

Diagnosing pluractionality: the view from Seri

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Pluractionality

Pluractionality

The expression of multiple events by markers on the verb (also called verbal plurality)

Relevance for this workshop:

- Pluractionality marking has effects that are similar to those of other categories, e.g. (imperfective) aspect induces a plurality of *coughing* events in (1).

(1) Jean toussait quand je me suis réveillé. French
Jean cough.PF.IMPF when I REFL am woken.up

Jean was coughing when I woke up.

Context 1: Jean coughed once when I woke up. FALSE

Context 2: Jean had a coughing fit when I woke up. TRUE

- Many terms in the literature for this phenomenon and the diversity of its manifestations (e.g. iterative, repetitive, distributive)

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Seri

- Seri is spoken in northwest Mexico, in two villages on the coast: *Haxōl lihom*/El Desemboque and *Socaaix*/Punta Chueca



Figure: The Seri region in Mexico

- Isolate, approx. 900 speakers (Ethnologue 2007 estimate)

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Outline

- The problem: verbal form alternations in Seri
- Background on Seri verbal morphology
- Seri verbs are marked for pluractionality
- Profile of pluractionality in Seri
- Conclusion

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Stem alternations

- Verb stems in Seri typically have 4 non predictable forms

(2)

	Form A	Form B	Form C	Form D
'run'	-panzx	-panozxim	-pancojc	-pancoxla

- The forms have been analyzed as encoding two bivalent categories in Moser 1961, Marlett 1981, Marlett 2016

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Category 1 = Subject number

(3)

	Cat. 1: subject number			
	singular		plural	
'run'	Form A -panzx	Form B -panozxim	Form C -pancojc	Form D -pancoxla

- (4) I ran
- Moxima ihp-yo-panzx.
 - Moxima ihp-yo-panozxim.
yesterday 1SG-RLS.YO-run
 - *Moxima ihp-yo-pancojc.
 - *Moxima ihp-yo-pancoxla.
- (5) We ran
- Moxima ha-yo-pancojc.
 - Moxima ha-yo-pancoxla.
yesterday 1PL-RLS.YO-run
 - *Moxima ha-yo-panzx.
 - *Moxima ha-yo-panozxim.

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Part 1: diagnosing pluractionality

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Existing hypotheses

- In the literature on Seri, MULT-forms have been described as being triggered by three types of context

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graph TD
    A[MULT-forms] --> B[A. Event plurality]
    A --> C[C. Object plurality]
    A --> D[B. Imperfective aspect]
  
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MULT-form ≠ imperfective

- Marlett 2016: non-MULT-forms ~ perfective and MULT-forms ~ imperfective
- Cross-linguistically imperfective forms have 2 main sub-meanings (Comrie, 1976; Bybee et al., 1994; Cover and Tonhauser, 2015):
 - habitual
 - progressive/continuous
- The distribution of MULT-forms is not the distribution observed for imperfective morphology cross-linguistically.

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MULT-form ≠ imperfective

Not habitual

- The **MULT-form** does not express habituality

(12) Context: María died last year. All her life, she went to church once every day.

María quih hant ifii coox cah x, SG, MULT
 María DEF NMLZ.OBL.be.morning every DEF.FOC UNSPEC.TIME
 iglesia cap contiya / #contiyatim.
 church DEF 3IO.AW.RLS.YO.go 3IO.AW.RLS.YO.go.MULT
Every morning, María went to church. [EDSEI27NOV2017DRPM, elicitation]

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MULT-form ≠ imperfective

Not habitual

- The **MULT-form** does not express habituality

(13) Context: María and Irma died last year. All their life, they went to church once every day together.

María xah Irma xah hant ifii coox cah x, PL, MULT
 María and Iram and NMLZ.OBL.be.morning every DEF.FOC UNSPEC.TIME
 iglesia cap contiyat / #contiyatolca.
 church DEF 3IO.AW.RLYO.go.PL RLYO.go.MULT.PL
Every morning, María and Irma went to church. [Questionnaire2FT4, elicitation]

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MULT-form ≠ imperfective

Not continuous

- The **MULT-form** does not express a continuous event

(14) Context: Yesterday my brother ran in a race from point A to B. While he was running, the light went out.

