

## 9 Verbal Derivation

Derivation of a verb stem from another verb (or an adjective or noun) is typically by addition of a derivational suffix to the input stem. Inflectional suffixes follow the derivational suffix.

The suffixal vowel in the reversive and causative derivatives is an unspecified short vowel. It gets its vowel quality by feature-spreading from the preceding vowel (i.e. the final vowel of the input stem). This is true even when the preceding vowel is subsequently itself syncopated or raised to become a high vowel. For the phonology, see Suffixal Vowel-Spreading (§3.xxx) and Presuffixal V<sub>2</sub>-Raising (§3.xxx).

The suffixes in question will be represented as  $-r\acute{v}-$ ,  $-w\acute{v}-$ ,  $-g\acute{v}-$ ,  $-n\acute{v}-$ , etc., where “ $\acute{v}$ ” represents the unspecified short vowel. This vowel is always H-toned, as is true of the final short vowel in all nonmonosyllabic inflectable verb stems.

In all cases, if the input verb is all-H-toned, so is the suffixed derivative. If the input verb is of the type L(L...H), with only the final mora high-toned, this pattern is also extended to the suffixed derivative. For example, a bisyllabic HH input corresponds to a HH-H derivative, while a LH input has a LL-H (note: not #LH-H) output. This lends itself to an autosegmental analysis, where input verbs may be {H} or {LH}, and these lexical contours are re-applied to suffixal derivatives, with the final H in {LH} always associated with the final mora.

$-r\acute{v}-$  and  $-w\acute{v}-$  appear as  $-r^n\acute{v}-$  and  $-w^n\acute{v}-$ , respectively, when preceded by a nasalized vowel or by a syllable beginning in a nasal or nasalized consonant, by regular application of Nasalization-Spreading (§3.xxx).

### 9.1 Reversive verbs

A typical feature of Dogon languages is the reversive category; compare English *un-* in verbs like *untie* and *uncover*.

The clear cases in Jamsay known to me are given in (xx1).

(xx1)	input	gloss	reversive	gloss
a.	páyá-	‘tie’	páyá-rá-	‘untie’
	pégé-	‘nail [verb]’	pégé-ré-	‘slide handle over (blade)’
b.	níṅé-	‘tangle’	níṅí-r <sup>n</sup> é-	‘untangle’
	píné-	‘shut’	píní-r <sup>n</sup> é-	‘open’
c.	dàṅá-	‘attach’	dàṅà-r <sup>n</sup> á-	‘cut crosswise’
	gònó-	‘be bent’	gònò-r <sup>n</sup> ó-	‘straighten’
	námá-	‘step on’	námá-r <sup>n</sup> á-	‘remove foot from’
	nájá-	‘forget’	nájá-r <sup>n</sup> á-	‘remember’

nóŋó	‘be caught (in tree)’	nóŋó-r <sup>n</sup> ó-	‘unhook (sth in tree)’
óŋó-	‘crumple’	óŋó-r <sup>n</sup> ó-	‘uncrumple’
sáŋá-	‘fence (in)’	sáŋá-r <sup>n</sup> á-	‘remove fence from’

d. gòró-	‘cover’	gòl-ló-	‘uncover’
kóró-	‘hang up’	kól-ló-	‘take down (sth hanging)’
píré-	‘get bogged’	píl-lé-	‘get unbogged’
tárá-	‘be stuck (to sth)’	tál-lá-	‘become unstuck’

For **nasalized** r<sup>n</sup> in (xx1.b-c), see Nasalization-Spreading (§3.xxx). For ll (xx1.d), see Post-Sonorant Syncope (§3.xxx) and Rhotic-Cluster Lateralization (§3.xxx).

The set of inputs in (xx1) shows a **limited range of C<sub>2</sub>**: 2 cases of g (including γ), 4 of r, and 9 of nasals (1 m, 2 n, 6 ŋ). A similar range is found with the -rʋ- allomorph of the causative (see below).

In addition to the examples given, where the reversive sense is fairly clear, there are many verbs in the lexicon whose shapes (e.g. CV<sub>1</sub>CV<sub>1</sub>rV<sub>1</sub>-, CV<sub>1</sub>llV<sub>2</sub>-) are compatible with reversive morphology. In a pair like gàmá- ‘reduce’ alongside gàmà-r<sup>n</sup>á- ‘share, divide’, there is a hint of possible reversive semantics, but the relationship is not transparent. With kólóló- ‘take off, doff (garment)’, there is more than a hint of reversive semantics, but from kúr<sup>n</sup>ó- ‘put on, don, wear (garment)’ we would expect reversive #kúl-ló rather than kól-ló-. In many other cases there is no attested simplex verb, so demonstrating reversive morphological status is impossible synchronically.

