

# The morphotactics of dependent affixes



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There is a tradition of defining affixed word forms as artichoke-like structures consisting of a stem that hosts successive, progressively peripheral layers of affixes:

( aff ( aff (stem) aff ) aff )

Yet, many morphological descriptions instead define affixed word forms as having the multiply pinnate structure of a bladderfern, consisting of a stem that hosts affixes that may themselves host affixes:

(( aff aff )( stem )( aff aff ))



Besides shedding important light on one variety of multiple exponence, the distinction between carrier affixes and dependent affixes suggests a conception of morphotactic structure in which affixes may themselves be morphologically complex:

$$\begin{array}{ccccc}
 \text{carrier} & & \text{dependent} & & \text{compound} \\
 \text{affix} & + & \text{affix} & = & \text{affix} \\
 \text{realizing } \sigma & & \text{realizing } \tau & & \text{realizing } \sigma \cup \tau
 \end{array}$$

*(Better:*

$$\begin{array}{ccccc}
 \text{carrier} & & \text{dependent} & & \text{compound} \\
 \text{rule} & + & \text{rule} & = & \text{rule} \\
 \text{realizing } \sigma & & \text{realizing } \tau & & \text{realizing } \sigma \cup \tau )
 \end{array}$$

That is,

- a dependent affix is an exponent of some property set  $\sigma$  whose appearance may be contingent on that of some other affix, its carrier; and
- a dependent affix and its carrier together form a compound affix.

This conception of dependent affixes provides one way of accounting for the varied ways in which they behave. Here, I discuss three dimensions of variation:

- Some dependent affixes invariably require a carrier affix, others don't.
- Some dependent affixes participate in a wider variety of morphotactic relations than others.
- Some dependent affixes may have more than one carrier in the same word form, others not.

Some dependent affixes have to have a carrier.

# Some dependent affixes have to have a carrier.

The first-person singular agent suffix *-ŋ*  
 in Limbu [Kiranti; Nepal]  
 (positive forms of HUʔMAʔ ‘teach’)

		stem	Nε	ε	U	ŋ	SI	ŋ
<b>Nonpreterite</b>	<b>1s→2s</b>	<i>huʔ</i>	nε					
	<b>1s→2d</b>	<i>huʔ</i>	nε				ci <sup>1</sup>	ŋ
	<b>1s→2p</b>	<i>huʔ</i>	n(ε)				i	ŋ
	<b>1s→3s</b>	<i>huʔr</i>			u	ŋ		
	<b>1s→3d</b>	<i>huʔr</i>			u	ŋ	si	ŋ
	<b>1s→3p</b>	<i>huʔr</i>			u	ŋ	si	ŋ
<b>Preterite</b>	<b>1s→2s</b>	<i>huʔ</i>	n(ε)	ε				
	<b>1s→2d</b>	<i>huʔ</i>	n(ε)	ε			ci <sup>1</sup>	ŋ
	<b>1s→2p</b>	<i>huʔ</i>	n(ε)	(ε)			i	ŋ
	<b>1s→3s</b>	<i>huʔr</i>		(ε)	u	ŋ		
	<b>1s→3d</b>	<i>huʔr</i>		(ε)	u	ŋ	si	ŋ
	<b>1s→3p</b>	<i>huʔr</i>		(ε)	u	ŋ	si	ŋ

1. alternant of *si* (van Driem 1987: 77)



# Some dependent affixes have to have a carrier.

## Limbu verb agreement

Content	Exponence
a. {3 <sup>rd</sup> person patient}	- <i>u</i>
b. {nonsingular patient} {nonthird plural patient}	- <i>si</i> - <i>i</i>

{1<sup>st</sup> singular agent}

-*ŋ*

# Some dependent affixes have to have a carrier.

## Limbu verb agreement

Content	Exponence
a. {3 <sup>rd</sup> person patient} {3 <sup>rd</sup> person patient, 1 <sup>st</sup> singular agent}	- <i>u</i> - <i>uŋ</i>
b. {nonsingular patient} {nonthird plural patient} {nonsingular patient, 1 <sup>st</sup> singular agent} {nonthird plural patient, 1 <sup>st</sup> singular agent}	- <i>si</i> - <i>i</i> - <i>siŋ</i> - <i>iŋ</i>

{1<sup>st</sup> singular agent}

-*ŋ*

Some dependent affixes have a carrier only if one is handy.