Hoyacj quih cōipanx / #cōipanozxm SG, MULT
 1POS.brother DEF 3IO.3POS.NMLZ.OBL.run 3IO.3POS.NMLZ.OBL.run.MULT
 iti, hamac cānoj quih iicot cōyooctim.
 [3POS.]on fire NMLZ.SUJ.roaf DEF [3POS.]between 3IO.RLYO.cut
While my brother was running, the light went out. [EDSEI27NOV2017DRPM, EDSEI29NOV2017GH, elicitation]

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MULT-form ≠ imperfective

Not continuous

- The **MULT-form** does not express a continuous event

(15) Context: Yesterday, my brothers ran in a race from point A to B. While they were running, the power went out.

Hoyácalcam quih cōipancojc / #cōipancoxica [PL, MULT]

1POS.brother.PL DEF 3IO.3POS.NMLZ.OBL.run.PL 3IO.3POS.NMLZ.OBL.run.MULT.PL
 iti, hamac cánoj quih iicot cōyoocim.
 [3POS.]on fire NMLZ.SUJ.roar DEF [3POS.]between 3IO.RLYO.cut
While my brothers were running, the light went out. [Questionnaire2FT4, elicitation]

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MULT-form ≠ imperfective

- The **MULT-form** can be used in a perfective context

(16) Context: Yesterday, I went to Puerto Libertad early in the morning and then came back here. But as soon as we got back, I had to go back because we ran out of gas. When I came back with the gas, I had to leave again almost immediately because a friend hurt himself.

Moxima, Xpanohax conthayitim. [SG, MULT]

yesterday Puerto_Libertad 3IO.AW.1SG.RLS.YO.go.MULT
Yesterday, I went to Puerto Libertad.

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MULT-form ≠ imperfective

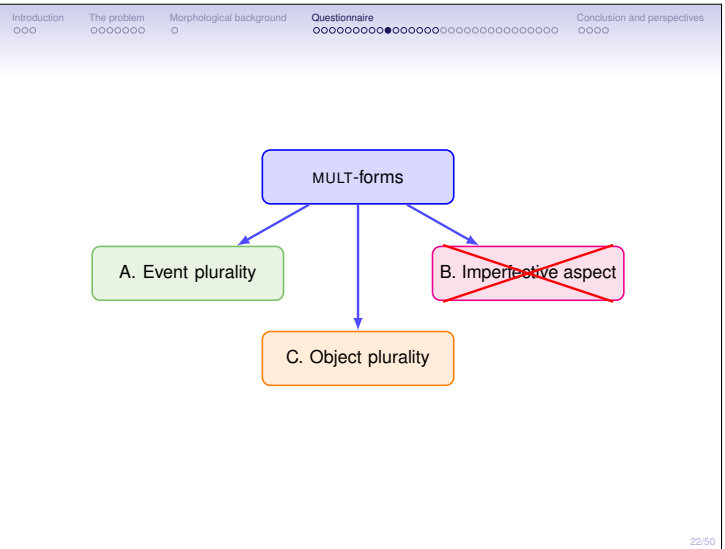
- The **MULT-form** can be used in a perfective context

(17) Context: Yesterday, Maria and Irma went to Puerto Libertad early in the morning and came back. But they had to go again in the evening.

Maria xah Irma xah Xpanohax contiyatolca. [PL, MULT]

Maria and Irma and Puerto_Libertad 3IO.AW.3;3.RLS.YO.go.MULT.PL
Maria and Irma went to Puerto Libertad (several times). [Questionnaire2FT4]

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MULT-forms require event plurality

- The multiple form expresses multiple events (running events in 18)

(18) Hoyacj quih cōipanoxxim iti, [SG, MULT]

1POS.brother DEF 3IO.3POS.NMLZ.OBL.run.MULT [3POS.]on
 hamac cánoj quih iicot cōyoocim.
 fire NMLZ.SUJ.roar DEF [3POS.]between 3IO.RLYO.cut
While my brother was running (here and there), the light went out.
 [EDSEI27NOV2017DRPM, EDSEI29NOV2017GH, elicitation]
 Context 1: Yesterday my brother ran in a race from point A to B. While he was running, the light went out. FALSE
 Context 2: Yesterday my brother did a scavenger hunt with other children. While he was playing the light went out. TRUE

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MULT-forms require event plurality

- The multiple form expresses multiple events (running events in 18)

(19) Hoyácalcam quih cōipancoxica iti, [PL, MULT]

1POS.brother.PL DEF 3IO.3POS.NMLZ.OBL.run.MULT.PL [3POS.]on
 hamac cánoj quih iicot cōyoocim.
 fire NMLZ.SUJ.roar DEF [3POS.]between 3IO.RLYO.cut
While my brothers were running, the light went out. [Questionnaire2FT4, elicitation]
 Context 1: Yesterday my brothers ran in a race from point A to B. While they were running, the light went out. FALSE
 Context 2: Yesterday my brothers did a scavenger hunt with other children. While they were playing the light went out. TRUE

