PHONOLOGICAL BEHAVIOUR OF SOME SUFFIXES IN NAWDM VERB MORPHOLOGY

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Abstract: This article is a generative analysis of Nawdm verb system. It mainly identifies the different verb markers and studies the morphological and phonological status of /n/ and /ya/ found in that system. Until recently, no detailed work has been done on the verb system of Nawdm spoken in the district of Siou (Doufelgou/Togo). Now, each variety of a language has its specificities. The main objective of the study is to analyze and help understand the verb system of Nawdm and to fill the gap noticed in this system. By so doing, I would like to 1) identify the different morphemes which make up the verb in Nawdm; 2) analyze the morphological and phonological status of /n/ and /ya/ in this verb system. I use the traditional notions of infinitive, accomplished, unaccomplished and imperative forms to account for Nawdm verb morphology. The study reveals that two morphemes (*-m* and *- bɪ*) mark the infinitive in the language. Accomplished has different forms according to their context of occurrence. Unaccomplished which refers to present and future presents the same form apart from the present continuous which presents a lengthened form of the verb final vowel. The difference between the present and future is noted in the future where each verb is preceded by one of the future particles *nan*, *kɛɛ* and *ba.*

Key-words: Nawdm, Generative Grammar, verb, suffix, status

Résumé : Cet article est une étude du système verbal du nawdm. Elle identifie les différents marqueurs du verbe et analyse le Statut morphologique et phonologique de /n/ et /ya/ qui se trouvent être des morphèmes marqueurs de ce système dans la variante de Siou (Doufelgou/Togo). Jusqu'à récemment, aucune étude détaillée de ce système n'a été réaliséé. Or, chaque variante d'une langue présente des spécificités. Cette analyse qui s'inscrit dans le cadre de la Grammaire Générative, spécialement la morphologie générative et la phonologie générative a pour objectif principal d'analyser le système verbal du nawdm parlé à Siou et de combler ce manque. En étudiant ce système je voudrais 1) identifier les différents morphèmes marqueurs du système verbal du nawdm; 2) analyser le Statut morphologique et phonologique de /n/ et de /ya/ rencontrés dans ce système. Les notions traditionnelles de l'infinitif, d'accompli, d'inaccompli et de l'impératif sont utilisées pour mieux rendre compte de ce système. L'étude montre que les verbes du nawdm se classent en deux groupes à l'infinitif. Certains sont marqués par le morphème *-m* tandis que d'autres sont marqués par le morphème *-bɪ*. L'accompli présente plusieurs

mophèmes marqueurs selon leur contexte d'apparition. L'inaccompli, qui fait référence au présent et au futur présente la même forme sauf le présent continu où l'on note l'allongement de la voyelle finale du verbe. La différence entre le présent et le futur se situe au futur dont les verbes sont précédés de l'une des particules *nan, kɛɛ* et *ba*.

Mots-clés: nawdm, approche générativiste, verbe, suffixe, statut

Introduction

The verb is a word or combination of words that indicates the action or state of being or condition. The verb is the part of a sentence that tells us what the subject performs. Many researchers have investigated Nawdm verb system especially, Boguemna (2014), Nicole (1983; 2018). According to Boguemna, *-bə́* and *-m(ə́)* mark the infinitive in the language. Nicole used *-b* and *-m* to represent this infinitive. However, these studies considered the Western variety of Nawdm (Baga, Koka). Knowing that a language may have various varieties and that each variety may have its particularities as is the case of Nawdm, the present analysis uses data from the Eastern variety. To the best of my knowledge, this variety has not yet received a particular attention as far as the phonological and morphological description of its verb system is concerned even though Gawa (2016, p. 234-241) introduced it in her doctorate dissertation. Indeed, Gawa identified the verb suffixes without giving a clear description of this system. This explains the reason why the status of /n/ at the end of the accomplished and unaccomplished forms and the morpheme *-ya* in the imperative form are not taken into account in these previous works. This gap is to be filled.

The data used in this paper are based on the material of the fifth chapter of my dissertation. These data are mainly verbs which are classified into two groups according to their endings in the infinitive. After this classification, I used the traditional notions of accomplished, unaccomplished and imperative to identify the various verb markers in the language. The qualitative method is therefore used. The study falls within the Generative Grammar, especially the Generative Morphology and the Generative Phonology. Generative Morphology is used to account for the different constituents of the verb, especially the inflectional morphemes while Generative Phonology is used to explain the role or the phonological status of /-n/ and /-ya/ found among the markers.

The morphemes *-n* and *-ya* found in the verb system of Nawdm behave the same. They appear in a specific context. These morphemes occur in objectless sentences and they drop when there is an object.