## 9.2 Deverbal causative verbs

Before proceeding, brief mention can be given to verbs borrowed directly from **Fulfulde causatives**. These are all-H-toned verbs ending in ...íné- or ...íné- (the choice depends mainly on harmony with preceding vowels). These contain the Fulfulde Causative formative -in- plus the -ε (-e) ending that is normal in Fulfulde verb borrowings.

I distinguish (deverbal) **causative**, (deadjektiv) **factitive**, and **denominal** verbalizations. However, the distinctions between causative, factitive, and other transitive derivations are somewhat fuzzy, and there is much overlap in the respective morphologies. For an interesting **pseudo-causative** (actually a nominal syntactically) formed with suffix -wè, see below, §9.xxx.

For the causative strictly speaking, there is a basic choice between **three basic suffix allomorphs** -wʋ-, -gʋ-, and -rʋ-, all with underspecified vowel v. The w and r consonants become w<sup>n</sup> and r<sup>n</sup> due to Nasalization-Spreading under phonologically regular conditions (§3.xxx). One should not confuse -rʋ- as a minor Causative allomorph with the productive Reversive suffix -rv-.

In most cases, the **tones** of the causative are predictable from those of the input; see §3.xxx. The few exceptions that I have noted are in (xxx). All are H-toned monosyllables with LH-toned causatives. The productive Causative suffix *-wǎ-* is represented once (xx1.a). Most cases involve a minor Causative suffix allomorph *-nǎ-* (xx1.b). In addition to the one example of {LH}-toned causative from H-toned input with *-wǎ-* (xx1.a), there is one example of the same tonal relationship in a passive with *-wǎ-*, namely *è : -wé-* ‘be seen’ from *é : -* ‘see’, , §9.xxx, below).

(xx1)	input	gloss	causative	gloss
a.	bé : -	‘remain’	bè : -wé-	‘cause to remain’
b.	bá : -	‘learn’	bà : -ná-	‘cause to remain’
	dó : -	‘arrive’	dò : -nó-	‘cause to arrive’
	jó : -	‘be much, many’	jò : -nó-	‘do much’
	mé : <sup>n</sup> -	‘be ground up’	mè : <sup>n</sup> -né-	‘grind up’

The most productive of the three Causative suffix allomorphs is *-wǎ-*. It is readily applied to new borrowings, and can be added to a wide range of stem shapes ranging from mono- to trisyllabic. Representative examples are in (xx2).

(xx2) Causatives with *-wv-* (or *-w<sup>n</sup>v-*)

	input	gloss	causative	gloss
a.	pá : -	‘come up beside’	pá : -wá-	‘put next to’
	pé : -	‘weep’	pé : -wé-	‘cause to weep’
	kó : -	‘eat (meat)’	kó : -wó-	‘give meat to’
	yǎ : -	‘go’	yà : -wá-	‘allow to go’
b.	áyá-	‘hear’	áyá-wá-	‘cause to hear’
	cégé-	‘be charred’	cégé-wé-	‘char’
	dègè-	‘spend day’	dègè-wé-	‘have (sb) spend
day’				
	lóyó-	‘overflow’	lóyó-wó-	‘make overflow’
	péré-	‘jump’	péré-wé-	‘brandish’
	táyá-	‘put on shoes’	táyá-wá-	‘put shoes on (sb)’
	wè : jé-	‘become accustomed’	wè : jè-wé-	‘habituate (sb)’
c.	ñé : -	‘eat (meal)’	ñé : -w <sup>n</sup> é-	‘feed’
	nǎ : -	‘drink’	nò : -w <sup>n</sup> ó-	‘give drink to’
	nú : -	‘enter’	nú : -w <sup>n</sup> ó-	‘make enter’

d.	ér <sup>n</sup> é-	‘be full (sated)’	ér <sup>n</sup> é-w <sup>n</sup> é-	‘make full (sated)’
	kár <sup>n</sup> á-	‘do’	kár <sup>n</sup> á-w <sup>n</sup> á-	‘cause to do’
	páŋá-	‘hold in place’	páŋá-w <sup>n</sup> á-	‘cause to hold’
e.	kúnó-	‘put’	kúnú-w <sup>n</sup> ó-	‘allow to put’
	jìmné-	‘become blind’	jìmnì-w <sup>n</sup> é-	‘make blind’
	jùgó-	‘know’	jùgù-wó-	‘inform’
	píté-	‘be inflated’	pítí-wé-	‘inflate’
	dìŋé-	‘sit’	dìŋì-w <sup>n</sup> é-	‘make sit’

A small set of causatives is characterized by a suffix allomorph -gʷ- or (apparent) -ŋʷ-. All examples known to me are in (xx3).