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## Swahili relative affixes

- a. *vitabu*      *a-vi-soma-vyo*      *Hamisi*  
books.CL.8    SBJ:CL.1-OBJ:CL.8-read-REL:CL.8    Hamisi.CL.1  
'the books which Hamisi reads'

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'the books which Hamisi is reading'
- c. *vitabu*      *a-si-vyo-vi-soma*      *Hamisi*  
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'the books which Hamisi doesn't read'

Some dependent affixes have a carrier only if one is handy.

## Swahili relative affixes

{REL:class 8}

-*vyo*

{pres}

*na-*

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## Swahili relative affixes

{REL:class 8}

-*vyo*

{pres}

*na-*

{pres, REL:class 8}

*navyo-*

Some dependent affixes take only one sort of carrier.



# Some dependent affixes take only one sort of carrier.

Past- and perfect-tense forms of HUR 'see'  
in Pengo [S. Central Dravidian]

		Singular	Plural	
Past	1 <sup>st</sup>	<i>huṛ-t-aŋ</i>	EXCL. <i>huṛ-t-ap</i> , INCL. <i>huṛ-t-as</i>	
	2 <sup>nd</sup>	<i>huṛ-t-ay</i>	<i>huṛ-t-ader</i>	
	3 <sup>rd</sup>	m.	<i>huṛ-t-an</i>	<i>huṛ-t-ar</i>
		f.	<i>huṛ-t-ik</i>	<i>huṛ-t-ik</i>
		n.	<i>huṛ-t-at</i>	<i>huṛ-t-iŋ</i>
	Perfect	1 <sup>st</sup>	<b><i>huṛ-t-aŋ-n-aŋ</i></b>	EXCL. <i>huṛ-t-ap-na</i> , INCL. <i>huṛ-t-ah-na</i>
2 <sup>nd</sup>		<i>huṛ-t-ay-na</i>	<i>huṛ-t-ader-na</i>	
3 <sup>rd</sup>		m.	<i>huṛ-t-an-na</i>	<i>huṛ-t-ar-na</i>
		f.	<i>huṛ-t-ik-na</i>	<b><i>huṛ-t-ik-n-ik</i></b>
		n.	<i>huṛ-t-at-na</i>	<b><i>huṛ-t-iŋ-n-iŋ</i></b>

# Some dependent affixes take only one sort of carrier.

Past- and perfect-tense forms of HUR 'see'  
in Pengo [S. Central Dravidian]

		Singular	Plural	
Past	1 <sup>st</sup>	<i>hur-t-aŋ</i>	EXCL. <i>hur-t-ap</i> , INCL. <i>hur-t-as</i>	
	2 <sup>nd</sup>	<i>hur-t-ay</i>	<div style="background-color: yellow; padding: 5px; border: 1px solid black;"> <p style="color: red; font-weight: bold;">Dependent agreement suffixes</p> <p style="color: blue; font-weight: bold;">Carrier is likewise suffixal</p> </div>	
	3 <sup>rd</sup>	m.		<i>hur-t-an</i>
		f.		<i>hur-t-at</i>
		n.		<i>hur-t-iŋ</i>
Perfect	1 <sup>st</sup>	<b><i>hur-t-aŋ-n-aŋ</i></b>		EXCL. <i>hur-t-ap-na</i> , INCL. <i>hur-t-ah-na</i>
	2 <sup>nd</sup>	<i>hur-t-ay-na</i>	<i>hur-t-ader-na</i>	
	3 <sup>rd</sup>	m.	<i>hur-t-an-na</i>	<i>hur-t-ar-na</i>
		f.	<i>hur-t-at-na</i>	<b><i>hur-t-ik-n-ik</i></b>
		n.		<b><i>hur-t-iŋ-n-iŋ</i></b>

