



# Multidimensional features with linear morphology

The case for an independent morphological level of representation

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Funded by the Arts & Humanities Research Council (UK) under grant AH/P002471/1 ('Seri verbs'). Their support is gratefully acknowledged. Thanks to all our Seri consultants, especially: Deborah Perales, Gabriel Hoefler, Teresa Hoefler, Karelia Perales, Genoveva Herrera, and Anamaria Morales.

## Seri (isolate)

- Seri is spoken on the coast of Sonora (Mexico) in two villages: El Desemboque/Hax l Iihom and Punta Chueca/Socaaix



- It is spoken by approximately 900 speakers (Ethnologue 2007)

# THE PROBLEM

## The problem

- Plural suffixes in nouns and verbs, with subtler meanings

### PL MARKERS IN NOUNS

<b>paar-<i>oj</i></b>	'priests'
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<b>haahol-<i>cam</i></b>	'roads'
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<b>xpaahj�-<i>lca</i></b>	'hematites'
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<b>nop-<i>xam</i></b>	'bobcats'
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### PL MARKERS IN VERBS

<b>itacsipx-<i>oj</i></b>	's/he glues multiple times'
<b>tmasl-<i>oj</i></b>	'it is black in various places'
<b>itzacoz-<i>oj</i></b>	'they peck'
<b>tac�t-<i>oj</i></b>	'they cover multiple times'

<b>toeequel-<i>cam</i></b>	'it teeters on the edge multiple times'
<b>itapooil-<i>cam</i></b>	'they twist'
<b>itapocal-<i>cam</i></b>	'they remove its shell multiple times'

<b>itamoosa-<i>lca</i></b>	'it is creased in various places'
<b>ittiipx�zi-<i>lca</i></b>	'they tighten'
<b>itahoaatj�-<i>lca</i></b>	'they sweeten multiple times'

<b>itsap-<i>xam</i></b>	'they swat at'
<b>ititooc-<i>xam</i></b>	'they sow multiple times'

Examples from Moser & Marlett (2010)

## The problem

- Polyfunctionality: each exponent can express a range of meanings across verbs

<b>itsap-<i>xam</i></b>	'they swat at'	<b>ititooc</b>	'they sow'	(multiple times)
<b>itsap-<i>tolca</i></b>	'they swat at'	<b>ititooc-<i>xam</i></b>	'they sow'	

<b>itapooil-<i>cam</i></b>	'they twist'	<b>itapocl-<i>coj</i></b>	'they remove its shell'	(multiple times)
<b>itapooiz-<i>olca</i></b>	'they twist'	<b>itapocal-<i>cam</i></b>	'they remove its shell'	

<b>itzacoz-<i>oj</i></b>	'they peck'	<b>tac�t-<i>am</i></b>	'they cover'	(multiple times)
<b>itzacoz-<i>am</i></b>	'they peck'	<b>tac�t-<i>oj</i></b>	'they cover'	

Examples from Moser & Marlett (2010)

## The problem

- Syncretism: each exponent can express a range of meanings within a paradigm

<b>c�itfiz-<i>xam</i></b>	'they make knots'
<b>c�itf&lt;coo&gt;z-<i>xam</i></b>	'they make knots (multiple times)'

<b>itazaail-<i>cam</i></b>	'they anchor'
<b>itazaail-<i>cam</i></b>	'they anchor (multiple times)'

<b>c�itaafip-<i>oj</i></b>	's/he unfastens (multiple times)'
<b>c�ita&lt;too&gt;fip-<i>oj</i></b>	'they unfasten'

Examples from Moser & Marlett (2010)

# FEATURE SYSTEM

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## Seri verbs

- Number distinctions in verbs; see Marlett (1988, 2016) and Moser & Marlett (2010)
  - Subject number
    - Singular
    - Plural
  - Verbal number
    - Neutral
    - Multiple; see Cabredo Hofherr, Pasquereau, O'Meara (2018)
    - Distributional (Moser 1961's "sequential", not explicitly factored into subsequent work); see Pasquereau (2019) for arguments that it does not require temporal distribution

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## Seri verbs: subject number

- Singular subject

*Moxima sahmees hizcoi h-yoohit.*  
yesterday orange DEM.PL 1SG-RLS.YO.eat  
'Yesterday I ate these oranges.'

*Moxima sahmees hizcoi h-yoohitim.*  
yesterday orange DEM.PL 1SG-RLS.YO.eat.MULT  
'Yesterday I ate these oranges (over time).'

\* *Moxima sahmees hizcoi h-yoiitoj.*  
yesterday orange DEM.PL 1SG-RLS.YO.eat.PL  
Int. 'Yesterday I ate these oranges.'

\* *Moxima sahmees hizcoi h-yoiitolca.*  
yesterday orange DEM.PL 1SG-RLS.YO.eat.PL.MULT  
Int. 'Yesterday I ate these oranges (over time).'