(xx3) Causatives with -gv- (or -ŋv-)

	input	gloss	causative	gloss
a.	kúró-	‘be undiluted’	kúró-gó-	‘make undiluted’
b.	bùró-	‘be revived’	bùrù-gó-	‘revive’
c.	éré-	‘escape’	ér-gé-	‘let escape’
	káwá-	‘separate self’	káw-gá-	‘separate’
d.	sáy <sup>n</sup> á-	‘be spread’	sáy <sup>n</sup> -ŋá-	‘disorder, shuffle’
		(compare sáy <sup>n</sup> á-w <sup>n</sup> á-		‘spread [tr]’)
e.	súgó-	‘go down’	súnú-ŋó-	‘take down’
	dògó-	‘be finished’	dònò-ŋó-	‘finish (sth)’

In (xx3.a), we have -gʷ- added to the segmentally intact input stem. In (xx3.b), the medial vowel has raised to high by regular Presuffixal V<sub>2</sub>-Raising (§3.xxx). In (xx3.c), the medial vowel is **idiosyncratically syncopated**. Summing across (xx3.a-c), we have the following C<sub>2</sub>’s: 3 r, 1 g.

The three causatives with suffix -ŋʷ- (xx3.d-e) are difficult, but all have a nasal in the preceding syllable, whereas there are no stems with a nasal in this position in causatives with surface -gʷ- (xx3.a-c). This suggests that Nasalization-Spreading (§3.xxx) has converted /g/ to ŋ. In (xx3.d), sáy<sup>n</sup>-ŋá- is semantically as well as morphologically specialized, and it co-exists with a semantically and morphologically regular causative sáy<sup>n</sup>á-w<sup>n</sup>á-. Syncope to (C)vC- before the derivational suffix connects sáy<sup>n</sup>-ŋá- (xx3.d) to the two cases of Syncope in (xx3.c), reinforcing the

view that  $-g\acute{v}-$  in (xx3.a-c) and  $-n\acute{v}-$  at least in (xx3.d) involve the same underlying suffix allomorph.

To account for the even less transparent (xx3.e), consider the possibility of taking the underlying suffix allomorph to be  $-n\acute{v}-$  rather than  $-g\acute{v}-$ . (See below for more cases of  $-n\acute{v}-$ .) An underlying  $/s\acute{u}g\acute{u}-n\acute{o}-/$  (the vocalism is regular), in this analysis, undergoes metathesis of  $/g\dots-n/$  to  $/n\dots-g/$ , then Nasalization-Spreading converts the  $/g/$  to  $\eta$ , producing the observed consonantal sequence  $n\dots-\eta$ . For the key step (metathesis), see §3.xxx. The same phonological pattern is seen in  $w\grave{a}n\grave{a}-\eta\acute{a}$  ‘become/make distant’, inchoative and factitive of adjective  $w\grave{a}\gamma\acute{a}$  ‘distant’ (§9.xxx, below). However, this brings to only three the set of derived verbs with this consonantal alternation, and the phonological derivation I have suggested cannot be very transparent to native speakers.

Another phonologically difficult pattern is seen in (xx4).

(xx4)	input	gloss	causative	gloss
	$w\grave{a}j\acute{a}-$	‘be left over’	$w\grave{a}\gamma\grave{a}-j\acute{a}-$	‘cause to be left over’

The same consonantal alternation is seen in noun  $w\acute{e}j\grave{e}$  ‘craziness’, denominal verb  $w\grave{e}g\grave{e}-j\acute{a}-$  ‘become crazy’ or ‘drive (sb) crazy’, see §9.xxx, below. If the final  $-j\acute{v}-$  in these two derivatives is taken to be a surface variant of allomorph  $-g\acute{v}-$ , an allomorph seen clearly in e.g.  $b\grave{u}r\grave{u}-g\acute{o}-$  ‘revive’ (xxx), above, metathesis can again be posited. Thus underlying  $/C\grave{v}j\grave{v}-g\acute{v}-/$  becomes  $/C\grave{v}g\grave{v}-j\acute{v}-/$ . If the vowels are from the set  $\{a\ \text{ɔ}\}$ , the  $/g/$  regularly spirantizes to  $\gamma$  (§3.xxx). This accounts for  $w\grave{a}\gamma\grave{a}-j\acute{a}-$  in (xx4).

There are some semantically causative derivatives with a third suffix allomorph  $-r\acute{v}-$ , identical in form to the productive Reversive suffix seen above, though the verbs in question do not have reversive derivatives. All known examples are in (xx5).

