

Event plurality in Seri

Patricia Cabredo Hofherr, Jérémy Pasquereau & Carolyn O'Meara

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Introduction

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



Figure: The Seri region in Mexico (Encyclopædia Britannica, Inc.)

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

Methodology

- We mainly worked in the village of El Desemboque with 4-6 speakers (3 fieldtrips: Jan/Feb 2017, Nov/Dec 2017, April 2018)
- Elicitation (Matthewson, 2004) with Spanish as the contact language
- Attested examples from existing texts

Outline I

- 1 The problem: verbal form alternations in Seri
- 2 Background on Seri verb morphology
- 3 Verb forms of category 2 mark event plurality
- 4 Semantic profile of the pluractional marker
- 5 Conclusion

Outline I

- 1 The problem: verbal form alternations in Seri
 - Several forms for each verb
 - At least 2 categories
- 2 Background on Seri verb morphology
- 3 Verb forms of category 2 mark event plurality
- 4 Semantic profile of the pluractional marker
- 5 Conclusion

Verbs forms

- The majority of verb stems in Seri have at least 4 non predictable forms (some have fewer, some have more)
- (1)

Form A	Form B	Form C	Form D	
-panzx	-panozxim	-pancojc	-pancoxica	'run'
- The forms have been analyzed as encoding two meaningful categories in Marlett (2016)
 - ▶ category 1: subject number
 - ▶ category 2: event plurality / aspect / object number (Moser, 1961; Moser and Marlett, 2010; Marlett, 2016)
 - The pre-stem slots host a number of prefixes encoding other distinctions (e.g. person, realis/irrealis, ...) that do not interact with the choice of one form or the other

Category 1 = Subject number

singular subject		plural subject		'run'
Form A	Form B	Form C	Form D	
-panzx	-panozxim	-pancojc	-pancoxica	

- | | |
|--|--|
| <p>(3) I ran</p> <p>a. Moxima ihp-yo-panzx.</p> <p>b. Moxima ihp-yo-panozxim.
yesterday 1SG-REALIS.YO-run</p> <p>c.* Moxima ihp-yo-pancoj.</p> <p>d.* Moxima ihp-yo-pancoxica.</p> | <p>(4) We ran</p> <p>a. Moxima ha-yo-pancojc.</p> <p>b. Moxima ha-yo-pancoxica.
yesterday 1PL-REALIS.YO-run</p> <p>c.* Moxima ha-yo-panzx.</p> <p>d.* Moxima ha-yo-panozxim.</p> |
|--|--|

Category 2 = ?

Category 1: subject number	singular plural	Category 2	
		unmarked	marked
		-panzx	-panozxim
		-pancojc	-pancoxica

- Marlett 2016 analyses category 2 as **aspect** and with the values **perfective** and **imperfective**
- In earlier work Marlett analyses category 2 as **object number** and as **event number** with values **singular** and **plural** (Moser, 1961; Marlett, 1981, 2016)

What is the semantics of category 2 marked on the verb?

- We will use the provisional labels **unmarked** and **marked** (glossed MRK)

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On the morphology of these categories

- In many languages, meaning X ↔ exponent Y
- In Seri, this one-to-one relation does not hold
- Expression of these categories is extremely varied: suffix, infixes, and/or phonological alternations

FORM A	FORM B	FORM C	FORM D	GLOSS
-pim	-pim- tim	-pim- xam	-pim- lkam	'make leather sandals'
-apot	-apot- im	-apt	-apot- am	'pay'
-aaspoj	-aasipl	-atoosipl- oj	-atoosipl- oj	'write'
-azazin- ot	-azazjc	-azazj- oj	-azazjc	'weave'

- There are at 255 such inflectional classes (Baerman 2017)
- As far as we know, inflectional classes are not predictable

Paradigmatic reality of category 2 forms

- Following Marlett 2016; Baerman 2017, we hypothesize that Seri verb stems lexicalize 2 categories:
 - ▶ Category 1: subject number [singular / plural]
 - ▶ Category 2: aspect/object/event number (Marlett, 2016) [unmarked / **marked**]
- **Marked** forms have a semantically constant meaning component in common
- The realization of this meaning component is to some extent governed by morphological regularities and, as far as we can tell, arbitrary to some extent (Baerman, 2017)