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## Seri verbs: subject number

- Plural subject

\* *Moxima sahmees hizcoi ha-yoohit.*  
yesterday orange DEM.PL 1PL-RLS.YO.eat  
Int. 'Yesterday we ate these oranges.'

\* *Moxima sahmees hizcoi ha-yoohitim.*  
yesterday orange DEM.PL 1PL-RLS.YO.eat.MULT  
Int. 'Yesterday we ate these oranges (over time).'

*Moxima sahmees hizcoi ha-yoiitoj.*  
yesterday orange DEM.PL 1PL-RLS.YO.eat.PL  
'Yesterday we ate these oranges.'

*Moxima sahmees hizcoi ha-yoiitolca.*  
yesterday orange DEM.PL 1PL-RLS.YO.eat.PL.MULT  
'Yesterday we ate these oranges (over time).'

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## Seri verbs: event number

- Neutral form is underspecified

*Juan quih xiica an iqueaacalca coi hant iyootox*  
Juan DEF suitcases DEF.PL down 3>3.RLYO.extend  
'Juan dragged the suitcases.'

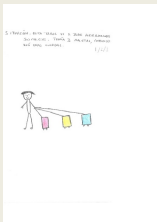
### Context 1: true

Distribution over times: ✓  
Distribution over spaces: ?



### Context 2: true

Distribution over times: ✗  
Distribution over spaces: ✓



### Context 3: true

Distribution over times: ✗  
Distribution over spaces: ✗



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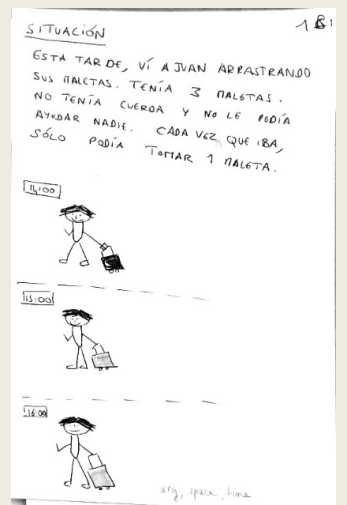
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Juan DEF suitcases DEF.PL down 3>3.RLYO.extend  
'Juan dragged the suitcases.'

### Context 1: true

Distribution over times: ✓  
Distribution over spaces: ?

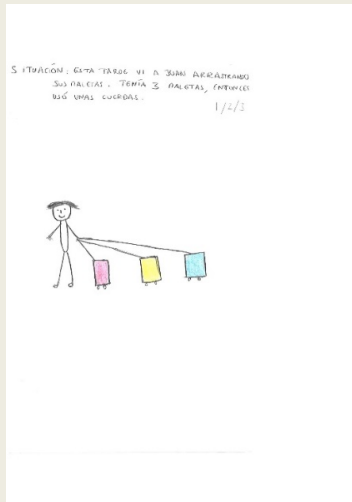


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### Seri verbs: event number

- Neutral form is underspecified

*Juan quih xiica an iqueaacalca*  
 Juan DEF suitcases  
*coi hant iyootox*  
 DEF.PL down 3>3.RLYO.extend  
 'Juan dragged the suitcases.'

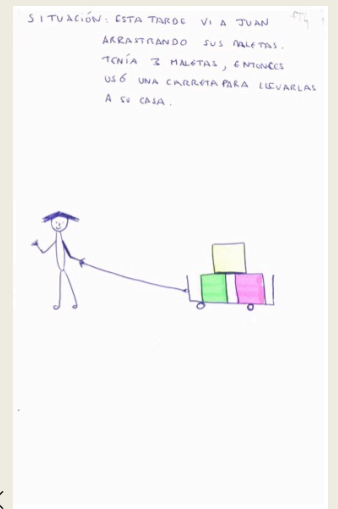


Context 2: true  
 Distribution over times: ✗  
 Distribution over spaces: ✓

### Seri verbs: event number

- Neutral form is underspecified

*Juan quih xiica an iqueaacalca*  
 Juan DEF suitcases  
*coi hant iyootox*  
 DEF.PL down 3>3.RLYO.extend  
 'Juan dragged the suitcases.'



Context 3: true  
 Distribution over times: ✗  
 Distribution over spaces: ✗

### Seri verbs: multiple

- Multiple form requires multiple events which are, at least, distributed over times

*Juan quih xiica an iqueaacalca coi hant iyootoxim*  
 Juan DEF suitcases DEF.PL down 3>3.RLYO.extend.MULT  
 'Juan dragged the suitcases.'

Context 1: true

Distribution over times: ✓  
 Distribution over spaces: ?



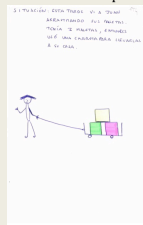
Context 2: false

Distribution over times: ✗  
 Distribution over spaces: ✓



Context 3: false

Distribution over times: ✗  
 Distribution over spaces: ✗



### Seri verbs: distributional

- Distribution form requires multiple events which are, at least, distributed over spaces

*Juan quih xiica an iqueaacalca coi hant iyootyax*  
 Juan DEF suitcases DEF.PL down 3>3.RLYO.extend.DIST  
 'Juan dragged the suitcases.'

