Transitive verbs as lexical affixes?

Eitan Grossman (Hebrew University of Jerusalem)
Affixes Symposium – Turku
August 17-18, 2023
eitan.grossman@mail.huji.ac.il

One of the most fundamental distinctions in morphology

Roots or **stems**, which carry **lexical** meaning

Affixes, which carry **grammatical** meanings

A well-known assumption

'While roots generally serve as the bases of words and carry their central semantic content, affixes are structurally and functionally dependent, never constituting words on their own and conveying meanings that are somehow subordinate as well. We expect roots to carry such meanings as 'rock,' 'mouth,' or 'catch,' and affixes to indicate such features as causation, tense, or gender' (Mithun 1997: 357).

However

There are many linguistic phenomena that render this association problematic:

- Bound roots (Næss 2018)
- Bound lexical morphemes (Næss 2018)
- Lexical affixes (Mithun 1997)

Today's talk

1. Lexical affixes in the languages of North America and the Pacific
2. Coptic transitive verbs as lexical affixes?
3. Conclusions

Nuxalk (Salishan, Canada; Mithun 1997)

- Nuxalk makes a clear distinction between stems (including simple roots) and affixes.
- Nuxalk stems are often similar in meaning to stems in other languages, e.g., *cap* 'bone,' *cim* 'talk,' etc.
- Nuxalk affixes mark stuff like nominalizer, iterative, reciprocal, perfective, and so on.
- So far, this is like most textbook affixes.

(Mithun 1997)

However

Nuxalk has a set of **suffixes** that seem to carry **lexical** meaning:

-uc	'mouth'	*-ulmx*	'earth, floor'
-alus	'piece'	*-lt*	'child'
-ak	'hand'	*-alic*	'tooth'
-lst	'rock'		

(Mithun 1997)

Suffixes vs. stems/roots

Suffix	Stem	
-uc	*cuca*	'mouth'
-ak	*suxa*	'hand'
-lst	*tx̣t*	'rock'

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Suffixes vs. stems/roots

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Nuxalk suffixes

These suffixes **differ** from roots in a number of ways:

1. Suffixes never serve as words or as the base of words.
2. They are a relatively closed class.
3. Their meanings tend to be more general and diffuse than those of stems.
4. They are not arguments in their own right, but rather modify arguments.

These suffixes are **similar** to roots in a number of ways:

1. They are not a small or entirely closed category.
2. Their meanings are often quite concrete ('rock,' 'child')

(Mithun 1997)

Discourse

Mithun (1997: 363)

(10) Stem *tnx̣ᵂ* 'head' and suffix *-i·x̣ᵂ*: Dan Nelson in Davis and Saunders (1980: 224.196)

ʔ*um-tutim-kᵂ-c̓*   *ta-**ɬnx̣ᵂ**-ɬ-tx̣ᵂ*.   (stem)
unload-C.PASS-QUOT-PFV PROX-**head**-DP-DIST
'The heads were unloaded.

*qᵂuc̓-**i·x̣ᵂ**-tim-kᵂ-c̓*   (suffix)
wash-**head**-PASSIVE-QUOT-PFV
They were washed.'

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Lexical affixes

Mithun (1997) suggests that some languages have **lexical affixes**, which are formally affixes but are semantically like roots in carrying lexical meanings.

Documented for indigenous North American languages from the Salishan, Wakashan, Tsimshian, and Eskimo families.

Diachrony

Mithun (1997) suggests that these lexical affixes originated in compounding and incorporation constructions.

Austronesian 'classifying prefixes'

Described for languages as spread out as Formosa (Taiwan), Papua New Guinea, and New Caledonia.

Manam

móli   *i-ʔara-sisiʔ-i*

range   3SG-CL-peel-3SG

'He peeled the orange (with his teeth).'

(Ozanne-Rivierre & Rivierre 2004)

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(3)   Manam classificatory prefixes

Ɂara-   'with the teeth' (< *Ɂarat* 'bite')
Ɂin-   'with the fingers' (< *Ɂint* 'pinch')
Ɂoro-   'a cutting action' (< *Ɂorot* 'cut')
dua-   'by hitting with the sole of the foot' (< *dua* 'hit with the sole of the foot')
tara-   'a chopping action' (< *tara* 'chop')
zaŋ-   'a hitting and breaking action' (< *zaŋ* 'pound')
rau-   'a hitting (not necessarily breaking) action' (no independent verbal counterpart)
tata-   'a throwing and breaking action' (< *tata* 'hit sth. against sth. else')
nagu-   'a pricking, piercing action' (< *nagur* 'prick')
roɁa-   'a throwing action' (< *roɁaɁ* 'throw')

Austronesian 'classifying prefixes'

Some classifying prefixes combine with independent transitive verbs, but others combine with verbs that occur only as bound stems.