Claims of this talk

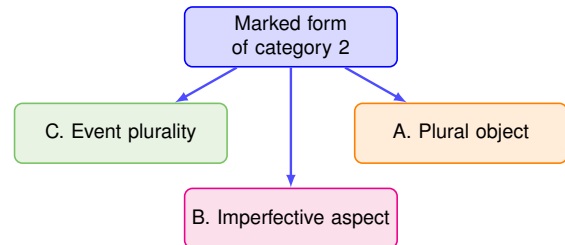
- Claim 1: The marked form of category 2 is best analysed as marking event plurality.
- Claim 2: The marked form of category 2 is a pluractional form.
- Claim 3: The pluractional semantics of the marked form can be frequentative or incremental, depending on the telicity of the underlying predicate.

Outline I

- 1 The problem: verbal form alternations in Seri
- 2 Background on Seri verb morphology
- 3 Verb forms of category 2 mark event plurality
 - Category 2 does not encode object number or aspect
 - Category 2 requires event plurality
 - Category 2 as a pluractional marker
- 4 Semantic profile of the pluractional marker
- 5 Conclusion

Alternative hypotheses

- In the literature, marked forms have been described as encoding three kinds of information



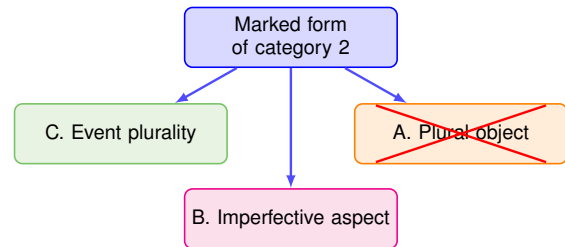
Marked form does not mark object number

- Plural object can occur with the unmarked category 2 value.

(7) Juan quih sahmees hizcoi **iyoohit** / iyoohitim.
 Juan ART.DEF.FLX orange DEM.PL 3;3.REALIS.YO.eat 3;3.REALIS.YO.eat.MRK
John ate those oranges. [EDSEIFEB2017DRPM, elicitation]

- Singular object can occur with the marked category 2 value.

(8) María quih hapaspoj iiqi icaaca
 María ART.DEF.FLX NMLZ.SUJ.PAS.write 3POS.towards NMLZ.OBL.ABS.POS.send
 z iyaaspoj / **iyaasipl.**
 ART.INDEF 3;3.REALIS.YO.write 3;3.REALIS.YO.write.MRK
María wrote a letter. [EDSEI27NOV2017DRPM, elicitation]



Marked form ≠ imperfective

- Marlett 2016: unmarked forms ~ perfective and marked forms ~ imperfective
- Cross-linguistically imperfective forms have 2 main sub-meanings (Comrie, 1976; Cover and Tonhauser, 2015):
 - ▶ habitual
 - ▶ continuous/iterative

• Claim: The distribution of the forms with marked category 2 is not the distribution observed for imperfective morphology cross-linguistically.

Marked form ≠ imperfective

Not habitual

- the **marked form** does not express habituality ...

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

María quih hant ifii coox cah x,
 María ART.DEF.FLX NMLZ.OBL.be.morning every ART.DEF.FOC UNSPEC.TIME

iglesia cap **contiya** / **#contiyatim.**
 church ART.DEF.standing REALIS.YO.go REALIS.YO.go.MRK

Every morning, María went to church. [EDSEI27NOV2017DRPM, elicitation]

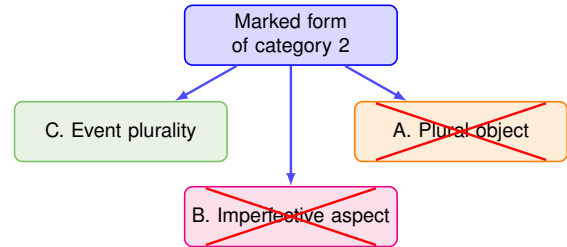
Marked form ≠ imperfective

Not continuous

- the **marked form** does not express a continuous event

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

Hoyacj quih cöipanzx / #cöipanozxm
 1POS.brother ART.DEF.FLX 3IO.3POS.NMLZ.OBL.run 3IO.3POS.NMLZ.OBL.run.MRK
 iti, hamac cánoj quih iicot cöyooctim.
 while fire NMLZ.SUJ.roar ART.DEF.FLX 3POS.among 3IO.REALIS.YO.cut
While my brother was running, the light went out. [EDSEI27NOV2017DRPM,
 EDSEI29NOV2017GH, elicitation]



Marked forms require event plurality

- The marked form expresses multiple running events

(11) Context: Yesterday my brother did a scavenger hunt with other children. While he was playing the light went out.

