoun in the adnominal construction? First, the emphasis on the *agentive* role of the subject in the process is permitted by the prepositional construction of the reflexive as a modifier of an *agentive*

²⁰ Considering its semantic scope over the whole predicate, the locative reflexive must be viewed as a 'construction', in the sense defined by Construction grammar (e.g. Goldberg 1995), that is as a pairing of a form with a meaning.

subject. Moreover, the lexical meaning of 'the head' as a reflexive pronoun may also contribute to the semantics of this construction through the metonymic interpretation of 'the head' as the seat of the decisional power (see § 2), thus as a volitional agent. Finally, the intensive effect related to the discarding of the evoked alternatives is produced by the use of a reflexive pronoun in this adnominal function. Through the reflexive anaphora, the same participant is referred to twice in the same noun phrase: the first time (by the noun) for its denotational content and its argumental role in the predicative relation, the second time (by the reflexive anaphora), as a noun modifier in an oblique form, that is as a qualifying reidentification confirming its agentive role in the process. This repeated mentioning of the same referent producing an intensive effect can be paralleled with the role of lexical reduplication in French, in NPs like une femme-femme (lit. 'a woman-woman') for instance. This compound noun phrase is not lexicalized, it is a construction used by the speaker to indicate that the woman referred to corresponds the prototypical woman with all her attributes that is a really feminine woman. Culioli (1990: 117-22) has called this the "centering operation" (centrage) and described it as follows: the first occurrence of the noun refers to a particular woman, the second occurrence - in the same noun phrase - refers to the prototype (called by Culioli the center of the notional domain), and has no refential value but a qualifying role, producing a "high degree" value. Similarly, the repeated mention of the same participant in the modifying use of the reflexive pronoun produces a centering effect, discarding the other possible participants in the process, and confirming the role of the subject through the reflexive anaphora, hence the intensive meaning. This centering effect of adnominal intensifiers was very clearly formulated by König and Siemund in their generalized principle stating that « Adnominal intensifiers relate a center X (referent of the focus) to a periphery of alternative values » (ibid.: 45). I propose to relate this centering effect to the double reference to the same participant through the reflexive anaphora. This first use of the reflexive modifier as an agent intensifier is restricted to intentional processes with an agentive subject. In the following uses, there is no restriction on the process.

4.2. Emphasizing identity ('in person', 'per se', 'the actual one')

(42) Directeur bi bopp-am Sàmba [D] ci jiñ na director head-POSS.3SG DEF in accuse PRF.3SG N.PR 'The director in person (~ himself) has accused Sàmba'

In (42), the semantic contribution of the prepositional reflexive to the utterance is slightly different. Rather than emphasizing the agentive role of the subject, the reflexive pronoun lays stress on the *identity* of the person, as a distinguishing quality for participating in the event expressed in the predicative relation. In this example, the emphasis on the agentive role of the subject is not completely absent (since the subject is the agent of an intentional process), but the emphasis on his identity is more salient. This is due to the semantics of the term 'director' indicating the highest position in a hierarchical organization. This social identity is an aggravating factor for the event: the prepositional reflexive centers on the implication of the top of a hierarchy in the process, eliminating the (expected) alternative participants. The outstanding status of the agent in this value of adnominal intensifiers has been described by König and Siemund (2000: 45) as one of the necessary conditions for the 'centering' effect (in my terminology) of adnominal intensifiers: "X [the modified noun] has a higher position than Y [the peripheral alternative values] in a hierarchy". This higher position can also account for the use of the prepositional reflexive in (37) 'my own father has lied'.

This type of use of the adnominal reflexive phrase for emphasizing the identity of the participant in the process is neither restricted to hierarchical terms nor to agentive subjects. In

contrast to the preceding use emphasizing agentivity, this use can apply to patientive objects as in (43), to inanimate referents as in (44) or (45), and even to a relative clause (46). Those semantic aspects of the modified noun are conditioning factors for this value of the reflexive modifier: since the modified nouns do not play any agentive role in the predicative relation, the centering effect produced by the repeated reference to the same participant, as described above (4.1), bears on its mere identity.

(43) Gis naa directeur_i bi ci bopp-am_i [D] see PRF.1SG director DEF in head-POSS.3SG 'I have seen the director in person ~ himself'

(Talking about the origin of diseases: it can be a spirit or...)