Nemi (Ozanne-Rivierre 1979)

cai-   'with teeth'

to-   'by hand'

the-   'by hitting'

(Ozanne-Rivierre & Rivierre 2004)

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(9) Nemi

to- 'by hand' (without percussion)' + bound verb forms

+ *-^{m}balii* 'drive in'   *to-^{m}balii* 'drive in by hand'

+ *-^{m}bii* 'break' [< POc *piti(k)*]   *to-^{m}bii* 'crush by hand, grind (coffee in a mill)'

+ *-^{m}bune* 'cut'   *to-^{m}bune* 'break (by hand), tear in two (fabric)'

+ *-^{n}dua* 'pierce' [< POc *sua*]   *to-^{n}dua* 'pierce with the finger'

+ *-^{v}gane* 'split' [< POc *pwalaq]*   *to-^{v}gane* 'separate, incise, split (with a knife)'

+ *-leei* 'push, make fall'   *to-leei* 'push with the hand'

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Austronesian lexical prefixes

In some Austronesian languages, a small number of prefixes of verbal origin, most likely from serial verb and incorporation constructions.

Outside of the Pacific Rim

- Bound complement clause-taking verbs in many Nakh-Dagestanian and Abkhaz-Adyghe languages (Panova 2018, Maisak 2018, Michael Daniel p.c.).
- Verb incorporation and complex predicates constructions all over the place, e.g., Tubino-Blanco, Harley & Haugen 2014 on Hiaki.
- Bipartite verb stems in Sino-Tibetan (e.g., Japhug, Jacques 2021; Hildebrandt 2005), Nakh-Daghestanian, Nichols 2003).

Interim summary

- In some languages from North America and the Pacific, items that are formally like affixes but semantically like roots are documented.
- Typically, they constitute small or closed classes.
- Their diachronic sources include:
    - Compounding constructions
    - Noun incorporation constructions
    - Serial verb constructions, verb incorporation, and other complex predicate constructions

Coptic transitive verbs

Coptic: some background

- Afroasiatic
- The latest stage of the indigenous language of the Egyptian Nile Valley and the Delta
- All speakers eventually shifted to Arabic sometime in the last millennium
- Strong tendency for inflectional affixes
- One of the most prefixing languages known (Grossman 2018, Grossman & Polis 2018)

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	PARAMETER	PREFIXING OR SUFFIXING	SUFFIXING SCORE	PREFIXING SCORE
1	case affixes on nouns	exclusively prefixing	0	2
2	pronominal subject affixes on verbs	exclusively prefixing	0	2
3	tense-aspect affixes on verbs	exclusively prefixing	0	2
4	plural affixes on nouns	predominantly prefixing	0	1
5	pronominal possessive affixes on nouns	predominantly prefixing	0	1
6	definite or indefinite affixes on nouns	exclusively prefixing	0	1
7	pronominal object affixes on verbs	exclusively suffixing	1	0
8	negative affixes on verb	exclusively prefixing	0	1
9	interrogative affixes on verbs	exclusively prefixing	0	1
10	adverbial subordinator affixes on verbs	exclusively prefixing	0	1
	TOTAL		1	12
	AFFIXING INDEX		100%	

The prefixing preference of Coptic (Grossman & Polis 2018)

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A Coptic verbal template

	I	II	III	IV	V	VI	VII	VIII	IX
	Pre-TAM	TAM/POL1	S/A	TAM/POL2	modal	causative	causee	root	p
(a)		*a-*	*k-*			*tre-*	*n-*	*souon-*	*-g*
		PST.AFF	2SG.M			CAUS	1PL	know	2SG.M
	'you have caused us to know you'
(b)		*mp-*	*f-*		*oueš-*			*fi-*	*nefbal*
		PST.NEG	3SG.M-		DESID			lift-	his.eyes
	'he did not want to lift his eyes'

How to be a transitive verb in Coptic

Flagging   P arguments can bear an ACC case prefix *n- (mmo-)*
                        A arguments can bear a NOM case prefix *nci-*

Indexing   A and P arguments can be indexed on the verb

Incorporation   Both A and P arguments can be incorporated into the verb

Stem alternation   Alternation between 3 stems, conditioned on whether the P
                        argument is ACC-marked, indexed, or incorporated.