The main hypothesis considers Nawdm as a language with overt markers. The second hypothesis is that there is a relationship between the suffix *-n* on the one hand and *-ya* on the other hand found in the verb morphology and the object of a

sentence all related to the verb. The objectives of the study are to 1) identify the different morphemes which make up the verb in Nawdm; 2) analyze the morphological and phonological status of /-n/ and /-ya/ in that verb system.

The study is divided into three main sections. In the first section, I identify the different constituents a verb can be made of. The second section deals with the status of the morphemes *-n* and *-ya*. The findings are presented in the third section.

1. The different constituents of the verb in Nawdm

Nawdm verb takes different forms. Its form can be infinitive, accomplished, unaccomplished, imperative. The sub-sections below consider each form in turn.

1.1 The infinitive

Two main morphemes are used to form the infinitive in Nawdm. Boguemna, (2014, p. 65) notes that "[…] the suffixes *-bə́* and *-m(ə́)* are some of the inflectional suffixes which can modify verb roots. These suffixes can, to some extent, be equated to the English notion of the infinitive preposition 'to' even though it is not totally the same". Nicole (2018, p.100) used *-b* and *-m* as he writes: "En nawdm il n'y a généralement que deux possibilités de suffixe, -b ou -m selon que le verbe est pluractionnel ou monactionnel respectivement." These morphemes are: *-m* and *– bɪ* in the Eastern variety of Nawdm also known as "Siou". The verb in the infinitive behaves as a noun. Indeed, it means "the fact of doing" something as stated in Nicole (ibid): "En nawdm, la forme sous laquelle on cite un verbe est une forme nominale du verbe. Comme le nom, elle se caractérise par son suffixe de classe et par sa fonction." As stated earlier, Nicole used data from the Western variety of Nawdm where, instead of *-bɪ,* speakers use *-b*. Thus, I consider these morphemes as infinitive markers and I classify them into two groups.

-Verbs in *-m*

(1)	sə́: -m	"to abandon/to desert/to leave"
	tí: -m	"to accept/to agree"
	hɛ́wɔ́lgə́–m	"to add"
	hɔ́də́ –m	"to wait for"
	mú gə́ –m	"to catch/to capture"
	rɔ́:gə́ –m	"to choose"
	bɔ́tgə́ –m	"to castrate"
	tɔ́rgə́ –m	"to contaminate/to help"

The morpheme *–m* appears systematically at the right of every verb base in the data. This morpheme marks the infinitive. Therefore, the verbs above belong to the group of *-m*.

-Verbs in -bɪ

The second group of verbs ends in the morpheme *-bɪ*. The following data illustrate this second group.

(2)

dɔ́ –bɪ	"to feed"
hóɦ -bɪ	"to call"
nyí –bɪ	"to drink"
yó –bɪ	"to see"
kpɛ́ɦr –bɪ	"to hide something"
bá̀g. -bɪ	"to look for"
wárɔ: -bɪ	"to whisper/to murmur"
lɛ̀gé: -bɪ	"to change/to modify"

Here again, the morpheme–*bɪ* is common to the verbs. Hence, these verbs are then classified in the second group. From the data in (1) and (2), we realize that the infinitive forms of the verbs follow the structure verb root + verb suffix.

1.2. Accomplished form of Nawdm verbs

The accomplished forms are obtained by adding various suffixes to the verb roots. If the verbs are realized in isolation or in a sentence without any object, the suffixes –ran, –an/ən, –n and ø are attached to the verb roots. But when the verbs are used in sentences with complements or objects, the suffixes –ra, -a/ɪ, ø are added to theses verb roots. The action in both cases is accomplished. The following data are illustrative.

(3)

(a) Subject + verb + accomplished marker -ran + ø object

bɔ́:-rán	"to dismiss/expel"
sɪ́-rán	"to give"
rɪ̂:-rán	"to fetch"
tʊ̂:m-rán	"to send"

(b) Subject + verb + accomplished marker –ra + Object

bɔ́:rá	"to dismiss/expel"
sɪ́rá	"to give"
rɪ̂:rá	"to fetch"
tʊ̂:mrá	"to send"

(c) Subject + verb+ accomplished marker–an/-ən + ø object

bɔ́l-án	"to swallow"
ká:l-án	"to count/to read"
dɔ́:t-ə́ń	"to sleep"
sɔ̀kl-ə́ń	"to love"

(d) Subject + verb + accomplished marker –a/ɪ + Object

bɔ́lá	"to swallow"

ká:lá "to count/to read"
dɔ́:tɪ́ "to sleep"
sɔ̀klɪ́ "to like/to love"