(44) man naa doon feebar ci bopp-am [D] can PRF.3SG:LINK be disease in head.POSS.3SG 'it may be a disease per se ~ on its own'

(Talking about a village called Bëyti whose name has been given later on to an extended quarter)

(45) **Bëyti** si boppam, | sunu dëkk,... [C]

N.TPN in head-POSS.3SG POSS.1PL village

'The actual Bëyti (~ Bëyti itself), our village, (they all came to take refuge here)'

(Talking about how to cure a disease)

(46)Dafa bëgga [li ko boppam. [D] faj waral ci REL 0.3SG cause head.POSS.3SG FOC.V.3SG want:LINK cure in 'He wants to treat its very cause ~ the cause itself' (lit. to cure [what caused it] in its head)

As is shown by these examples, the *bopp*-prepositional phrase is always postposed to the modified constituent, whatever its position in the clause. This element has to be a noun or any term in a nominal function²¹. So in (47), the verb dox 'to walk' has a nominal use.

(47)**Dox** boppam wér [D]ci baax na ci g-i yaram head.POSS.3SG be.good PRF.3SG in health CLg-GEN body walk 'Walking per se ~ as such is good for your health'

4.3. Emphasizing the inclusion in an ordered list ('even him or her')

In another type of use, the prepositional reflexive phrase takes on a meaning close to that of the 'scalar maximizer' even, as exemplified in (48)a, paralleled in (48)b with a paraphrase using àttaa 'even'. The constrast with alternative participants is still present here but the specificity of this type of use is to indicate that alternative participants have undergone or performed the process, and to add a gradation by including in the list of participants the most unexpected, or most remarkable one. This example can be constrasted with (16)b, where the direct reflexive was used to emphasize the agentive role and the responsibility of the subject in affecting him or herself.

(48) a. Móodu ci bopp-am gaañ-u na [D]

²¹ So the intensifying use of the *bopp*-phrase is not restricted to independent personal pronouns, as it is the case in the examples given in Heine & Kuteva's (2001: 168), and holds for noun phrases and proper names as well.

N.PR in head.POSS.3SG injure-MID PRF.3SG
b. àttaa Móodu gaañ-u na [D]
even N.PR injure-MID PRF.3SG
'Even Móodu has injured himself'

This type of adnominal use with scope over the predicate is not restricted to animate subjects: it is possible for object arguments or for inanimates, as exemplified in (49) below, and can be paraphrased by various adverbs or discourse particles like àttaa 'even', itam 'too' or sax 'even, by the way'. Nevertheless, in contrast to those markers, the use of the prepositional reflexive as a scalar maximizer requires contextual conditioning and displays an important constraint on clause chaining: the alternative participants undergoing or performing the process must have been established in the previous context, and the same predicative relation must be repeated for the participant modified by the bopp-phrase, as shown in (49): (49)a is ungrammatical; the predicate must be repeated as in (49)b. Thus, the preceding context establishes the list of alternative participants in the process (which are not discarded this time but taken as a basis for a gradation toward the center), and the repeated predicate makes the modified noun an "extreme center" included in the list. This constraint on the repetition of the predicate can be interpreted as a trace of the original reflexive meaning of this intensifying use of the prepositional reflexive in this specific context.

(49) a. * dóor ñépp Musaa boppam na ci hit all head:POSS.3SG PRF.3SG N.PR in dóor b. na ñépp, dóor Musaa boppam na ci PRF.3SG all hit PRF.3SG head:POSS.3SG hit N.PR in 'He hit everyone, (he hit) even Musaa' [D] dóor na ñépp, dóor wotoom boppam c. hit PRF.3SG all hit PRF.3SG car:POSS.3SG head:POSS.3SG 'He hit everyone, (he hit) even his car' [D]

The repetition of the same predicative structure as a necessary condition for the interpretation of the prepositional reflexive as a scalar maximizer is visible in the next example. In (50), a traditional healer is explaining to a woman that, when pregnant, women should not eat white clay, as they sometimes do in Senegal, because white clay is not good for their health.

(50)kew dana yàq doom, vow cisa destroy PRO.2SG white.clay POSS.2SG child FUT.3SG in bopp dina yàq sa varam. [W]sa head FUT.3SG destroy POSS.2SG body POSS.2SG *'White clay may destroy your child, even you, it may destroy your body' 'White clay may destroy your child, as for yourself, it may destroy your body.'