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Differential Marking and Indexing for both Subjects and Objects!

Transitive verbs in Coptic

All native transitive verbs in Coptic have three allomorphs, a free form and two bound forms.

(a) *a-f-kô*   *n-t-sêfe*

     PST-3SGM-put.∑1 ACC-DEF.FSG-sword

     'He put the sword'

∑1   free form, occurs alone or with overt case markers

Transitive verbs in Coptic

All native transitive verbs in Coptic have three allomorphs, a free form and two bound forms.

(b)   *a-f-kaa-s*

         PST-3SGM-put.∑2-3SGF

         'He put it'

∑2   bound form, occurs with P indexes

Transitive verbs in Coptic

All native transitive verbs in Coptic have three allomorphs, a free form and two bound forms.

(c)   *a-f-ka-t-sêfe*

PST-3SGM-put.∑3-DEF.FSG-sword

'He put the sword'

∑3   bound form, occurs with incorporated lexical P

Transitive verbs in Coptic

All native transitive verbs in Coptic have three allomorphs, a free form and two bound forms.

(a)   *a-f-kô*   *n-t-sêfe*   ∑1   free form, occurs alone or with overt case markers

PST-3SGM-put   ACC-DEF.FSG-sword

'He put the sword'

(b)   *a-f-kaa-s*   ∑2   bound form, occurs with P indexes

PST-3SGM-put-3SGF

'He put it'

(c)   *a-f-ka-t-sêfe*   ∑3   bound form, occurs with incorporated lexical P

PST-3SGM-put-DEF.FSG-sword

'He put the sword'

$\sum 3$ — a lexical affix?

Lexical because…
- It simply carries the lexical meaning of the verb.
- No difference in meaning between the free form and the bound form.

Affix because…
- It is **host-selective**, only attached to lexical noun phrases.
- It is invariably **adjacent** to the host.
- The combination is **uninterruptible**, nothing can occur between the affix and the host.

Adjacency and uninterruptability

Coptic has second-position 'Wackernagel' clitics that follow the first heavy constituent in a clause.

a-f-tôkm   *n-tef-sêfe*   **Free form + ACC**
PST-3SGM-draw.∑1   ACC-his-sword
'He drew his sword'

Adjacency and uninterruptability

Coptic has second-position 'Wackernagel' clitics that follow the first heavy constituent in a clause.

a-f-tôkm=de   *n-tef-sêfe*   **Free form + ACC**
PST-3SGM-draw.∑1=then ACC-his-sword
'He then drew his sword'

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a-f-tôkm=de　　　　　　*n-tef-sêfe*
PST-3SGM-draw.∑1=then ACC-his-sword
'He then drew his sword'

Free form + ACC

a-f-tekm-tef-sêfe
PST-3SGM-draw.∑3-his-sword
'He drew his sword.'

Bound form + incorporated P

Adjacency and uninterruptability

Coptic has second-position 'Wackernagel' clitics that follow the first heavy constituent in a clause.

a-f-tokm=de   *n-tef-sêfe*
PST-3SGM-draw.∑1=then   ACC-his-sword
'He then drew his sword'

Free form + ACC

a-f-tekm-tef-sêfe=de
PST-3SGM-draw.∑3-his-sword=then
'He then drew his sword.'

Bound form + incorporated P

Inflectional classes - phonologically and lexically conditioned

	$\sum 1$	$\sum 2$	$\sum 3$				
1.	CôC	CoC-	CC-	*bôl*	*bol-*	*bl-*	'release'
2.	CôCe	CoC-	CeC-	*kôte*	*kot-*	*ket-*	'build'
3.	CôCC	CoCC-	CeCC-	*sôtp*	*sotp-*	*setp-*	'choose'
4.	tVCo	tVCo-	tVCe-	*tako*	*tako-*	*take-*	'ruin'
5.	CoCCC.	CCCôC	CCCC-	*sopsp*	*spsôp-*	*spsp-*	'beg'
6.	-	-	-	*eine*	*nt-*	*n-*	'bring'
7.	-	-	-	*eire*	*aa-*	*r-*	'do'

Word stress

- Word stress can only fall on the ultimate or penultimate syllable.
- A transitive verb and adjacent P argument form a single domain for stress assignment.
- As a result, the verb cannot bear stress and is phonologically reduced.

pau*los=de*   *a-f-**sô**tp*   *n-**si**las*
Paul=then   PST-3SGM-choose.∑1   ACC-Silas
'Paul then chose Silas'

*a-f-setp-mnt**snoous***
PST-3SGM-choose.∑3-twelve
'He chose twelve'