(e) Subject + verb+ accomplished marker -n + ø object

saˇ:-n "to let/abandon
faˇ:-n "to publish/evangelize"
yaˇ:-n "to judge"
toˇ:-n "to give"

(f) Subject + verb + ø marker

saˇ: "to let/abandon
faˇ: "to publish/evangelize"
yaˇ: "to judge"
toˇ: "to give"

The data above illustrate the accomplished forms in Nawdm. In these data, the markers –ran, -ra, -an/-ən, -a/-ɪ, –n, and ø are attached to the verb bases to signal that the actions are already performed. The verbs whose root final sound is a vowel form their accomplished with *–n* and ø as exemplified respectively in (e) and (f) above. The morphophonological analysis of these suffixes and the relation between the morpheme *-n* and the object will be provided in the course of this study.

1.3. Unaccomplished forms in Nawdm

Unaccomplished refers to the fact that the action of the verb is not at its end, Gawa (2016, p.239). Like in many languages, unaccomplished refers to the form of the verb in the present tense and future in Nawdm. However, the present and the future show the same verb forms. To make a difference between them, the particles *nan/nən, kɛɛ and ba* marking future precede every verb. Let us consider the data below.

(4)

(a)	Infinitive	Present tense	Gloss
	kpélŋə́bɪ́	kpélŋán	"learn"
	mú gə́m	mú gán	"catch"
	nyíbɪ́	nyínə́n	"drink"
	tí:bɪ́	tí:nə́n	"dig"
	yàdgə́m	yàdán	"spread"
(b)	Infinitive	Present tense	Gloss
	kpélŋə́bɪ́	kpélŋáá́	"learn"
	mú gə́m	mú gáá́	"catch"
	nyíbɪ́	nyíyáá́	"drink"
	tí:bɪ́	tí:yáá́	"dig"
	yàdgə́m	yàdgáá́	"spread"

(5)

(a)	Infinitive	Future particle	+	Future	Golss
	kpélŋə́bɪ́	nan	+	kpélŋán	"will learn"
	múgə́m	nan	+	múgán	"will catch"
	nyíbɪ́	nan	+	nyínən	"will drink"
	tí:bɪ́	nan	+	tí:nən	"will dig"
	yàdgə́m	nan	+	yàdán	"will spread"
(b)	Infinitive	Future particle	+	Future	Golss
	kpélŋə́bɪ́	kɛɛ	+	kpélŋá	"will learn"
	múgə́m	kɛɛ	+	múgá	"will catch"
	nyíbɪ́	kɛɛ	+	nyí	"will drink"
	tí:bɪ́	kɛɛ	+	tí:	"will dig"
	yàdgə́m	kɛɛ	+	yàdgá	"will spread"
(c)	Infinitive	Future particle	+	Future	Golss
	kpélŋə́bɪ́	ba	+	kpélŋá	"will learn"
	múgə́m	ba	+	múgá	"will catch"
	nyíbɪ́	ba	+	nyí	"will drink"
	tí:bɪ́	ba	+	tí:	"will dig"
	yàdgə́m	ba	+	yàdgá	"will spread"

The data in (4) illustrate the present tense. (4a) shows the simple present whereas (4b) is about present continuous where the vowel *a* is lengthened. (4a) and (5a) show that the form of the verb is the same in the present tense and the future tense. As stated above, the dissimilarity is that the future is preceded by the future particles *nan, kɛɛ*, and *ba. nan* and *kɛɛ* refer to a far future whereas *ba* refers to a near future. In addition, (5b) and (5c) show identical verb form. However, their future particles are not identical. In (5b) the future particle is *kɛɛ* while in (5c) it is *ba*. The observation of these data reveals that the suffix of the verb in (5a) seems to be in relation with the future particle *nan*. Indeed, the final consonant of the future particle and the last sound of verb in future are identical as illustrated in the following structure:

nan + verb +an

n

The status of this sound is analyzed further in section 2.

The last form of the verb I consider in this article is the imperative which is discussed below.

1.4. Imperative form of Nawdm verbs

Nawdm (Eastern variety) distinguishes two types of imperatives. We have the simple form and the imperative continuous. Let us consider the following data.

(6)

(a) bǐ "lift up!"
kpǐ "erase/put off! (light)
tǐ "accept!"
bǒ "expel/dismiss!"

(b) bìyá "lift up!"
kpìyá "erase/put off! (light)"
tìyá "accept!"

(c) lǒ:ḿ "keep putting/ placing!"
bǐ:ḿ "keep lifting up!"
kpǐ:ḿ "keep erasing/ putting off! (light)"
tǐ:ḿ "keep accepting!"