Context 1: true

Distribution over times: ✓  
 Distribution over spaces: ?



Context 2: true

Distribution over times: ✗  
 Distribution over spaces: ✓



Context 3: false

Distribution over times: ✗  
 Distribution over spaces: ✗



### Seri verbs

- Two cross-classifying features
  - Subject number [singular, plural]
  - Verbal number [neutral, multiple, distributional] **(previously only 2 values had been recognized)**

event number

subject number	'wrap'	neutral	multiple	distributional
	singular	<b>iyacapnij</b>	<b>iyacapanl</b>	<b>iyacapnalca</b>
	plural	<b>iyacapnalcoj</b>	<b>iyacapzil</b>	<b>iyacapzilca</b>

- In principle, 6 cells but in the overwhelming majority of cases, if there is a separate distributional form, it is in the singular subject paradigm

event number

subject number	'drag'	neutral	multiple	distributional
	singular	<b>hant iyootox</b>	<b>hant iyootoxim</b>	<b>hant iyootyax</b>
	plural	<b>hant iyootyajc</b>	<b>hant iyootyaxlca</b>	

# FEATURE SYSTEM

## One inventory of exponents for all feature values

- For every exponent<sub>x</sub>, it is not possible to associate it<sub>x</sub> with one bundle of feature values

SG NEUTRAL	SG MULT	SG DIST	PL NEUTRAL	PL MULT	PL DIST	
-taxnij	-taxanl		-taxnal-ca	-taxnal-coj		'scold'
-atox	-atoxim	-atyax	-atyaj-c	-atyax-lca		'stretch'
-tahoij		-tahoil-c	-tahoil-coj			'make tubular'
-tzam	-tzam-tim	-tzamlqu-im	-tzamlc-am			'corner, attack'
-tanamj	-tanaml-c		-anaml-coj	-anaml-cam		'hurry'
-tazaain-im	-tazaiin-im		-azaail-cam	-azaiil-cam		'anchor'
-tpoc	-tpoct-im		-tpocl-im	-tpocal-am		'fall'
-tpazj-c	-tpaxlax		-tpazlax	-tpazlax-lca		'be scattered'
-tineezil-ca	-tineezil-im		-tineezil-coj	-tineezil-am		'be raspy'
-tapox	-tapox-im	-taptax	-taptaj-c	-tapo-tam	-taptax-lca	'pull out'

-tim 

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## One inventory of exponents for all feature values

- For every exponent<sub>x</sub>, it is not possible to associate it<sub>x</sub> with one bundle of feature values

SG NEUTRAL	SG MULT	SG DIST	PL NEUTRAL	PL MULT	PL DIST	
-taxnij	-taxanl		-taxnal-ca	-taxnal-coj		'scold'
-atox	-atoxim	-atyax	-atyaj-c	-atyax-lca		'stretch'
-tahoij		-tahoil-c	-tahoil-coj			'make tubular'
-tzam	-tzam-tim	-tzamlqu-im	-tzamlc-am			'corner, attack'
-tanamj	-tanaml-c		-anaml-coj	-anaml-cam		'hurry'
-tazaain-im	-tazaiin-im		-azaail-cam	-azaiil-cam		'anchor'
-tpoc	-tpoct-im		-tpocl-im	-tpocal-am		'fall'
-tpazj-c	-tpaxlax		-tpazlax	-tpazlax-lca		'be scattered'
-tineezil-ca	-tineezil-im		-tineezil-coj	-tineezil-am		'be raspy'
-tapox	-tapox-im	-taptax	-taptaj-c	-tapo-tam	-taptax-lca	'pull out'

-c 

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SG NEUTRAL	SG MULT	SG DIST	PL NEUTRAL	PL MULT	PL DIST	
-taxnij	-taxanl		-taxnal-ca	-taxnal-coj		'scold'
-atox	-atoxim	-atyax	-atyaj-c	-atyax-lca		'stretch'
-tahoij		-tahoil-c	-tahoil-coj			'make tubular'
-tzam	-tzam-tim	-tzamlqu-im	-tzamlc-am			'corner, attack'
-tanamj	-tanaml-c		-anaml-coj	-anaml-cam		'hurry'
-tazaain-im	-tazaiin-im		-azaail-cam	-azaiil-cam		'anchor'
-tpoc	-tpoct-im		-tpocl-im	-tpocal-am		'fall'
-tpazj-c	-tpaxlax		-tpazlax	-tpazlax-lca		'be scattered'
-tineezil-ca	-tineezil-im		-tineezil-coj	-tineezil-am		'be raspy'
-tapox	-tapox-im	-taptax	-taptaj-c	-tapo-tam	-taptax-lca	'pull out'

-ca 

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## One inventory of exponents for all feature values