Hoyacj quih cöipanzx / cöipanozxm
 1POS.brother ART.DEF.FLX 3IO.3POS.NMLZ.OBL.run 3IO.3POS.NMLZ.OBL.run.MRK
 iti, hamac cánoj quih iicot cöyooctim.
 while fire NMLZ.SUJ.roar ART.DEF.FLX 3POS.among 3IO.REALIS.YO.cut
While my brother was running (here and there), the light went out.
 [EDSEI27NOV2017DRPM, EDSEI29NOV2017GH, elicitation]

Marked forms require event plurality

- Marked forms require a plurality of events

(12) a. Juan quih icoozim ccooo tintica iti
 Juan ART.DEF.FLX NMLZ.OBL.warm NMLZ.SUJ.all ART.DEF.AW 3POS.in
 hehean com ano coyom / coyoomam.
 desert ART.DEF.lying 3POS.in 3IO.REALIS.YO.lying 3IO.REALIS.YO.lying.MRK
Juan slept in the desert all summer. [SC on marked form: he does
 not sleep there every night]

b. Yaacö hamasol quih ihaapl ccooo tintica
 bear ART.DEF.FLX NMLZ.OBL.cold NMLZ.SUJ.all ART.DEF.AW
 iti zaaj z ano coyom / #coyoomam.
 3POS.in cave ART.INDEF 3POS.in 3IO.REALIS.YO.lying 3IO.REALIS.YO.lying.MRK
The bear slept in a cave all winter. [EDSEIFEB2017DRPM, elicitation]

Typical properties of pluractional markers cross-linguistically

- Category 2 marking displays properties observed for pluractional markers in other languages
 - Exact cardinality expressions do not count event iterations (e.g. adverbs, cardinal arguments) (Yu, 2003; van Geenhoven, 2005; Laca, 2006)
 - No multiplication effect for singular indefinites (van Geenhoven, 2005; Laca, 2006)

Exact cardinality expressions do not count event iterations

- The exact cardinality expression in (13) is considered odd with the marked form *ihexelim* 'buy' (cf van Geenhoven 2005; Yu 2003; Laca 2006)

(13) Icatoomec hino coofin tintica Juan quih sahmees
 week 1POS.to NMLZ.SUJ.happen ART.DEF.AW Juan ART.DEF.FLX orange
 pac ihexl / #ihexelim isnaap yoozoj.
 ART.INDEF.PL INF.TRNS.buy INF.TRNS.buy.MRK REALIS.YO.6.times
Last week, Juan bought oranges 6 times. [SC on marked form: It's
 weird. It sounds like he bought oranges six times various times.]
 [EDSEI21ABR2018DRPM, elicitation]

Verb forms of category 2 mark event plurality Category 2 as a pluractional marker

No multiplication effect for singular indefinites

- Event plurality expressed by pluractional markers does not multiply indefinite singulars (van Geenhoven, 2005; Laca, 2006)
 - In (14) the marked form of *-aaspoj* 'write' does not multiply the indefinite singular object *hapaspoj iiqui icaaca zo* 'a letter'.
 - Interpretation: the same letter is written over several occasions.

(14) Maria quih hapaspoj iiqui icaaca
 María ART.DEF.FLX NMLZ.SUJ.PAS.write 3POS.towards NMLZ.OBL.ABS.POS.send
 Z **iyaasipl.** [EDSEI27NOV2017DRPM, elicitation]
 ART.INDEF 3;3.REALIS.YO.write.MRK
Maria wrote a letter. [SC: She didn't finish it, came back to write it.]

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Verb forms of category 2 mark event plurality Category 2 as a pluractional marker

Summary

- Claim 1: Category 2 marks event plurality
 - not imperfective aspect (no continuous readings, no habitual readings)
 - licensed in contexts with several events
- Claim 2: Category 2 has properties of other pluractional markers
 - no multiplication effect for singular indefinite
 - exact cardinality expressions do not count iterations

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Semantic profile of the pluractional marker

Outline I

- The problem: verbal form alternations in Seri
- Background on Seri verb morphology
- Verb forms of category 2 mark event plurality
- Semantic profile of the pluractional marker**
 - Distributive dependencies
 - Frequentative and incremental readings
- Conclusion

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Semantic profile of the pluractional marker

What kind of pluractional?