In spite of the preceding mention of the possible harm to the child as an alternative participant in the process, there is no way here to interpret the reflexive prepositional phrase as meaning 'even you', because the two predicates are not identical: in the second clause, the modified pronoun is not an object of the verb yaq 'destroy' (yaram 'body' is the object of yaq) as in the first clause: yow 'you' is actually a topic, corefential with the possessor indexed by the next possessive marker on the object (namely $sa\ yaram$ 'your body'). For the scalar interpretation, one needs the changes in the second clause illustrated in (51): the same verb is repeated with the new participant as an object pronoun ('you'), in order to have a parallel predicative structure. Due to the position of

object clitics between the inflection and the lexical part of the predicate (see comment on (8) in § 3.), the prepositional reflexive cannot be placed immediately after the pronominal object: a coreferential independent pronoun is needed, in antitopic position, to introduce the adnominal modifier, as it was the case in (39).

Interestingly, (52) with a coordinative construction was given as a possible equivalent, confirming König and Siemund's predictions (ibid.: 55) about the contexts favoring the acceptability of reflexive intensifiers. In Wolof, nominal coordination is formed with the comitative preposition *ag* (whereas verbal coordination requires another morphem *te*), so the modified pronoun is actually coordinated to the previous object.

(52)dana vàa doom, [D]ag vow sa bopp. destroy POSS.2SG FUT.3SG child with PRO.2SG POSS.2SG head in 'it will destroy your child, and even you'

4.4. Semantic continuity, limits and motivation: comparison with ci wàllu boppam

In the previous sections, we saw that the prepositional reflexive used as an adnominal intensifier produces various senses, depending on the context: emphasis on the agentivity of the modified noun ('by him or herself'), on the identity ('in person', 'per se', 'the actual one') or on the inclusion of the modified term in an ordered list of participants in a process, that is as a scalar maximizer ('even'). There is clearly a semantic continuity between the various intensifying uses of the reflexive locative phrase: out of context, the clause is often ambiguous in several ways, as illustrated in (53).

- (53)Buur ci boppam dem seeti ndax li naar wax king head:POSS.3SG leave look:CTF in Q.PLR REL moor say dëgg la. [D] truth FOC.CMP.3SG
 - 'The king himself went to see whether what the Moore said was true'
 - ~ 'The king went (by) himself to see whether what the Moore said was true'
 - ~ 'The king, in person, went to see whether what the Moore said was true'
 - ~ 'Even the king went to see whether what the Moore said was true'

This polysemy of the reflexive prepositional phrase is probably permitted by the underspecification of the preposition ci in Wolof: ci has a broad locative meaning and is used as a kind of all-purpose preposition. Its specific meaning in context is specified by the semantics of the other terms, in particular by the predicate. In the present case, the contextual meaning of the locative reflexive is partly conditioned by the nature of the terms (e.g. human vs. non-human agent, intentional vs. non intentional predicate) and always specified by the context. In (54) for instance, the first clause has preconstructed a (minimal) set of forgiving people, therefore when the predicate is repeated for God, the reflexive intensifier gets the meaning of the scalar maximizer, including the predicate in its scope: 'even God does it'.

(54)Ви la tooñee, danga baal. nit ko wara when O.SG human offend:ANT FOC.V.2SG 0.3sgmust:LINK forgive

Yàlla ci boppam dafa baal-e. [D] God in head:POSS.3SG FOC.V.3SG forgive-ANTIP 'When someone offends you, you must forgive him. Even God forgives'

Finally, some occurrences have been found where the prepositional reflexive phrase modifies a maximally peripheral element, such as a topic or an antitopic, sometimes with a very loose connection to the sentence. For instance, in (55), the word 'disease' has no syntactic role or pronominal reference in the predicative relation and will be referred to by the speaker after no less than nine clauses. Thus this modified noun appears as a broad topic introducing a long development.

(Context: a speaker is asking a person to describe the kind of disease for which he has consulted a traditional healer, the person anwers with a long story starting like this:)

Feebar daal moom ci boppam, bi (55)bi ma disease DEF indeed PRO.3SG in head:POSS.3SG when AOR.1SG ubbi liibër ... [H] ñëwee. mи seet ma, benn na come: ANT AOR.3SG look 0.1SG open PRF.3SG book one 'Well, the disease itself, when I came, he examined me, has opened a book and...