Inherited bivalent intransitives

(a)   *a-f-nau*   *ero-f*   ∑1   free form
             PST-3SGM-see   ALL-3SGM
             'He saw him(self)'

(b)   **a-f-nau-f*   ∑2 ~~bound form, occurs with P indexes~~

(c)   **a-f-nau-t-sêfə*   ∑3 ~~bound form, occurs with lexical P~~

Borrowed (bivalent in)transitives (< Greek)

(a)   *a-f-staurou*   *mmo-f* $\sum 1$ free form

       PST-3SGM-crucify   ACC-3SGM

       'He crucified him(self)'

(b)   **a-f-staurou-f*   ~~$\sum 2$ bound form, occurs with P indexes~~

(c)   **a-f-staurou-t-sêfe*   ~~$\sum 3$ bound form, occurs with lexical P~~

Interim summary

- All inherited transitive verbs have allomorphic bound stems, which occur when a P argument is bound to the verb stem.
- Bound stems are phonologically reduced with respect to the free form of the stem, due to stress shift.
- Inherited bivalent intransitives have no bound stems, nor do borrowed verbs.
- The meaning of the bound stem is identical to that of the free form.
- Importantly, these prefixed lexical verbs are a feature of the entire inherited lexicon — it is a basic defining feature of transitivity in this language.

Distribution

In general…

- The free form of the verb plus overt case marker is associated with the high end of most referentiality scales (as is typical for DOM).
- Conversely, the bound form of the verb with incorporated P argument is associated with the low end of most referentiality scales.

So Coptic roughly conforms to functional expectations, based on Mithun's description of lexical affixes in Salishan.

Distribution

The distribution of the different verb stems depends on a number of factors, including:

- TAM, primarily aspect
- A range of semantic and pragmatic features of arguments, including definiteness, specificity, topicality (aboutness, continuity/persistence)
- Verbal semantics, primarily involving dynamicity and affectedness of arguments

Analyzed as Differential Object Marking (Engsheden 2006, 2008, 2018; Grossman 2014, 2018).

The role of topicality (Engsheden 2008)

Salome asks the king for the head of John the Baptist. The king grieved a lot, but:

a-f-ouehsahne   e-ti   mmo-s   na-s
PST-3SGM-order to-give   ACC-3SGF to-3SGF
'He ordered to give it (the head) to her'

a-f-joou   a-f-fi   n-t-ape   n-iôhannês   hm-p-ʃteko
PST-3SGM-send PST-3SGM-carry ACC-the-head of-John   in-the-prison
'He sent and beheaded John in the prison'

a-u-eine   mmo-s   hijm-p-pinaks a-u-taa-s   n-t-ʃeereʃêm
PST-3PL-bring ACC-3SGF on-the-platter   PST-3PL-give-3SGF   to-the-girl
'It was brought on the platter and it was given to the girl' (Matthew 14)

The role of topicality (Engsheden 2008)

a-oua=de   n-netaheratou   tekm-tef-sêfe
PST-one=but of-the.pl.standing draw-his-sword
'But one of those those who stood by drew his sword'

a-f-reht-p-hmhal   m-p-archiereus
PST-3SGM-strike-the-servant of-the-archpriest
'He struck the servant of the archpriest'

a-f-slp-pef-maaje
PST-3SGM-his-ear
'He cut off his ear' (Mark 14)

Summary and conclusions

- Some languages have small, closed classes of affixes that have lexical meanings (or lexical items that behave formally like affixes).
- One language, Coptic – genealogically and geographically remote from these languages – is cross-linguistically unusual in that all transitive verbs have bound stems that are morphosyntactically affix-like.
- On the one hand, there is no visible semantic difference between free and bound stems.
- On the other hand, constructions with the bound stem do seem to correlate with lower semantic transitivity, in Hopper & Thompson's (1980) sense.

So what?

As Næss (2018) points out...
- While being bound is a crucial part of the definition of an affix,
- Being morphologically or phonologically independent is not a necessary criterion for being a root.

There are many ways of being a bound root, so we should be looking for the relevant parameters of variation, both intra-linguistically and cross-linguistically.

Towards a future (multivariate) typology

Some relevant parameters of variation?

- Synchronic existence of bound and free variants of the same root
    - Degree of phonological similarity
    - Degree of semantic similarity
- Productivity/class size
- Host-selectivity
- Head-dependent status (Muriel's talk)
- Diachronic source construction
- Root type-specific properties (potentially many variables here!)
- Discourse profile
- More…

Thanks!
Kiitos!