# Some dependent affixes may take >1 sort of carrier.

## The inflection of the adjective YAK 'big' in Noon [Atlantic-Congo; Senegal]

			Noun class	Indefinite	Definite			
					Location 1	Location 2	Location 3	
Nondim.	Inanim.	sg	CL.1	<i>w-i-yak</i>	<i>w-i-yak-w-ii</i>	<i>w-i-yak-w-um</i>	<i>w-i-yak-w-aa</i>	
			CL.2	<i>f-i-yak</i>	<i>f-i-yak-f-ii</i>	<i>f-i-yak-f-um</i>	<i>f-i-yak-f-aa</i>	
			CL.3	<i>m-i-yak</i>	<i>m-i-yak-m-ii</i>	<i>m-i-yak-m-um</i>	<i>m-i-yak-m-aa</i>	
			CL.4	<i>k-i-yak</i>	<i>k-i-yak-k-ii</i>	<i>k-i-yak-k-um</i>	<i>k-i-yak-k-aa</i>	
			CL.5	<i>p-i-yak</i>	<i>p-i-yak-p-ii</i>	<i>p-i-yak-p-um</i>	<i>p-i-yak-p-aa</i>	
			CL.6	<i>j-i-yak</i>	<i>j-i-yak-j-ii</i>	<i>j-i-yak-j-um</i>	<i>j-i-yak-j-aa</i>	
		pl	CL.1–3	<i>c-i-yak</i>	<i>c-i-yak-c-ii</i>	<i>c-i-yak-c-um</i>	<i>c-i-yak-c-aa</i>	
			CL.4–6	<i>t-i-yak</i>	<i>t-i-yak-t-ii</i>	<i>t-i-yak-t-um</i>	<i>t-i-yak-t-aa</i>	
		Anim.	sg		<i>y-i-yak</i>	<i>y-i-yak-y-ii</i>	<i>y-i-yak-y-um</i>	<i>y-i-yak-y-aa</i>
			pl		<i>b-i-yak</i>	<i>b-i-yak-b-ii</i>	<i>b-i-yak-b-um</i>	<i>b-i-yak-b-aa</i>
Dim.		sg		<i>j-i-yak</i>	<i>j-i-yak-j-ii</i>	<i>j-i-yak-j-um</i>	<i>j-i-yak-j-aa</i>	
		pl		<i>t-i-yak</i>	<i>t-i-yak-t-ii</i>	<i>t-i-yak-t-um</i>	<i>t-i-yak-t-aa</i>	

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			CL.4	<i>k-i-yak</i>	<i>k-i-yak-k-ii</i>	<i>k-i-yak-k-um</i>	<i>k-i-yak-k-aa</i>
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			CL.6	<i>j-i-yak</i>	<i>j-i-yak</i>		
		pl	CL.1–3	<i>c-i-yak</i>	<i>c-i-yak</i>		
			CL.4–6	<i>t-i-yak</i>	<i>t-i-yak</i>		
		Anim.	sg	<i>y-i-yak</i>	<i>y-i-yak</i>		
			pl	<i>b-i-yak</i>	<i>b-i-yak</i>		
Dim.		sg	<i>j-i-yak</i>	<i>j-i-yak-j-ii</i>	<i>j-i-yak-j-um</i>	<i>j-i-yak-j-aa</i>	
		pl	<i>t-i-yak</i>	<i>t-i-yak-t-ii</i>	<i>t-i-yak-t-um</i>	<i>t-i-yak-t-aa</i>	

Dependent agreement prefixes

Both prefixal carriers and suffixal carriers

Some dependent affixes may take >1 sort of carrier.