(xx5) Causatives with  $-r\acute{v}-$  (or  $-r^n\acute{v}-$ )

	input	gloss	causative	gloss
a.	$d\grave{i}g\acute{e}-$	‘follow; join at ends’	$d\grave{i}g\grave{i}-r\acute{e}-$	‘align in a row’
	$\acute{i}j\acute{e}-$	‘stand, stop’	$\acute{i}j\acute{i}-r\acute{e}-$	‘arrest, detain’
b.	$j\grave{e}g\acute{e}-$	‘tilt’	$j\grave{e}g\grave{e}-r\acute{e}-$	‘cause to tilt’
c.	$g\grave{o}\eta\acute{o}-$	‘rotate’	$g\grave{o}\eta\grave{o}-r^n\acute{o}-$	‘cause to rotate’
	$\grave{i}n\acute{e}-$	‘take a bath’	$\grave{i}n\grave{i}-r^n\acute{e}-$	‘bathe (sb)’

There are no phonological irregularities. Vocalism, tones, and nasalization of /r/ to r<sup>n</sup> conform to the patterns seen with other causatives. The C<sub>2</sub> distribution is as follows: 2 g, 1 j, 1 n, 1 ŋ. This C<sub>2</sub> pattern is similar to what we saw above with reversible -r<sup>v</sup>-.

témé- ‘find’ has a regular causative témé-w<sup>n</sup>é- and an irregular one tém-né-. Both are used in contexts like ‘cause (e.g. problems) to find (sb)’, i.e., ‘bring (troubles) upon (sb)’. tém-né- is homophonous to the deadjectival factitive tém-né- ‘soak, make wet’, cf. adjective tēm ‘wet’. It may be that tém-né- was resorted to for ‘cause to find’ to distinguish this causative from the common passive derivative témé-w<sup>n</sup>é- ‘be found’ (§9.xxx, below).

Finally, there are a few C<sup>v</sup>: -n<sup>v</sup>- causatives with a fourth basic suffix allomorph, -n<sup>v</sup>-. Two or them are based on input stems with medial r or r<sup>n</sup> (xx6.a), one (somewhat opaque) is based on one with medial ŋ (xx6.b), and the two others are based on monosyllabic C<sup>v</sup>: - inputs (xxx.c). All have LH tones, which is expectable in (xx6.a-b) but not in (xx6.c), given the input tones.

(xx6) Causatives with -n<sup>v</sup>-

	input	gloss	causative	gloss
a.	gàrá-	‘pass by’	gà: -ná-	‘take across’
	mòr <sup>n</sup> ó-	‘come together’	mò: -nó-	‘bring together’
b.	dìŋé-	‘sit down’	dè: -né-	‘make sit’
c.	jó: -	‘be much, many’	jò: -nó-	‘do much’
	dó: -	‘arrive’	dò: -nó-	‘cause to arrive’
	mé: <sup>n</sup> -	‘be ground up’	mè: <sup>n</sup> -né-	‘grind up’

The n of the -n<sup>v</sup>- suffix seems to have had something to do with the idiosyncratic deletion of the medial rhotic in (xx6.a) and of the medial ŋ in (xx6.b). Some irregular nouns may have likewise lost a medial rhotic before Sg -n. In any event, the loss of a medial consonant creates an intermorphemic vowel sequence that must be contracted. See VV-Contraction (§3.xxx).

The rather lexicalized gà: -ná- ‘take across’ competes with a regular causative gàrà-wá- ‘allow to go across’, with a slightly different nuance.

I suggested just above that the type sùgó- ‘go down’, causative súnú-ŋó- ‘take down’, may involve underlying suffix allomorph -n<sup>v</sup>-. We will see below that -n<sup>v</sup>- is common in deadjectival verbalizations.

### 9.3 Pseudo-causative verbs

In addition to true causatives, there is a **pseudo-causative** derivative that is used in a special type of ‘before ...’ clause, with no causative element in the meaning. For the syntax, see §15.xxx.

The “verb” in this construction is actually a **nominal** syntactically (§15.xxx). It ends in L-toned  $-w\grave{v}$ , and takes **no suffixes** (pronominal-subject, AN, Participial). The vocalism of the suffix (and of the preceding syllable) is accounted for by Suffixal Vowel-Spreading and Presuffixal  $V_2$ -Raising (§3.xxx), exactly as with the suffixally derived verbs covered elsewhere in this chapter. However, the pseudo-causative does not respect the constraints on tones applicable to inflectable verbs stems. Instead, regardless of input lexical tones, the entire stem has H-tones, while  $-w\grave{v}$  itself is L-toned. This is consistent with the H(H...)L tone overlay (§3.xxx).

Examples of pseudo-causative verbs used in the ‘before’ construction are in (xx1). If the input verb has a true causative, the latter is shown on the right for comparison. However, while the pseudo-causative is completely productive, many verbs have no true causative in common use. (xx1.a) has non-nasal monosyllabic inputs. (xx1.b) has monosyllabic inputs beginning with a nasal, hence  $-w^n v-$  suffix by Nasalization Spreading (§3.xxx). (xx1.c) has bisyllabic inputs with two identical vowels. (xx1.d) is similar but also shows Nasalization Spreading. (xx1.e) has bisyllabic inputs with high followed by mid-height vowel. (xx1.f) has trisyllabic inputs. (xx1.g) is based on a poorly assimilated Fulfulde borrowing with disharmonic [u ε] vowel sequence, and shows that such stems do not raise the second-syllable vowel.