- Seri category 2 marked forms
 - allow distributive dependencies between the plurality of events and plural arguments (unlike Hoan markers described in Collins 2001)
 - allow distribution of event plurality over locations
 - disallow continuative readings (unlike e.g. Chechen pluractional (Yu, 2003) see bear example (12b).
 - disallow distributive dependencies between the plurality of events and occasions (unlike e.g. *keep+Ving Marie kept going to church.*)
- Seri category 2 marked forms convey frequentative and incremental event plurality (comparable to *ir/andar + gerund* periphrases in Spanish (Laca, 2006)) (claim 3)

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Semantic profile of the pluractional marker Distributive dependencies

Allows distributive dependencies: event plurality ↔ plural arguments

- The marked form allows an interpretation with event plurality distributed to individuals making up a plural argument
- Like *keep + Ving* (the guests kept arriving) unlike other event plurality markers (e.g. Collins 2001)

(15) Context: I hugged two children. I hugged the first one only once, and I hugged the second one once too. [EDSEI23NOV2017DRPM, elicitation]

a. Xicaquiziil coi isoj **cohyapxazi.**
 children ART.DEF.PL 3POS.body 3IO.1.REALIS.YO.cover
I hugged the children (lit. I covered the children's body).

b. Xicaquiziil coi isoj **cohyapxazalim.**
 children ART.DEF.PL 3POS.body 3IO.1.REALIS.YO.cover.MRK
I hugged the children.

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Semantic profile of the pluractional marker Distributive dependencies

Allows distributive dependencies: event plurality ↔ plural arguments

- If there is just one collective hugging event, the marked form *isoj cō-apxazalim* is not felicitous.

(16) Context: I hugged two children at the same time, just once. [EDSEI23NOV2017DRPM, elicitation]

a. Xicaquiziil coi isoj **cohyapxazi.**
 children ART.DEF.PL 3POS.body 3IO.1.REALIS.YO.cover
I hugged the children (lit. I covered the children's body).

b. #Xicaquiziil coi isoj **cohyapxazalim.**
 children ART.DEF.PL 3POS.body 3IO.1.REALIS.YO.cover.MRK

Cabredo, Pasquereau & O'Meara Event plurality in Seri Toronto, 4 May 2018 30 / 43

Semantic profile of the pluractional marker Distributive dependencies

Allows distributive dependencies: event plurality ↔ locations

- The marked form is not felicitous because the event just happened in one location/time

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

Hoyacj quih coipanzx iti, hamac cánoj
 1POS.brother ART.DEF.FLX 3IO.3POS.NMLZ.OBL.run while fire NMLZ.SUJ.roar
 quih iicot cōyooc̄tim / #cōyooc̄loj.
 ART.DEF.FLX 3POS.between 3IO.REALIS.YO.cut 3IO.REALIS.YO.cut.MRK
While my brother was running, the light went out. [EDSEI29NOV2017OP, EDSEI29NOV2017GH, elicitation]

Cabredo, Pasquereau & O'Meara Event plurality in Seri Toronto, 4 May 2018 31 / 43

Semantic profile of the pluractional marker Distributive dependencies

Allows distributive dependencies: event plurality ↔ locations

- The marked form is possible, the light went out in all the houses in the village

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

Hoyacj quih coipanzx iti, hamac cánoj
 1POS.brother ART.DEF.FLX 3IO.3POS.NMLZ.OBL.run while fire NMLZ.SUJ.roar
 quih iicot cōyooc̄tim / cōyooc̄loj.
 ART.DEF.FLX 3POS.between 3IO.REALIS.YO.cut 3IO.REALIS.YO.cut.MRK
While my brother was running, the light went out. [EDSEI29NOV2017OP, EDSEI29NOV2017GH, elicitation]

Cabredo, Pasquereau & O'Meara Event plurality in Seri Toronto, 4 May 2018 32 / 43

Semantic profile of the pluractional marker Distributive dependencies

Disallows distributive dependencies: event plurality ↔ occasions

- The marked form is not licensed by the overall plurality of events of María's going to church (over the course of her life)