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SG NEUTRAL	SG MULT	SG DIST	PL NEUTRAL	PL MULT	PL DIST	
-taxnij	-taxanl		-taxnal-ca	-taxnal-coj		'scold'
-atox	-atoxim	-atyax	-atyaj-c	-atyax-lca		'stretch'
-tahoij		-tahoil-c	-tahoil-coj			'make tubular'
-tzam	-tzam-tim	-tzamlqu-im	-tzamlc-am			'corner, attack'
-tanamj	-tanaml-c		-anaml-coj	-anaml-cam		'hurry'
-tazaain-im	-tazaiin-im		-azaail-cam	-azaiil-cam		'anchor'
-tpoc	-tpoct-im		-tpocl-im	-tpocal-am		'fall'
-tpazj-c	-tpaxlax		-tpazlax	-tpazlax-lca		'be scattered'
-tineezil-ca	-tineezil-im		-tineezil-coj	-tineezil-am		'be raspy'
-tapox	-tapox-im	-taptax	-taptaj-c	-tapo-tam	-taptax-lca	'pull out'

-lca 

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## One inventory of exponents for all feature values

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SG NEUTRAL	SG MULT	SG DIST	PL NEUTRAL	PL MULT	PL DIST	
-taxnij	-taxanl		-taxnal-ca	-taxnal-coj		'scold'
-atox	-atoxim	-atyax	-atyaj-c	-atyax-lca		'stretch'
-tahoij		-tahoil-c	-tahoil-coj			'make tubular'
-tzam	-tzam-tim	-tzamlqu-im	-tzamlc-am			'corner, attack'
-tanamj	-tanaml-c		-anaml-coj	-anaml-cam		'hurry'
-tazaain-im	-tazaiin-im		-azaail-cam	-azaiil-cam		'anchor'
-tpoc	-tpoct-im		-tpocl-im	-tpocal-am		'fall'
-tpazj-c	-tpaxlax		-tpazlax	-tpazlax-lca		'be scattered'
-tineezil-ca	-tineezil-im		-tineezil-coj	-tineezil-am		'be raspy'
-tapox	-tapox-im	-taptax	-taptaj-c	-tapo-tam	-taptax-lca	'pull out'

-coj 

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## One inventory of exponents for all feature values

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SG NEUTRAL	SG MULT	SG DIST	PL NEUTRAL	PL MULT	PL DIST	
-taxnij	-taxanl		-taxnal-ca	-taxnal-coj		'scold'
-atox	-atoxim	-atyax	-atyaj-c	-atyax-lca		'stretch'
-tahoij		-tahoil-c	-tahoil-coj			'make tubular'
-tzam	-tzam-tim	-tzamlqu-im	-tzamlc-am			'corner, attack'
-tanamj	-tanaml-c		-anaml-coj	-anaml-cam		'hurry'
-tazaain-im	-tazaiin-im		-azaail-cam	-azaiil-cam		'anchor'
-tpoc	-tpoct-im		-tpocl-im	-tpocal-am		'fall'
-tpazj-c	-tpaxlax		-tpazlax	-tpazlax-lca		'be scattered'
-tineezil-ca	-tineezil-im		-tineezil-coj	-tineezil-am		'be raspy'
-tapox	-tapox-im	-taptax	-taptaj-c	-tapo-tam	-taptax-lca	'pull out'

-tam 

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SG NEUTRAL	SG MULT	SG DIST	PL NEUTRAL	PL MULT	PL DIST	
-taxnij	-taxanl		-taxnal-ca	-taxnal-coj		'scold'
-atox	-atoxim	-atyax	-atyaj-c	-atyax-lca		'stretch'
-tahoij		-tahoil-c	-tahoil-coj			'make tubular'
-tzam	-tzam-tim	-tzamlqu-im	-tzamlc-am			'corner, attack'
-tanamj	-tanaml-c		-anaml-coj	-anaml-cam		'hurry'
-tazaain-im	-tazaiin-im		-azaail-cam	-azaail-cam		'anchor'
-tpoc	-tpoct-im		-tpocl-im	-tpocal-am		'fall'
-tpazj-c	-tpaxlax		-tpazlax	-tpazlax-lca		'be scattered'
-tineezil-ca	-tineezil-im		-tineezil-coj	-tineezil-am		'be raspy'
-tapox	-tapox-im	-taptax	-taptaj-c	-tapo-tam	-taptax-lca	'pull out'

-cam

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## One inventory of exponents for all feature values

- For every exponent<sub>x</sub>, it is not possible to associate it<sub>x</sub> with one bundle of feature values

SG NEUTRAL	SG MULT	SG DIST	PL NEUTRAL	PL MULT	PL DIST	
-taxnij	-taxanl		-taxnal-ca	-taxnal-coj		'scold'
-atox	-atoxim	-atyax	-atyaj-c	-atyax-lca		'stretch'
-tahoij		-tahoil-c	-tahoil-coj			'make tubular'
-tzam	-tzam-tim	-tzamlqu-im	-tzamlc-am			'corner, attack'
-tanamj	-tanaml-c		-anaml-coj	-anaml-cam		'hurry'
-tazaain-im	-tazaiin-im		-azaail-cam	-azaail-cam		'anchor'
-tpoc	-tpoct-im		-tpocl-im	-tpocal-am		'fall'
-tpazj-c	-tpaxlax		-tpazlax	-tpazlax-lca		'be scattered'
-tineezil-ca	-tineezil-im		-tineezil-coj	-tineezil-am		'be raspy'
-tapox	-tapox-im	-taptax	-taptaj-c	-tapo-tam	-taptax-lca	'pull out'