The data in (6) show the construction of the imperative in Nawdm. (a) and (b) show the simple forms. The morpheme –yá in (b) marks the simple imperative which, for some reason deletes in (a). In (c), –ḿ marks the imperative continuous. The observation I also make of these data is that the verb roots in (b) bear a low (L) tone. However, these roots bear a rising (LH) tone in (a) and (c). I assume that the tone of the imperative is high (H). As regards the tonal system, two level tones (low tone and the high tone) are attested in Nawdm. These tones can combine to form contour tones as demonstrated in Gawa (2016). Thus, I argue that the combination of these low and high tones gives a rising tone in (a) and (c). Even though the simple imperative marker /-ya/ deletes in (a), its tone remains and combines with the tone of the verb root and forms a contour rising tone. In Nawdm, nasal consonant can be syllabic. Besides, the language attests complex nuclei which can be composed of a vowel and a nasal in word final position (Gawa, 2020). This is the case of /m/ which bears the high tone in (c). Since /m/ has the quality of a tone bearing unit (because being nasal consonant and part of the nucleus), it bears the imperative high tone.

2. The status of /n/ and /ya/

The observation of the data in (3) shows that the items in (3a), (3c), (3e) end with the identical morpheme /-n/. The second observation is that where the object appears, the morpheme /-n/ is absent. What is then the morphological, phonological, and syntactic role played by /n/ in these utterances? The data below are illustrative.

(7) (a) Subject + verb + Acc
mà rɪ̃:-rán
1st Sing + fetch +Acc
"I fetched"

(b) Subject + verb + Acc + Object
mà rɪ̃:-rá nyá:lm
1st Sing +fetch +Acc + water
"I fetched water"

mà ká:l-án	mà ká:l-á lúg.bírí
1st Sing + count + Acc	1stSing + count + Acc +money
"I counted"	"I counted money"
mà dɔ́:t-ə́ń	mà dɔ́ :t-í dùgùn
1st Sing + sleep+Acc	1stSing + sleep+Acc+ room (in)
"I slept"	"I slept in the room"
mà tó:-n	mà tó ró:gʊ́
1st Sing +give+Acc	1st Sing + give +Acc +bag
"I gave"	"I gave the bag"

All of the constituents of the accomplished marker appear phonetically in (7a) with objectless utterances whereas in (7b) its last element -n does not appear phonetically while the object/complement appears. I assume yet that, (7a) and (7b) convey the same meaning of accomplished. Therefore, I argue that the zero element ø at the end of objectful utterances and the segment /n/ in final objectless utterances do not have the same environments. Their syntactic environments are illustrated below.

1) Subject + verb +Acc – object
   NP+V+Acc
2) Subject + verb + Acc +object
   (a) NP + V+ Acc + NP
   (b) NP +V +Acc +ø

From this analysis I argue for a relation between the distribution of the accomplished marker and the object, all related to the verb. I assume that the final segment /n/ is not part of the accomplished marker. It rather stands for an imagined object. When the real object appears, /n/ does not play any role. So, it has to drop as illustrated in (7b) above. Phonologically, I consider /-ran/ as the morpheme (underlying representation) with its different concrete realizations (allomorphs). These allomorphs are phonologically conditioned because phonological rules can explain their presence or change. Thus, in [mà ká:lá lúg.bírí], two rules apply. Firstly, the segment /r/ drops when the root final sound is a liquid. So, # mà ká:l+rán lúg.bírí# → [mà ká:lán lúg.bírí]. Secondly, the disappearance of /n/ is motivated by the presence of the object initial consonant. Then, # mà ká:lán lúg.bírí # → [mà ká:lá lúg.bírí]. Therefore, /r/ →ø / [+liquid] -; /n/ →ø / - [+cons]. In the variety of Nawdm considered in this study, the schwa /ə/ is not allowed in word final position. Then, instead of remaining a mid vowel after the deletion of /n/, /ə/ raises and changes into the high vowel [ɪ]. This explains its presence among the allomorphs of the accomplished marker. Considering their context, I claim that -ran is the morpheme which has different concrete realizations.

Another evidence for /n/ to stand for an imagined object and an underlying representation is observed in (4) under "present" and in (5a) under the paradigm "future". Here, /n/ appears systematically at the end of each item after which there is no object. If I add the object to these verbs, I will obtain the following data.