(xx1)	gloss	basic form	pseudo-causative	true causative
a.	‘arrive’	dó:-	dó:-wò	dò:-nó-
	‘see’	é:-	é:-wè	—
	‘say’	gá:-	gá:-wà	—
	‘go out’	gó:-	gó:-wò	—
	‘send’	tí:-	tí:-wè	—
	‘go’	yǎ:-	yá:-wà	—
b.	‘enter’	nú:-	nú:-w <sup>n</sup> ò	nú:-w <sup>n</sup> ó-
	‘sleep’	ní:-	ní:-w <sup>n</sup> è	—
c.	‘come’	yèr é-	yér é-wè	—
d.	‘assemble’	mòr <sup>n</sup> ó-	mó <sup>r</sup> ó-w <sup>n</sup> ò	mò:-nó-
e.	‘spill’	yùwó-	yúwú-wò	—
	‘stand’	íj é-	íjí-wè	íjí-r é-
	‘go down’	súgó-	súgú-wò	súnú-ηó-

	‘sit’	dìŋé-	díŋí-w <sup>n</sup> è	dìŋì-w <sup>n</sup> é-
	‘know’	jùgó-	júgú-wò	jùgù-wó-
	‘be blinded’	jìmné-	jímní-w <sup>n</sup> è	—
	‘accompany’	dìmné-	dímní-w <sup>n</sup> è	—
f.	‘shell (nuts)’	kórówó-	kórówó-wò	—
	‘inform’	jùgù-wó-	júgú-wó-wò	—
g.	‘fine’	júkké-	júkké-wè	júkké-wé-

#### 9.4 Passive verbs

There is no productive passive, mediopassive, or antipassive suffixal derivation. A passive sense is often conveyed by a transitive construction with a referentially vague subject, often 3Pl ‘they’, so ‘he was killed’ is expressed as ‘they killed him’ (wó wó : -tù-bà). This is systematically used with nàr<sup>n</sup>á- ‘(woman) bear (child)’, so that ‘he/she was born’ is expressed as ‘they bore him/her’ (wó nǎn-tù-bà). A 3Pl subject is used (illogically) even with singular object, a good indication that the 3Pl is impersonal. A similar impersonal 3Pl subject occurs in a productive participial compound type producing instrumental nominals (‘oil that they rub’ = ‘oil for rubbing’); see §5.xxx. However, the “passive” construction with impersonal 3Pl subject is not common in main clauses with verbs other than ‘bear’.

Since most transitive verbs have no derivational passive, they just use their ordinary stem-shape in (medio-)passive as well as transitive function. In other words, they are “ambi-valent”; see §9.xxx, below.

Suffixal passive derivatives are attested for a handful of common verbs (xx1).

(xx1)	a.	t é m é -	‘(come and) find’	t é m é - w <sup>n</sup> é -	‘be found (regularly)’
	b.	b è r é -	‘obtain’	b è r é - w é -	‘be obtainable (regularly)’
	c.	é : -	‘see’	è : - w é -	‘be seen’
	d.	g á : -	‘say’	g á : - w á -	‘be said, be sayable’

The suffix is -w<sup>n</sup>é-, identical to the productive Causative suffix. Nasalized -w<sup>n</sup>é- is of course due to Nasalization-Spreading (§3.xxx). The only irregularity is the {LH} tone pattern of è : -wé-. Compare bé : - ‘remain’ but bè : -wé- ‘cause to remain’ (§9.xxx, above).

Textual examples are in (xx2).

(xx2)	a.	[cènè-jéy-bè-jèyê : kù <sup>n</sup> ]	[kó kù <sup>n</sup> ]
		[combativeness Def]	[Nonh Def]
		kǒ-t t é m é - w <sup>n</sup> é =kò	
		Nonh-with <b>find-Pass.Impf</b> ≡be.Nonh	

‘A combative spirit is regularly found with it (=cobra).’ (ko-rú)  
**2004.3.5**

- b. kó gá:rá jó: ⇒ bèrè-wé≡kò jé  
 Nonh more many **get-Pass.Impf≡be.Nonh** for  
 ‘in order that more (millet) will be obtained’ **2004.3.6**
- c. ú:r<sup>n</sup>ó≡kò dèy è:-wé≡kò gá  
 get.up≡be.Nonh if **see-Pass.Impf≡be.Nonh** say  
 ‘(saying) if it (=rifle) fires, it will be seen.’ **2004.3.24**
- d. [íjé ké] làyá nù:-gó-∅ gá:-wà-gó-∅  
 [today Topic] other enter-**Impf.Neg-3SgS** **say-Pass-**Impf.Neg-3SgS****  
 ‘Nowadays, by contrast, it isn’t (=can’t be) said that it won’t go in  
 (=happen).’ **2004.4.12**

bèrè-wé- can also be used as the passive of bèré- in the sense ‘can, be able to’ with VP complement (§17.xx). In Jamsay, unlike English, the higher ‘can’ verb rather than the lower verb is passivized.