-tim -c -ca -lca -coj -tam -cam

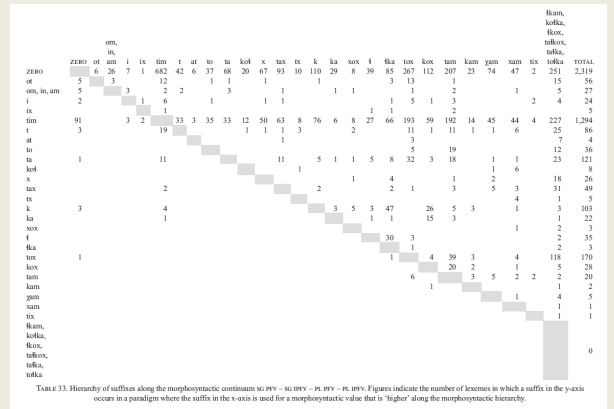
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# INCREMENTAL MAPPING

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## Incrementality of the exponents

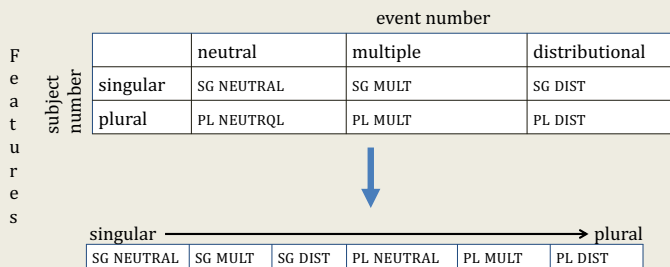
- The system is not completely random however, because both the paradigm cells and the exponents *mostly* follow an implicational scale (Baerman 2016):



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## Incrementality of the features

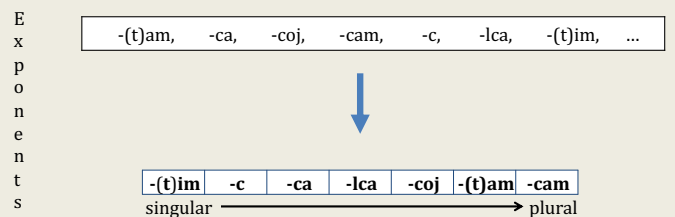
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29

## Incrementality of the exponents

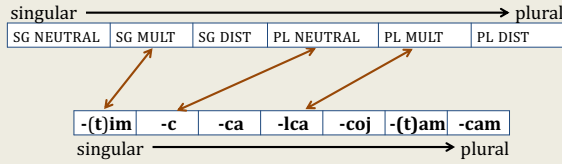
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30

### Incrementality of the features/exponents

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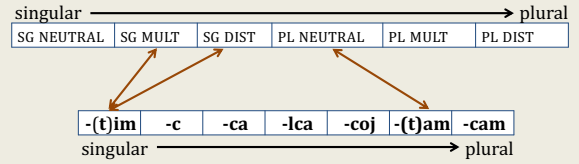


SG NEUTRAL	SG MULT	SG DIST	PL NEUTRAL	PL MULT	PL DIST	
-atox	-atox-im	-atyax	-atyaj-c	-atyax-lca		'stretch'

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### Incrementality of the features/exponents

- The system is not completely random however, because both the paradigm cells and the exponents *mostly* follow an implicational scale (Baerman 2016):

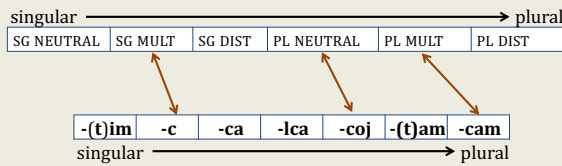


SG NEUTRAL	SG MULT	SG DIST	PL NEUTRAL	PL MULT	PL DIST	
-tzam	-tzam-tim	-tzamlqu-im	-tzamlc-am			'corner, attack'

32

### Incrementality of the features/exponents

- The system is not completely random however, because both the paradigm cells and the exponents *mostly* follow an implicational scale (Baerman 2016):

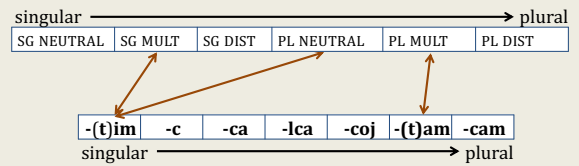


SG NEUTRAL	SG MULT	SG DIST	PL NEUTRAL	PL MULT	PL DIST	
-tanamj	-tanaml-c		-tanaml-coj	-tanaml-cam		'hurry'