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MULT-forms require event plurality

- MULT-forms require a plurality of events

(20) Maria quih hant ifii coox cah x, [SG, MULT]
 Maria DEF NMLZ.OBL.be.morning every DEF.FOC UNSPEC.TIME
 iglesia cap **contiyatim**.
 church DEF RLYO.go.MULT
Every morning, Maria went to church. [EDSEI27NOV2017DRPM, elicitation]
 Context 1: María died last year. All her life, she went to church
 once per day. FALSE
 Context 2: María died last year. All her life, she went to church
 several times per day. TRUE

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MULT-forms require event plurality

(21) Context: María and Irma died last year. All their life, they went
 to church several times per day together.
 Maria xah Irma xah hant ifii coox cah x, [PL, MULT]
 María and Irma and NMLZ.OBL.be.morning every DEF.FOC UNSPEC.TIME
 iglesia cap contiyat / **contiyatolca**.
 church DEF RLYO.go.PL RLYO.go.MULT.PL
Every morning, Maria and Irma went to church. [elicitation]
 Context 1: María and Irma died last year. All their life, they went
 to church once every day together. FALSE
 Context 2: María and Irma died last year. All her life, she went
 to church several times per day together. TRUE

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MULT-form does not mark object plurality

- Singular object can occur with MULT-forms as long as the context provides a plurality of events

(22) Context: Yesterday, I ate the orange you gave me
 segment-by-segment.
 Moxima sahmees hipquij ih-yo-**ohitim**. [SG, MULT]
 yesterday orange DEM.SG 1SG-RLS.YO-eat
Yesterday, I ate this orange. [EDSEI14OCT2018DRPM2]

(23) Context: Yesterday, we shared the orange you gave me and ate
 it segment-by-segment.
 Moxima sahmees hipquij ha-yo-**itolca**. [PL, MULT]
 yesterday orange DEM.SG 1PL-RLS.YO-eat
Yesterday, we ate this orange. [EDSEI14OCT2018DRPM2]

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  graph TD
    A[MULT-forms] --> B[A. Event plurality]
    A --> C[B. Imperfective aspect]
    A --> D[C. Object plurality]
    style C stroke:#f00,stroke-width:4px
  
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Part 2: profile of pluractionality in Seri

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Profile of pluractionality in Seri

- MULT-forms are markers of event plurality
- Markers of event plurality are not a semantically-homogeneous class (Dressler, 1968; Cusic, 1981; Xrakovskij, 1997; Yu, 2003; Laca, 2006; Wood, 2007; Bertinetto and Lenci, 2012)
- We describe the semantic profile of the MULT-category against the backdrop of event plurality markers cross-linguistically:
 - Exact cardinality expressions do not count event iterations (e.g. adverbs, cardinal arguments) as in e.g. Chechen (Yu, 2003)
 - No multiplication effect for singular indefinites as in e.g. West Greenlandic (Van Geenhoven, 2005)
 - The plurality of events can be distributed over times and/or participants

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Background on distributive dependencies

- We compare singular and plural subject MULT-forms with respect to the distributive dependencies they allow
- In this talk, we present distribution over time only and participants only, in intransitive constructions

- Controlling for/Blocking distribution over times is difficult.
- We constructed scenarios that forced a simultaneous reading:
 - statives (trees grow - no temporal change)
 - concerted action (crossing a brook on different planks at the same time)
- In these cases distribution is necessarily over arguments BUT ALSO in space (trees here and there, crossing at the same time at different points).

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Distributive dependencies with sg. MULT (intransitives)

- Distribution over time only is possible

(30) Context: Last year, Teresa went to year once every day (not more) to pray for her sick child.

Hant hino coofin cap Teresa quih iglesia cap **contiyatim**.
 last year Teresa DEF church DEF 3IO.AW.RLS.YO.go.MULT
Last year, Teresa went to church. [EDSEI27OCT2018DRPM.GH.ATHFLKPH, elicitation]

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Distributive dependencies with sg. MULT (intransitives)

- Distribution over singular subject participant only is not testable
- Distribution over time + participant is possible

(31) Context: I'm invisible and I wash the table little by little, taking break. You see it happen.