- (xx3) [kó kâ:<sup>n</sup>] tégé bèrè-wé≡kò  
 [Nonh too] speak **can-Pass.Impf≡be.Nonh**  
 ‘That too can be said.’ **2004.3.9**

## 9.5 Ambi-valent verbs without suffixal derivation

Verbs that can be used intransitively or transitively, without suffixal derivation, are here termed “ambi-valent” (with a hyphen).

In Jamsay, the **mediopassive** type predominates. If the intransitive case frame is [X VERB], the transitive frame is [Y[X VERB]], where X is the direct object and a new agent is added. Depending on the verb, one could argue that either the transitive or intransitive verb is lexically basic. In (xx1.a), ‘become dirty’ is probably basic with ‘make dirty’ a semantic causative, but in (xx1.b), ‘do’ is arguably basic with intransitive ‘be done’ a semantic mediopassive.

- | (xx1) | verb                | intransitive gloss | transitive gloss |
|-------|---------------------|--------------------|------------------|
| a.    | lóyó-jó-            | ‘become dirty’     | ‘make dirty’     |
| b.    | kár <sup>n</sup> á- | ‘be done’          | ‘do’             |

In the **antipassive** type, the transitive verb is probably basic, and the intransitive is used when the object is unspecified, e.g. because it is obvious or because it is generic (xx2).

- | (xx2) | verb | intransitive gloss | transitive gloss |
|-------|------|--------------------|------------------|
|-------|------|--------------------|------------------|

- a. sémé- ‘sweep (up)’ ‘sweep (e.g. courtyard)’  
 b. síré- ‘cook’ ‘cook (a meal)’

The tendency in Jamsay is to have a default direct object noun, often cognate to the inflected verb. Thus in Jamsay one doesn’t “sing,” one “sings (a) song” (núŋ nùŋó-); one doesn’t “eat,” one “eats a meal” (ńǎ: ńé: -); one doesn’t “work,” one “works (a) work” (bíré bíré-); one doesn’t “stutter,” one “stutters (a) stuttering” (ím ímé-). Where semantically appropriate, these inflected verbs can also be used with more specific objects (e.g. singing a particular type of song), in which case the default object is omitted.

## 9.6 Deadjectival inchoative and factitive verbs

Associated with (post-nominal) adjectives there are intransitive **inchoative** verbs ‘X become ADJ’, and transitive **factitive** verbs ‘Y make X ADJ’. Examples of three-way distinctions between adjective, inchoative verb, and factitive verb are in (xx1).

(xx1)	gloss	adjective	inchoative	factitive
a.	‘hard’	déŋ	dèŋé-	dèŋè-w <sup>n</sup> é-
	‘skinny’	dǒŋ	dòŋó-	dòŋò-w <sup>n</sup> ó-
	‘squeezed’	ěm	émé-	émé-w <sup>n</sup> é-
	‘bent’	gǒn	gònó-	gònò-w <sup>n</sup> ó-
	‘dry’	mǎy <sup>n</sup>	mày <sup>n</sup> á-	mày <sup>n</sup> à-w <sup>n</sup> á-
	‘rotten’	ǒy	óyó-	óyó-wó-
	‘old’	pěy <sup>n</sup>	pé: <sup>n</sup> -	pé: <sup>n</sup> -w <sup>n</sup> é-
b.	‘hard’	sè:gú	sé:gé-	sé:gé-wé-
	‘soft’	yòrú	yòró-	yòrò-gó-
c.	‘tight’	ěy <sup>n</sup>	éy <sup>n</sup> é-	éy <sup>n</sup> -né-
	‘wet’	tém	témé-	tém-né-
d.	‘ripe, cooked’	íré	íré-	írí-wé-
	‘coarse’	kúñú	kúñó-	kúñú-wó-

In all cases in (xx1), the inchoative is vowel-final, as are all Jamsay verb stems (except for one quasi-verb, kùn- ‘be in’). In (xx1.a-c) the final vowel of the inchoative is segmentally a copy of the vowel of the preceding syllable, even when the adjective has a different final vowel (xxx.b). In (xx1.d), the middle vowel of the factitive has regularly raised to be a high vowel (Presuffixal V<sub>2</sub>-Raising, §3.xxx).

In (xx1.a,d), and in ‘hard’ (xx1.b), the factitive is clearly the morphological **causative of the inchoative**, with the productive Causative suffix  $-w\acute{v}$ - (becoming  $-w^n\acute{v}$ - if preceded by a syllable beginning with a nasal or a nasalized consonant).