When asked to explain why the speaker added this reflexive locative phrase, a consultant said that the speaker wanted to "clearly state that he is precisely talking about his disease". Should we consider that the prepositional reflexive has grammaticalized as a kind of contrastive topic marker and that the reflexive marker has lost its original meaning and motivation? Actually, when the speaker wants to restrict his pointing to the modified term (in contrast to other possible topics), he needs to add a genitival construction with the word wàll 'part, share' in the prepositional reflexive phrase, as in (56): ci saa wàll-u bopp (lit. 'in my part of head') means 'for my part, as far as I am concerned'. This construction functions as an adnominal modifier like the plain prepositional reflexive. The preposition ci, however, can be omitted here, maybe indicating an incipient grammaticalization. The constrast between (56) and (57) clearly shows that the metonymic use of the 'head' for the person or entity in its integrity is still motivated in the prepositional reflexive: the insertion of wall ('part') is required in order to limit the implication of the referred participant in the process, thereby allowing this "restrictive reflexive" to function as a topic marker. The centering effect produced by the elimination of alternative participants in the process is not present with ci sa(m)a wàllu bopp which, instead, restricts the semantic scope of the predicative relation to the modified participant.

- (56) Kon man [ci] saa wàll-u bopp, naka laay faje?
 so PRO.1SG [in] POSS.1SG part-GEN.SG head how FOC.CMP.1SG:IPFV cure:ANTIP
 'In this case, for my part ~ as for me, how do I cure people?' [H]
- (57) Kon man ci saa bopp, naka laay faje?
 so PRO.1SG in POSS.1SG head how FOC.CMP.1SG:IPFV cure:ANTIP
 'In this case, how do I myself cure people?' [D]

This contrast is also visible in the next example: in (58)a with the restrictive reflexive, the speaker is questioning his interlocutor *about* himself, whereas with the plain prepositional reflexive, as in (58)b, he would have been questioning him *personally* or *directly* (not someone else) ²².

(Context: a speaker is trying to prompt someone to tell his personal story)

- (58) a. Léegi, ma laaj la. vow ci sa wàll-u bopp. PRO.2SG in POSS.2SG now AOR.1SG ask 0.2sgpart-GEN.SG head 'Now I am asking you [to tell me] about yourself '[C]
 - b. *Léegi, ma laaj la, yow ci sa bopp* now AOR.1SG ask O.2SG PRO.2SG in POSS.2SG head 'Now, I am asking you personally ~ directly (not someone else)' [D]

Finally in (59), the prepositional phrase with 'my part' is not possible (even as a topic marker), because the modified term is an agentive subject, therefore requiring the implication of *the person* as a whole in the process of going to the meeting: the use of the reflexive pronoun with bopp is necessary to emphasize the agentivity of the subject in the process, thus indicating that the metonymy of the 'head' for the person is still active in the prepositional reflexive.

So, to conclude on this point, we can state that, when modifying a topic or an antitopic as in (55), the prepositional reflexive indicates a "discursive centering" by which the speaker eliminates other alternatives and points to the very *nature* of the referred entity he precisely wants to talk about. In other words there is still an emphasis on the identity of the entity referred to and the semantics of the prepositional reflexive is the same as when it modifies an argument in a sentence.

5. Conclusion

This study has revealed that the noun phrase 'his head' has various grammatical uses in Wolof, falling in two main types, (1) as a reflexive pronoun with different semantic roles, and (2) as an adnominal intensifier in a reflexive prepositional phrase. So, from its use as a reflexive pronoun, the *bopp*-phrase has not grammaticalized further into a middle marker, in all likehood because the middle marker is older²³ than the reflexive pronoun in Wolof, as indicated by its suffixal status. In this language, the two constructions coexist, in most cases in complementary distribution²⁴, for prototypically *other-directed* processes (reflexive) vs. *self-directed* processes (middle). This confirms Kemmer's prediction (1993: 229) according to which middle markers

²² Wolof displays here an interesting contrast with Mina (Central Chadic): besides its use as a reflexive marker, in this language (Frajzyngier 2019: 59), the word for 'head' can be used to mark the topic of a verb of saying (e.g. 'we talked about a horse' lit. we talked head horse). As indicated by Frajzyngier (ibid.), this function is most likely a semantic extension of the coding of the spatial relation 'on' with 'head'. In Wolof, since *bopp* did not grammaticalize into a locative marker as we have seen (§ 2.), this use of 'head' is not possible: for the closest construction, that is as a topic marker, the restrictive construction ('in my part of head') is required.

²³ The middle suffix (as well as the genitive linker) may originate from the third (homophonic) spatial deictic -u. It contrasts with the proximal -i and distal -a ones and indicates the absence of localization of an entity in the speaker's sphere (Robert 2006).