## The Limbu negative suffix *-n*

<b>1sg</b>	mε- <i>nu:η</i> -ʔε- <i>n</i>	'I do not return'
<b>1du excl</b>	mε- <i>nu:η</i> -si- <i>gε</i> <sup>1</sup> - <i>n</i>	etc.
<b>1pl excl</b>	mε- <i>nu:ks</i> -i- <i>gε</i> <sup>1</sup> - <i>n</i>	
<b>1du incl</b>	a- <i>n</i> - <i>nu:η</i> -si- <i>n</i>	
<b>1pl incl</b>	a- <i>n</i> - <i>nu:η</i> -nεn	
<b>2sg</b>	kε- <i>n</i> - <i>nu:η</i> -nεn	
<b>2du</b>	kε- <i>n</i> - <i>nu:η</i> -si- <i>n</i>	
<b>2pl</b>	kε- <i>n</i> - <i>nu:ks</i> -i- <i>n</i>	
<b>3sg</b>	mε- <i>nu:η</i> -nεn	
<b>3du</b>	mε- <i>nu:η</i> -si- <i>n</i>	
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<b>1du incl</b>	a- <i>n</i> - <i>nu:η</i> -si- <i>n</i>	
<b>1pl incl</b>	a- <i>n</i> - <i>nu:η</i> -nεn	
<b>2sg</b>	kε- <i>n</i> - <i>nu:η</i> -nεn	
<b>2du</b>	kε- <i>n</i> - <i>nu:η</i> -si- <i>n</i>	
<b>2pl</b>	kε- <i>n</i> - <i>nu:ks</i> -i- <i>n</i>	
<b>3sg</b>	mε- <i>nu:η</i> -nεn	
<b>3du</b>	mε- <i>nu:η</i> -si- <i>n</i>	
<b>3pl</b>	mε- <i>n</i> - <i>nu:η</i> -nεn	

Dependent negative  
suffix *-n*

Both prefixal carriers  
and suffixal carriers

## Some dependent affixes may take >1 sort of carrier.

How a dependent affix composes with a carrier affix depends on whether these are prefixes or suffixes, with four logical possibilities:

	Property set $\sigma$ realized by means of dependent	Property set $\tau$ realized by means of carrier	Property set $\sigma \cup \tau$ realized by means of compound
(i)	prefix $x$ -	prefix $y$ -	prefix $xy$ -
(ii)	prefix $x$ -	suffix $-y$	suffix $-xy$
(iii)	suffix $-x$	prefix $y$ -	prefix $yx$ -
(iv)	suffix $-x$	suffix $-y$	suffix $-yx$

A dependent affix may have  $>1$  carrier within a word form.



A dependent affix may have >1 carrier within a word form.

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<b>1pl excl</b>	mε- <i>nu:ks</i> -i- <i>ge</i> <sup>1</sup> - <i>n</i>	
<b>1du incl</b>	a- <i>n</i> - <i>nu:η</i> -si- <i>n</i>	
<b>1pl incl</b>	a- <i>n</i> - <i>nu:η</i> -nεn	
<b>2sg</b>	kε- <i>n</i> - <i>nu:η</i> -nεn	
<b>2du</b>	kε- <i>n</i> - <i>nu:η</i> -si- <i>n</i>	
<b>2pl</b>	kε- <i>n</i> - <i>nu:ks</i> -i- <i>n</i>	
<b>3sg</b>	mε- <i>nu:η</i> -nεn	
<b>3du</b>	mε- <i>nu:η</i> -si- <i>n</i>	
<b>3pl</b>	mε- <i>n</i> - <i>nu:η</i> -nεn	

A dependent affix may have  $\leq 1$  carrier within a word form.

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## Three domains of variation among dependent affixes

- Some dependent affixes invariably **require a carrier affix**, others don't.
- Some dependent affixes participate in a **wider variety of morphotactic relations** than others.
- Some dependent affixes may have **more than one carrier** in the same word form, others not.

Each can be plausibly seen as variation in the patterns of compounding in which dependent affixes and carrier affixes participate.



1. BRITTLE BLADDER FERN.  
*Cystopteris fragilis*.

2. B. B. F.  
VAR. *C. angustata*.

## Sources

Ashton, E. O. 1944. *Swahili grammar*. Essex: Longman.

Burrow, T., & S. Bhattacharya. 1970. *The Pengo language*. Oxford: Oxford University Press.

Driem, George van. 1987. *A grammar of Limbu*. Berlin and New York: Mouton de Gruyter.

Soukka, Maria. 2000. *A descriptive grammar of Noon: A Cangin language of Senegal*. Munich: LINCOM Europa.