33

### Incrementality of the features/exponents

- The system is not completely random however, because both the paradigm cells and the exponents *mostly* follow an implicational scale (Baerman 2016):

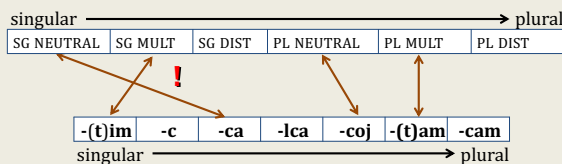


SG NEUTRAL	SG MULT	SG DIST	PL NEUTRAL	PL MULT	PL DIST	
-tpoc	-tpoct-im		-tpocl-im	-tpocal-am		'fall'

34

### Incrementality of the features/exponents

- The system is not completely random however, because both the paradigm cells and the exponents *mostly* follow an implicational scale (Baerman 2016):



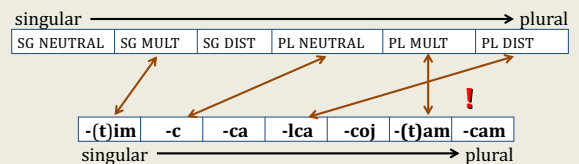
SG NEUTRAL	SG MULT	SG DIST	PL NEUTRAL	PL MULT	PL DIST	
-tineezil-ca	-tineezil-im		-tineezil-coj	-tineezil-am		'be raspy'

-(t)im is an outlier

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### Incrementality of the features/exponents

- The system is not completely random however, because both the paradigm cells and the exponents *mostly* follow an implicational scale (Baerman 2016):



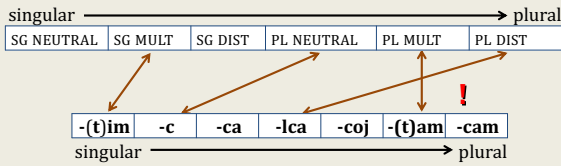
SG NEUTRAL	SG MULT	SG DIST	PL NEUTRAL	PL MULT	PL DIST	
-tapox	-tapox-im	-taptax	-taptaj-c	-tapot-am	-taptax-lca	'remove'

-(t)am is an outlier

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### Incrementality and *-tim/-tam*

- Two notable exceptions to this not completely random system are the endings *-tim* and *-tam*



- These are outliers in several respects
  - They are only found with verbs (so far as we know)
  - tim/-tam** are among the 5 most frequent exponents
  - tim** is most often found marking singular subject MULT forms
  - tam** is perceived by speakers as being 'the plural of **-tim**' in morphological elicitation tasks
- Hypothesis: productive verbal suffixes **-tim/-tam** have been overlaid on an older system of number marking shared between verbs and nouns

# WIESE 2013

- Wiese 2013 models Latin case morphology and its syncretisms using an incremental scale
  - Case exponents are ordered from least marked to most marked
  - Case values are ordered from least marked to most marked

Table 6 Correlation of formal and functional sequences (u-, ē-, a-, o-declensions)

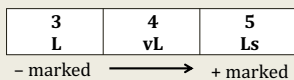
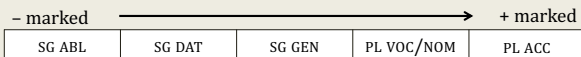
formal sequence (types/markers/endings)										
Types	0	1	2	3	4	5	6	6+	7	7+
Markers	-	s	m	L	vL	Ls	vLs	-X-s	vm	-X-m
u-dec.	-u	-us	-um	-ū	-ū	-īs		-ibus	-uum	
ē-dec.	—	-ēs	-em	-ē	-ei	-ēs		-ēbus		-ērum
a-dec.	-a	—	-am	-ā	-ae	-ās	-īs			-ārum
o-dec.	-e	-us	-um	-ō	-ī	-ōs	-īs			-ōrum
	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓
u-dec.	VNA <sub>Ntr</sub>	VN	A	Ab	D	G VNA <sub>Pl</sub>	AbD <sub>Pl</sub>		G <sub>Pl</sub>	
ē-dec.	—	VN	A	Ab	DG	VNA <sub>Pl</sub>	AbD <sub>Pl</sub>		G <sub>Pl</sub>	
a-dec.	VN	—	A	Ab	DG VN <sub>Pl</sub>	A <sub>Pl</sub>	AbD <sub>Pl</sub>		G <sub>Pl</sub>	
o-dec.	V	N	VNA <sub>Ntr/A</sub>	AbD	G VN <sub>Pl</sub>	A <sub>Pl</sub>	AbD <sub>Pl</sub>		G <sub>Pl</sub>	
functional sequences (syncretism fields)										

VNA<sub>Ntr</sub> not included

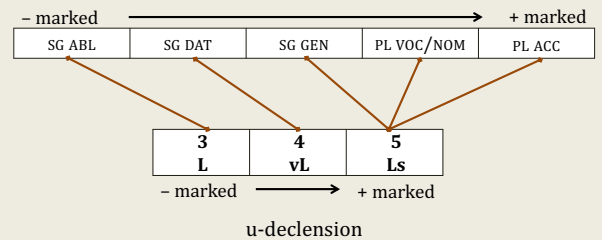
- Wiese 2013 models Latin case morphology and its syncretisms using an incremental scale
  - Case exponents are ordered from least marked to most marked
  - Case values are ordered from least marked to most marked