²⁴ Note that obligatorification and specialization are considered to be indicators of grammaticalization (Hopper, 1991: 21-22).

from non-reflexive sources will *not* develop into markers of reflexive semantics. However, in Wolof, the reflexive pronoun has developed a variety of non-prototypical uses that were not predicted in Kemmer's model, maybe pointing to another grammaticalization chain, ranging from direct and oblique reflexive pronoun to adnominal intensifier (in the locative phrase) through the genitive reflexive, which share properties with both types of uses. Some of these uses are well known, however the genitive reflexive is apparently a typologically rare structure and may have played a pivotal role in this grammaticalization chain. Furthermore, the detailed account of their various senses and contexts of use, as summarized in Table 3, allows us to understand their semantic continuity and discontinuity and, in particular, the relation between the reflexive and the intensifying uses that is seldom accounted for.

Table 3. The grammatical uses of the pronominal phrase 'his head' in Wolof

the reflexive pronomimal phrase 'his head'				
pattern	syntactic role	semantic role	meaning	
direct reflexive	object	patient	'himself'	
oblique reflexive	object	beneficiary	'for himself'	
(+ APPL suffix ~ PREP)	(~ oblique)	recipient	'to himself'	
		comitative	'with himself'	
		human instrument/agent	'by himself'	
genitive reflexive	noun modifier	possessor	'(of) his own'	
(+ GEN suffix)				
the intensifying prepositional phrase 'in his head'				
pattern	syntactic role	emphasing	meaning	
reflexive locative PP	noun modifier	agentivity	'by himself'	
(+ PREP)		identity	'in person', 'per se'	
		inclusion in a list of participants	'even him'	
the restrictive prepositional phrase 'in his part of head'				
reflexive locative PP	noun modifer	restrictive (topic) marker	'for his part'	
$(+ PREP + w \hat{a} l l - GEN)$				

The first important characteristics of the grammatical uses of the HEAD in Wolof is that, in all cases, the [POSS + HEAD] phrase functions as a pro-noun, occupying the syntactic slot of a noun and expressing co-reference (i.e. shared identity) with a noun in the clause through an anaphoric relation. The second remarkable point is that, under certain conditions, the syntactic and semantic role of this reflexive pro-noun can change according to the general syntactic patterns for nominal complements in this language: thanks to the applicative suffix, the coreference with the agentive subject can be extended from patientive object (direct reflexive) to oblique arguments (with a semantic role of beneficiary, comitative, recipient or, more specifically, human instrument/agent); thanks to the genitival connector, the reflexive pro-noun can function as a noun modifier indicating coreference of the modified noun with the possessor indexed on the possessive modifier of the head noun. In this construction, the possessive modifier has a double scope, on the possessed N1 and on bopp in N2. And finally, thanks to the locative preposition, the prepositional reflexive in adnominal position can function as a noun modifier, like the genitive reflexive, but in a different construction. The reflexive anaphora is still present in this case. However, because of its intra-phrastic scope, the necessary correlation with the agentive subject of an intentional predicate is lost and the co-reference expressed by the reflexive pronoun can be extended to any noun in the utterance, even a topic or an antitopic. What is the

semantic contribution of the reflexive anaphora in this intensifying use of the prepositional reflexive?

A clear semantic continuity, produced by a common semantic pattern, can be outlined across the various uses of this reflexive pronoun. In all these uses, the bopp-phrase with the possessive modifier has a pronominal functioning and indicates co-reference between two syntactic components. When the reflexive anaphora has scope over two different semantic roles, the bopp-phrase has a plain reflexive meaning. However, an emphasis (on the self-affectedness or self-benefit) is already present in this prototypical reflexive construction because a clear elaboration of the two distinct roles for the same agent is maintained by the pronominal construction (and strengthened by the semantic motivation of the use of 'the head' in this function), contrasting with the valency reduction of the middle construction. Furthermore, being restrictively used for typically *other-directed* processes, the reflexive construction also implies that alternative (more expected) agents are discarded. The "centering effect" on the actual participant, due to backgrounded elements in the semantics of the verb in the (in)direct reflexive construction, is even clearer, because explicitely marked, when the reflexive anaphora refers to the same participant in the *same* semantic role. This is the case, (a) for the oblique reflexive when it does not introduce a new semantic role (i.e. as an agent), and even more clearly, (b) with the genitive reflexive, for which the possessor is already indexed on the possessive modifier, and (c) for the prepositional reflexive used as a noun modifier. In all these cases, the reflexive anaphora creates a re-identification of the referent in the same role, producing an intensive effect by centering on the referent in this role and discarding the alternative participants. Furthermore, in the modifying uses, the reflexive anaphora no longer identifies a (coreferent) participant in the discourse, nor does it contribute to the denotational (or referential) value of the verbal scene, it functions as an optional element used by the speaker to qualify the modified term for discursive (argumentative) purposes²⁵.