Hehe iti icoohitim quih yopaaisx
 wood 3POSS.on 3POS:[OBL.NMLZ:]UNSP.SBJ:UNSP.OBJ:eat:MULT DEF.FLX RLS.YO.clean
 / **yopaaaxim**.
 RLS.YO.clean.MULT
The table is clean. / The table is becoming clean. [EDSEI29NOV2017DRPM, Questionnaire2FT4, elicitation]

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Distributive dependencies with MULT forms, summary

		sg. MULT	pl. MULT
INTR.	dist. over time only	✓	
	dist. over ptcp only	n.a.	

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Distributive dependencies with pl. MULT (intransitives)

- Distribute over times only is enough to license MULT.PL

(32) Context: The women crossed the arroyo together, various times. (source [EDSEIFEB2017DRPM, elicitation])

Cmajic quih hant ipzx com imac **cōyatooquelam**.
 woman.PL DEF arroyo DEF 3POS.middle 3IO.RLS.YO.cross.MULT.PL
The women crossed the arroyo.

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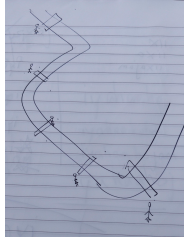
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Distributive dependencies with pl. MULT (intransitives)

- Distribution over participants only is possible (if they go in different directions)

(33) Context: The women were on different sides of the arroyo, they all had a phone and crossed at the same time once.

Cmajic quih hant ipzx com imac
 woman.PL DEF arroyo DEF 3POS.middle
cōyatooquelam.
 3IO.RLS.YO.cross.MULT.PL
The women crossed the arroyo. [EDSEIMAY2019DRPM.ATHF, elicitation]



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Summary

		sg. MULT	pl. MULT
INTR	dist. over time only	✓	✓
	dist. over ptcp only	n.a.	✓

- At first sight, singular and plural subject MULT-forms might seem to lexicalize different pluractional operators/features
 - Singular subject MULT-forms require distribution over times
 - Plural subject MULT-forms require distribution over times OR over arguments
- But in fact, these differences are superficial: the consequence of real-world limitations

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Conclusion

- MULT-forms mark pluractionality: not imperfective, not object plurality
- Pluractional forms in Seri have the following profile
 - exact cardinality expressions do not count event iterations
 - no multiplication of singular indefinites
 - they take scope under time adverbials
- Although singular & plural subject MULT-forms appear to have different profiles, they are the same: they require distribution over time or over participants
- We are elaborating a questionnaire meant to help diagnose and profile pluractionals across languages Vander Kloek 2014; Moore et al. 2015
- Pluractionals differ on many more parameters (effect of NP syntax on distribution possibilities, requirement for temporal gaps, ...)

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Perspectives

- This work forms the basis to explore the effect of the syntax of DPs on distribution possibilities
 - The type of phrase contributing participants for the MULT-form to distributive over

(34) Cardinalized subjects vs other subjects

a. *Haxaca quih capxa haxc yomihtolca.
dog.PL DEF SBJ.NMLZ.three apart RLS.YO.die.MULT.PL
Int. 3 dogs died.

b.%Osa xah Zombi xah Oto xah haxc yomihtolca
Osa and Zombi and Oto and apart RLS.YO.die.MULT.PL
Osa, Zombi, and Oto died.

c. Haxaca pac haxc yomihtolca,
dog.PL INDEF.PL apart RLS.YO.die.MULT.PL
Dogs died.

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Perspectives

- This work forms the basis to explore the effect of the syntax of DPs on distribution possibilities
 - The syntactic position of the phrase contributing participants for the MULT-form to distributive over

(35) Subject vs object

a. *Haxaca quih capxa haxc yomihtolca.
dog.PL DEF SBJ.NMLZ.three apart RLS.YO.die.MULT.PL
Int. 3 dogs died.

b. Ziix caamjö quih haxaca quih capxa haxc
thing SBJ.NMLZ.hunt DEF dog.PL DEF SBJ.NMLZ.three apart
iyamihitim.
3;3.RLS.YO.CAUS.die.MULT
The hunter killed 3 dogs.

Note that one dog cannot be killed.MULT.

(36) *Ziix caamjö quih haxc quih tazo haxc iyamihitim.

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¡Haxahtipe!



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List of abbreviations

ABS	absolute	MULT	multiple
ART	article	NMLZ	nominalizer
AW	away	OBJ	object
CAUS	causative	OBL	oblique
DEF	definite	PASS	passive
DEM	demonstrative	PL	plural
FLX	flexible	POS	possessive
FOC	focus	RLS	realis
INDEF	indefinite	SG	singular
INF	infinitive	SUJ	subject
INTR	intransitive	TRNS	transitive
IO	indirect object	UNSPEC	unspecified