	- marked							+ marked		
	V	N	A	Ab	D	G	V <sub>Pl</sub> N <sub>Pl</sub>	A <sub>Pl</sub>	Ab <sub>Pl</sub> D <sub>Pl</sub>	G <sub>Pl</sub>
u-decl. NTR			0	3	4		5		6	7
u-decl.	1	2	3	4		5			6	7
ē-decl.	1	2	3	4		5			6	7
a-decl.	0	2	3		4		5		6	7
o-decl. NTR		2		3		4	5		6	7
o-decl.	0	1	2	3		4	5		6	7

- Wiese 2013 models Latin case morphology and its syncretisms using an incremental scale
  - Case exponents are ordered from least marked to most marked
  - Case values are ordered from least marked to most marked
- We present Wiese 2013 using the notation we have been using for Seri

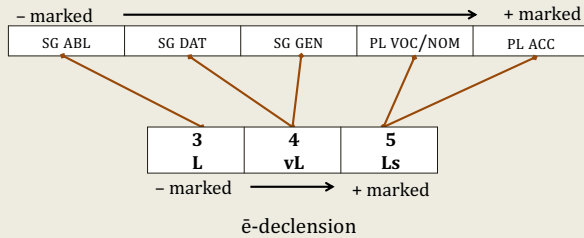


### Latin per Wiese (2013)



SG ABL	SG DAT	SG GEN	PL VOC/NOM	PL ACC	
ictu:	ictui:	ictu:s	ictu:s	ictu:s	'a blow'

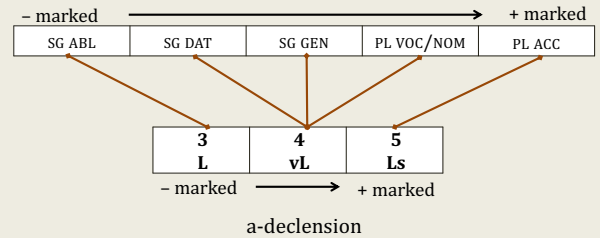
### Latin per Wiese (2013)



SG ABL	SG DAT	SG GEN	PL VOC/NOM	PL ACC	
die:	diei	diei	dies	dies	'a day'

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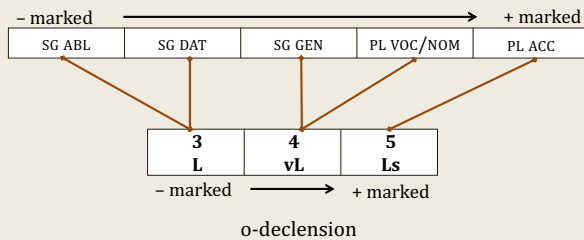
### Latin per Wiese (2013)



SG ABL	SG DAT	SG GEN	PL VOC/NOM	PL ACC	
capra:	caprae	caprae	caprae	capras	'a goat'

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### Latin per Wiese (2013)



SG ABL	SG DAT	SG GEN	PL VOC/NOM	PL ACC	
lupo:	lupo:	lupi:	lupi:	lupo:s	'a wolf'

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# CONCLUSION

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- Both Wiese (2013) and we have argued for the existence of morphological hierarchies as a paradigmatic organizing principle, in parallel to a hierarchical arrangement of features.
- But can this be formally implemented? Maybe it's wrong to try and implement this in terms of 'constructive' rules.
- Rather – for Seri at least – the hierarchy represents the diachronic residue of various layers of concatenative plural formation, anchored to a greater or lesser degree in the lexicon, and adapted by analogy to expand the paradigm when needed.
- Two arguments in favor:

- Argument #1: The system shows the diachronic traces of having been build up through the concatenation of plural suffixes, though there's no good reason to think it remains synchronically active.

SG NEUTRAL	PL NEUTRAL	
tooxi	tooxya-tolca	'die (animal)'
itap	itap-t	'dig (using instrument)'
itap-t	itap-to	'pull out (soft or loose things)'
itataaho	itataaho-j	'prepare'
intitoozi	intitoozi-toj	'release'
itcacj	itcaczi-l	'chop'
itamaax	itamaaj-c	'make alcoholic beverage'
tiimj	tiiml-ca	'clear'
cõitsitox	cõitsitox-lca	'strike (match)'

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- Argument #2: The rest of the (quite large) verbal paradigm is build up concatenatively through prefixation. Typologically at least two systems are operating simultaneously.