Finally, this study has revealed that the grammaticalization of the reflexive pronoun is not completed and that the use of *bopp* is still motivated in its grammatical uses. From a syntactic point of view, the *bopp*-noun phrase is always used in a nominal function (occupying a nominal slot) and retains some nominal properties, such as the presence of an inflecting possessive modifier and the postverbal position of a nominal (vs. pronominal) object. Morevoer several semantic restrictions have been observed, such as the use of the genitival reflexive with human beings, and also some intermediary cases where it is difficult to decide on a grammatical or a metonymic use of this body part term such as (60). So, Wolof is an instance of an intermediate stage of grammaticalization (stage II) according to the model proposed by Schladt (2000) for the body part reflexives, out of Heine's (1994) 'Overlap-Model'.

(60) *Móodu, mag-u boppam la.* [D]

N.PR elder.brother-GEN head-POSS.3SG FOC.CMP.3SG
'Móodu just does whatever he pleases'

head' refers to its *identity*.

Lit. 'Móodu is the elder brother of his head (= of himself)', meaning that Móodu does not listen to the elders as he should, he is his own *authority*'.

²⁵ I propose to characterize in a similar way the two grammatical uses of 'body' in Pero (see footnote 5) as described by Frajzyngier (this volume): when 'body' is not used as a reflexive pronoun (referring to the same participant in two different semantic roles), it functions as a noun modifier (modifying here the object of the verb). Interestingly, the intraphrastic scope of the reflexive anaphora in this language produces different semantic effects than the ones in Wolof, in all likelihood because the two reflexive markers originate from two different semantic notions ('body' in Pero vs. 'head' in Wolof): in Pero, when used to *qualify* a referent, the term 'body' refers to the *integrity* of the referent which has not been "affected" by the process (in the sense defined by the author), whereas in Wolof 'the

Altogether, these semantic restrictions and conditioning as well as the semantics of the various reflexive constructions in Wolof, emphasizing the agentivity, responsibility or identity of the referent, point to a metonymic use²⁶ of the HEAD for the PERSON or INDIVIDUAL with its specific attributes of will, intentionality and identity, at the root of the incipient grammaticalization of this noun. This metonymic use of *bopp* in grammatical function is still motivated and in accordance with many of its lexical uses, such as the compound noun phrase in (61).

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(61) bopp- sa- bopp [D 2003]
head POSS.2SG head
'every man for himself' ~ 'individualism' (lit. 'head-your-head')
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Abbreviations

indicates a pause, ANT anteriority, ANTIP antipassive, AOR aorist, APPL applicative, CAUS.4 causative with omitted causee, CLx agreement class marker of class x, COMP complementizer, COP imperfective copula, CTF centrifugal suffix, DEF definite article, FOC.CMP/S/V Complement/Subject/Verb focus inflection, FUT future, GEN genitive, IMP imperative, IPFV imperfective, LINK verbal linker, MID middle, NEG negative suffix or inflection, N.PR proper name, O object pronoun, PAST past, PL plural, POSS possessive, PRF perfect, PRO independent pronoun, PRST presentative inflection, Q.PLR polar question particle, REL relativizer, SG singular, TPN toponym.

Corpus and data references

The following abbreviations are used for the various references:

C	'The Wolof Corpus'. Robert, S. 2017. In Mettouchi, A. and C. Chanard (eds.), <i>The</i>
	Cortypo Corpus. http://cortypo.huma-num.fr/Archives/corpus.php

D Elicited from Jean-Léopold Diouf

D 2003 Jean-Léopold Diouf's dictionary (Diouf 2003)

G Gancax gi, a TV play from the radio program Jamonoy Tey, broadcast by the ORTS (Office de Radiodiffusion-Télévision du Sénégal) on July 8, 1984.

F Fallou Cissé's personal story, recorded by the author in Senegal in 2015.

H Feebar yi ak garab yi. Debate about traditional healers on the radio program Horizon, broadcast by the ORTS on November 21, 1985.

XSW Xam sa waru gaar, a play from an educational TV program, by the ORTS (Office de Radiodiffusion-Télévision du Sénégal) in 1986.

W *Nu waxtaan ci.* TV debate from an educational program, broadcast by the ORTS in April 1986.

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²⁶ More precisely a synecdoche strategy.

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