In (xx1.c), on the other hand, the factitives are constructed by adding  $-n\acute{v}$ - **to the consonant-final adjective**. It is difficult to understand the tonal patterns if we directly compare the adjectives and the  $-nv$ - derivative. The data in (xx1.c) seem to show that the inchoative verb is tonally independent of the adjective, just as verbs and cognate nominals are often tonally unrelated. The factitive is consistent in these cases with the inchoative rather than with the adjective. The same is true for ‘ripe, cooked’ in (xx1.d).

In many other cases, I have recorded a single form used indiscriminately in both factitive and inchoative functions. The most common and versatile derivational suffix is  $-n\acute{v}$ -, which appears after  $Cv:-$ ,  $CvCv-$ , and  $CvC-$  stems (xx2.a-c)..

(xx2)	gloss	adjective	inchoative/factitive
a.	‘pointed’	sĩ:	sí:-né-
	‘spacious’	wá:	wà:-ná-
b.	‘fat’	dùgú	dùgù-nó-
	‘heavy’	dùjú	dùjù-nó-
	‘good’	èjú	èjù-né-
	‘bad’	mòñú	mòñù-nó-
	‘thin’	ùñú	ùnú-nó-
c.	‘short’	gǒy <sup>n</sup>	gòy <sup>n</sup> -nó-
	‘black’	jém	jém-né-
	‘lightweight’	ñén	ñèn-né-
	‘sour’	nôm	nóm-nó-
	‘small’	těy	téy-né-
	‘cold, slow’	tôm	tóm-nó-
d.	‘big’	gàrá	gàrà-r <sup>n</sup> á-
	‘long, tall’	gùrú	gùnù-r <sup>n</sup> ó-
	‘sweet, sharp’	érù	éné-r <sup>n</sup> é-
	‘bitter’	jé:rù	jènè-r <sup>n</sup> é-
	‘fresh’	òrú	ónó-r <sup>n</sup> ó-
e.	‘red’	bán	bàrà-r <sup>n</sup> á-
f.	‘hot, fast’	ógù	ógó-ró-
			[intransitive also ógó-]

g.	‘distant’	wàʔá	wàná-ŋá-
h.	‘sleek’	ònú <sup>n</sup> ú	ónór <sup>n</sup> ó- [arguably ónó-r <sup>n</sup> ó-]

On the whole, these inchoative/factitive suffixes resemble the minor Causative suffixal allomorphs, although the primary Causative allomorph -wʔ- is strikingly absent. If we accordingly take the factitive (i.e. semantically causative-like) function as basic, we could think of these as a special case of mediopassive-type ambi-valent verb §9.xxx, above).

In §3.xxx, I present the case that a metathesis of r...-n to n...-r, followed by automatic Nasalization-Spreading, is behind the strange-looking consonantal alternations pairs in (xx2.d). *bàná-r<sup>n</sup>á-* (xx2.d) is synchronically anomalous, but the n in adjective *bán* ‘red’ derives historically from \*r<sup>n</sup>, so this originally involved the same type of metathesis as in (xx2.c).

*wàná-ŋá-* in (xx2.g), from *wàʔá* ‘distant’, is parallel to causative *súnú-ŋó-* ‘take down’ from intransitive *súgó-* ‘go down’ (§9.xxx, above). These unusual consonantal alternations suggest underlying suffix /-nʔ-/ and derivations involving metathesis and an irregular extension of Nasalization-Spreading (§3.xxx).

Inchoative/factitive *ónór<sup>n</sup>ó-* from trisyllabic adjective *ònú<sup>n</sup>ú* ‘sleek’ (xx2.g) is difficult to model phonologically, since a syllable seems to be missing.

## 9.7 Denominal verbs

A few verbs have a semantic and phonological connection with a noun or greeting phrase, and are at least arguably denominal (xx1). The suffixes are similar to those used in deadjectival verbalizations and/or to the minor Causative allomorphs: -rʔ- (and -r<sup>n</sup>ʔ- by Nasalization-Spreading), -jʔ- (problematic), -nó-, -ŋó- (perhaps nasalized from -gó-)

(xx1)	noun	gloss	verb	gloss
a.	dú:	‘load’	dù:-ró-	‘load (sth)’
	tìgé	‘family name’	tìgì-ré-	‘(griot) chant the ancestry of (sb)’
	gàamá	‘a certain one’	gàmà-r <sup>n</sup> á-	‘divide, share’
b.	lóʔò	‘trash’	lóʔó-jó-	‘become/make dirty’
			[cf. lógójó ‘toilet’]	
c.	pó:	(greeting)	pó:-nó-	‘greet (sb)’

- d.  $n\grave{u}r^n\acute{o}$  ‘pain, injury’     $n\grave{u}r^n\grave{u}-\eta\acute{o}-$  ‘injure; be injured’

## 9.8 Obscure verb-verb relationships

The verbs listed in (xx1) display irregular relationships. In some cases, it is questionable whether native speakers make any connections.