	'open'
subject nominalization, active	<b>c-aasax</b>
subject nominalization, passive	<b>hap-aasax</b>
subject nominalization, negative	<b>im-aasax</b>
action/instrument nominalization (possessed)	<b>ih-aasax</b>
complement nominalization (possessed)	<b>y-aasax</b>
infinitive	<b>ih-aasax</b>
realis- <i>t</i>	<b>it-aasax</b>
realis- <i>t</i> , passive	<b>tp-aasax</b>
realis- <i>t</i> , negative	<b>itcm-aasax</b>
realis- <i>yo</i>	<b>iy-aasax</b>
realis- <i>yo</i> , negative	<b>iyom-aasax</b>
emphatic realis	<b>ix-aasax</b>
emphatic realis, negative	<b>ixom-aasax</b>
realis- <i>mi</i> tense	<b>im-aasax</b>
independent irrealis	<b>is-aasax</b>
independent irrealis negative	<b>iscm-aasax</b>
imperative	<b>h-aasax</b>
imperative negative	<b>cm-aasax</b>

etc. etc.

Table from Moser & Marlett (2010)

### Does such a system allow for more flexibility in creating/accommodating new forms/meanings?

- Recent fieldwork has made clear that Seri plural marking allows a relatively high amount of flexibility in the creation/interpretation of verb forms
- Speakers were given 3 judgments in morphological elicitation:
  - "it's definitely a word":
  - "it's definitely not a word": \*
  - "maybe it's a word: I understand its meaning but I'm not sure I or others use it" : ?
- Many (but not all) invented words received a ? or ✓ judgement with a plausible proposed meaning ([CON] stands for constructed by linguist, [ELAB] for proposed examples by speakers)

### Does such a system allow for more flexibility in creating/accommodating new forms/meanings?

*Geno quih yaaco.*  
 Geno DET [3]RLYO.have\_house  
 'Geno has a house.' [CON] [EDSEI7NOV2019DRPMLKPH.ATHF.GHF.GH]

*Geno quih yaacotim.*  
 Geno DET [3]RLYO.have\_house.MULT  
 'Geno is fixing up her house.' [CON] [EDSEI7NOV2019DRPMLKPH.ATHF.GHF.GH]

*Geno quih ?yaacõtj. / \*yaacõt.*  
 Geno DET [3]RLYO.have\_house.DIST  
 'Geno has many houses.' [CON] [EDSEI12NOV2019DRPMLKPH.ATHF.LKPH.AMMO]  
 SC on yaacõtj: maybe, if she has many houses

SG NEUTRAL	SG MULT	SG DIST	PL NEUTRAL	PL MULT / DIST?	
-aaco [CON]	-aaco-tim [CON]	*-aacõt [CON] ?-aacõtj [CON]	-aacõt [ELAB] -aacõtj [CON]	-aacõtca [ELAB] ?-aacotam [ELAB] -aacojam [ELAB]	'have (build) a house'

### Does such a system allow for more flexibility in creating/accommodating new forms/meanings?

*Comcaac coi yaacõt.*  
 Geno DET.PL [3]RLYO.have\_house.PL  
 'The people have a house/houses.' [ELAB] [EDSEI7NOV2019DRPMLKPH.ATHF.GHF.GH]

*Comcaac coi yaacõtj.*  
 Geno DET.PL [3]RLYO.have\_house.PL  
 'The people have a house/houses.' [ELAB] [EDSEI7NOV2019DRPMLKPH.ATHF.GHF.GH]

SG NEUTRAL	SG MULT	SG DIST	PL NEUTRAL	PL MULT / DIST?	
-aaco [CON]	-aaco-tim [CON]	*-aacõt [CON] ?-aacõtj [CON]	-aacõt [ELAB] -aacõtj [CON]	-aacõtca [ELAB] ?-aacotam [ELAB] -aacojam [ELAB]	'have (build) a house'

### Does such a system allow for more flexibility in creating/accommodating new forms/meanings?

*Comcaac coi yaacõtca.*  
 Geno DET.PL [3]RLYO.have\_house.PL.MULT  
 'The people have fixed up a house/houses.' [ELAB] [EDSEI7NOV2019DRPMLKPH.ATHF.GHF.GH]

? *Comcaac coi yaacotam.*  
 Geno DET.PL [3]RLYO.have\_house.PL.MULT  
 'The people have fixed up a house/houses.' [ELAB] [EDSEI7NOV2019DRPMLKPH.ATHF.GHF.GH]  
 SC: it's a new word, if it's many people who fixed up their house.

*Comcaac coi yaacojam.*  
 Geno DET.PL [3]RLYO.have\_house.PL.MULT  
 'The people have been building houses.' [ELAB] [EDSEI12NOV2019DRPMLKPH.ATHF.LKPH.AMMO]  
 SC: if it's people building many houses: they finish one then build another

SG NEUTRAL	SG MULT	SG DIST	PL NEUTRAL	PL MULT / DIST?	
-aaco [CON]	-aaco-tim [CON]	*-aacõt [CON] ?-aacõtj [CON]	-aacõt [ELAB] -aacõtj [CON]	-aacõtca [ELAB] ?-aacotam [ELAB] -aacojam [ELAB]	'have (build) a house'

¡Haa xah tiipe!