(8) (a) mà kpélŋá lɔ́:rí jɔ́:bí
1st SG learn+present car/lorry drive
I learn car/lorry drive
"I learn to drive"
mà múgáá búrgʊ́
1st SG catch +present goat
I catch goat
"I catch the goat"

(b) mà nán kpélŋá lɔ́:rí jɔ́:bí
1st SG will learn car/lorry drive
I will learn car/lorry drive
"I will learn to drive car/lorry"
mà nán múgá búrgʊ́
1st SG will catch goat
I will catch goat
"I will catch the goat"

The forms of the verbs in (8a) and (8b) do not have the segment /n/ as in (4) and (5) since the objects clearly appear. The initial sounds of these objects appear to be consonants. I then argue that /n/ plays a specific role, that of standing for an imagined object. Therefore, it has a phonological status, that of being a phoneme which drops in contact with object initial consonant. Even though its absence or presence does not have much influence on the meaning, I postulate that /n/ is an underlying representation. In reference to the deletion of /n/, the dropping of /-ya/ can be explained by the presence of an object. When I observe the context in which it appears, I realize that the object is absent. Therefore, I argue that as /n/, /-ya/ represents an imagined object because /n/ as well as /-ya/ appear in objectless utterances. The difference between the deletion of /n/ and the deletion of /ya/ is that the former is a single segment with C structure whereas the latter has a CV structure. In phonology, segments can delete, insert, or copy the features of a nearby sound to facilitate the pronunciation. However, a whole syllable /ya/ with a CV (two sounds) structure drops in (6a). How can we explain this phenomenon? It finds its explanation in Ourso (2010) who notes:

> Les processus phonologiques déclanchent des mutations segmentales et suprasegmentales comme conséquence des règles ou des contraintes de la langue. Il est souvent rare que ces contraintes visent en même temps toute une syllable de structure CV où les constituants Coda Noyau s'effacent

> simultanément. Mais de tels phénomènes se rencontrent dans les langues et sont traités, au mieux, dans les analyses morphologiques et phonologiques comme 'cas d'haplologie où certaines des séquences jugées disgracieuses sont tout simplement effacées.
>
> Ourso (2010, p.269)

It is clear from the foregoing that a syllable with two constituents can drop at the same time in the same environment. Instead of deleting one segment as we do in phonology, a whole syllable can be dropped as is the case of /-ya/ in the verb system of Nawdm. It is then analyzed as a case of haplology. Phonologically, I assume yet that the imperative is marked at two levels: segmental level with /-ya/ and the suprasegmental level with the high (H) tone. The tone and /-ya/ appear when the object is absent. In case the object is present, only the tone marks the imperative.

3. Findings and discussion

The investigation of the verb morphology of the Eastern variety of Nawdm has revealed that two morphemes, *-m* and *–bɪ* mark the infinitive. The accomplished form is marked by various elements which are *–ran, -ra, -an/-ən, -a/-ɪ, –n*, and *ø*. There is a distinction between these accomplished morphemes. The analysis of the data has shown that there are objectful accomplished morphemes *–ra, -a/ɪ* or *ø* and an additional objectless accomplished morpheme *-n*. Indeed, this latter which appears also in the unaccomplished forms is not part of the accomplished suffixes because its presence or its absence is conditioned by the presence or absence of an object in the utterance. It therefore plays a specific role. This explains its disappearance in some utterances as a result of the phonological process of deletion. Another verb form considered in this analysis is the unaccomplished which refers to present and future in Nawdm. The form of the verb is identical in the present and future. The difference lays in the use of the future particles *nan, kɛɛ* and *ba.* The final vowel of the verb is lengthened to mark the present continuous. The last verb form taken into account in this article is imperative and its analysis has revealed that it has two forms, simple form with a high tone and the morpheme *-ya* which can delete resulting from the morphological process known as haplology and the imperative continuous marked by the morpheme -m.

Conclusion

Many morphemes mark Nawdm verbs according to their forms. Thus, the infinitive, the accomplished, the unaccomplished and the imperative are the different forms of Nawdm verbs taken into consideration in this study. Two morphemes mark the infinitive in the variety of Nawdm (Siou/Doufelgou) considered in the analysis. The accomplished is marked by *–ra, -a/ɪ* or *ø* according to the context in which they appear. Three different particles, *nan, kɛɛ* and *ba* mark

future. The morpheme *-m* shows the present continuous form. Furthermore, /-ya/ and the high (H) tone mark the imperative. The segmental marker of the imperative can drop. Its disappearance is conditioned. Therefore, I argued for a relationship between *-n* and *-ya* on the one hand and the object of a sentence on the other hand.

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Abbreviations and symbols

Acc	accomplished
Unacc	unaccomplished
NP	noun phrase
N	noun
V	verb/vowel
C	consonant
1st	first
SG	singular
ø	null element
+	addition
-	minus means without, absence. It also shows a bound morpheme