(xx1)	verb	gloss	related verb	gloss
	$l\acute{i}g\acute{e}-$	‘mix (bricks)’	$l\acute{i}g\acute{i}j\acute{e}-$	‘mix’
	$l\acute{e}:-$	‘fear’	$l\acute{i}r\acute{i}-w\acute{e}-$	‘frighten’
				[cf. noun $l\grave{i}-l\acute{e}:$ ‘fear’]
	$m\grave{a}:n\acute{a}-$	‘think, believe’	$m\grave{a}n\grave{a}-\eta\acute{a}-$	‘think, believe’
	$n\acute{a}:-$	‘spend night’	$n\acute{a}:-w^n\acute{a}-$	‘greet in morning’
	$\tilde{n}\grave{u}w^n\acute{o}-$	‘malfunction’	$\tilde{n}\grave{u}n\grave{u}\eta\acute{o}-$	‘do harm to, ruin’
	$s\acute{a}n\acute{a}-$	‘undo’	$s\acute{a}n\acute{a}-r^n\acute{a}-$	‘undo’
	$s\acute{e}:^n-$	‘(day) break’	$s\acute{e}:-r^n\acute{e}-$	‘(day) be about to break’
	$s\acute{i}r\acute{e}-$	‘cook, boil’	$s\acute{i}g\acute{i}r\acute{e}-$	‘cook, boil’

## 9.9 “Underived” trisyllabic verbs

My working lexicon contains one hundred trisyllabic verbs that are not derived suffixally from other attested verbs. The  $C_2/C_3$  sequences in these stems are strikingly reminiscent of those seen in suffixal derivatives where  $C_3$  is the suffixal consonant. The data can be summarized in tabular form, taking  $C_3$  as point of departure (xx1).

(xx1)	$C_3$	#	comment
a.	b	1	$C_2 = j$
	n	6	all are Fulfulde causatives with $-in-$
b.	g	4	3 after $C_2 = r$
	$\eta$	10	all after $C_2 = n$
c.	j	9	all after $C_2 = g$
	$\tilde{n}$	2	both after $C_2 = n$
d.	r	23	18 after $C_2 = g$ , 3 after $C_2 = j$ , 1 after $C_2 = m$
	$r^n$	16	all after nasal $C_2$ including 10 $C_2 = \eta$

e.	w	20	15 after C <sub>2</sub> = r, 4 after C <sub>2</sub> = l, 1 after C <sub>2</sub> = g
	w <sup>n</sup>	9	all after nasal/nasalized C <sub>2</sub> including 7 C <sub>2</sub> = r <sup>n</sup>

(xx1.a) is without much interest (one case of b, and six Fulfulde borrowings with n). All cases of ŋ, n), r<sup>n</sup>, and w<sup>n</sup> follow nasal or nasalized C<sub>2</sub>. Factoring this out, we note a high incidence of r, w, j, and g (in descending order of frequency). These correspond nicely to the consonants in the derivational suffixes we have considered (-rŵ- for reversive and a few causatives, -wŵ- in causatives, some causatives in -gŵ- and -jŵ-). Moreover, the associations of these suffix allomorphs with particular C<sub>2</sub>'s, commented on in the sections above, recur here. This suggests that most of the synchronically underived trisyllabic verbs not borrowed from Fulfulde originated as suffixal derivatives.

Strikingly absent from C<sub>3</sub> position in the sample of one hundred verbs are many consonants that occur as C<sub>1</sub> in this same set of verbs. The data for C<sub>1</sub> (excluding Fulfulde causatives) are: b = 8, c = 5, d = 6, g = 4, j = 6, k = 12, l = 6, m = 1, n = 2, p = 9, s = 9, t = 4, w = 6, y = 5, and zero (vowel-initial) = 11.

Also of interest is the very high incidence of C<sub>2</sub> = g (28). Other C<sub>2</sub>'s in the sample (excluding Fulfulde causatives) are j = 5, l = 4, m = 5, n = 7, ŋ = 11, p = 1, r = 18, and r<sup>n</sup> = 7.

Another, more synchronic way to look at it is that there are subtle patterns of favored consonantal sequences that apply (as constraints) to unsegmentable stems, and are enforced by allomorphic choices and phonological rules on suffixally derived stems. Except for g and j, for example, stops and affricates are very common as C<sub>1</sub> but very rare as C<sub>2</sub> or C<sub>3</sub>.

9	Verbal Derivation.....	1
9.1	Reversive verbs.....	1
9.2	Deverbal causative verbs.....	2
9.3	Pseudo-causative verbs .....	7
9.4	Passive verbs.....	8
9.5	Ambi-valent verbs without suffixal derivation .....	9
9.6	Deadjectival inchoative and factitive verbs.....	10
9.7	Denominal verbs.....	12
9.8	Obscure verb-verb relationships .....	13
9.9	“Underived” trisyllabic verbs.....	13