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

María quih hant ifii coox cah x,
 María ART.DEF.FLX NMLZ.OBL.be.morning every ART.DEF.FOC UNSPEC.TIME
 iglesia cap contiya / #contiyatim.
 church ART.DEF.stand REALIS.YO.go REALIS.YO.go.MRK
Every morning, María went to church. [EDSEI27NOV2017DRPM, elicitation]

Cabredo, Pasquereau & O'Meara Event plurality in Seri Toronto, 4 May 2018 33 / 43

Semantic profile of the pluractional marker Distributive dependencies

Disallows distributive dependencies: event plurality ↔ occasions

- The marked form expresses event plurality on each occasion

(20) Context: María died last year. All her life, she went to church several times every day.

María quih hant ifii coox cah x,
 María ART.DEF.FLX NMLZ.OBL.be.morning every ART.DEF.FOC UNSPEC.TIME
 iglesia cap contiya / contiyatim.
 church ART.DEF.stand REALIS.YO.go REALIS.YO.go.MRK
Every morning, María went to church. [EDSEI27NOV2017DRPM, elicitation]

Cabredo, Pasquereau & O'Meara Event plurality in Seri Toronto, 4 May 2018 34 / 43

Semantic profile of the pluractional marker Frequentative and incremental readings

Frequentative and incremental readings

- Category 2 marks frequentative and incremental event plurality (comparable to *ir/andar* + gerund periphrases in Spanish, described in Laca 2006)
 - allows frequentative and incremental readings
 - frequentative and incremental readings correlate with atelic and telic construal of the underlying predicates (parallels with the semantics described for movement periphrases in Romance in Laca 2006)

Cabredo, Pasquereau & O'Meara Event plurality in Seri Toronto, 4 May 2018 35 / 43

Semantic profile of the pluractional marker Frequentative and incremental readings

Effect of telicity

- In Spanish, telicity of the auxiliary (atelic *andar* vs. telic *ir*) correlates with frequentative (on-off) vs. incremental interpretation. (Laca, 2006)
- In Seri the telicity of the embedded predicate has a similar effect
 - the marked form of an **atelic** predicate, e.g. *-iihtim* 'be (in location)' conveys that the event is intermittent and undirected

(21) Pancho quih hehean com ah ano
 Pancho ART.DEF.FLX desert ART.DEF.lying ART.DEF.FOC 3POS.in
 yiihtim.
 REALIS.YO.be.MRK
Pancho walks around in the desert. [EDSEI23NOV2017DRPM, elicitation]

Cabredo, Pasquereau & O'Meara Event plurality in Seri Toronto, 4 May 2018 36 / 43

Semantic profile of the pluractional marker	Frequentative and incremental readings	Conclusion
<h2>Effect of telicity</h2> <ul style="list-style-type: none"> The marked form of a telic predicate, e.g. <i>hapaspoj iiqi icaaca z -aasip/</i> 'write a letter' conveys that the event is incremental and directed <p>(22) Maria quih hapaspoj iiqi icaaca z María ART.DEF.FLX NMLZ.SUJ.PAS.write 3POS.to NMLZ.OBL.ABS.POS.send ART.INDEF iyaasipl. [EDSEI27NOV2017DRPM, elicitation] 3;3.REALIS.YO.write.MRK <i>Maria wrote a letter.</i> [SC: She didn't finish it, came back to write it.]</p>		<h2>Outline I</h2> <ol style="list-style-type: none"> The problem: verbal form alternations in Seri Background on Seri verb morphology Verb forms of category 2 mark event plurality Semantic profile of the pluractional marker Conclusion
Cabredo, Pasquereau & O'Meara	Event plurality in Seri	Toronto, 4 May 2018 37 / 43
Cabredo, Pasquereau & O'Meara	Event plurality in Seri	Toronto, 4 May 2018 38 / 43

Conclusion	Conclusion	
<h2>Summary of what we've shown</h2> <ul style="list-style-type: none"> Marked forms mark event plurality <ul style="list-style-type: none"> not imperfective, not object plurality single event per occasion does not license marked form Marked forms are pluractional forms <ul style="list-style-type: none"> exact cardinality expressions do not count event iterations no multiplication of singular indefinites Pluractional forms in Seri have the following profile <ul style="list-style-type: none"> they do not allow continuative readings they distribute over plural arguments and locations, but not occasions they have an incremental or frequentative semantics depending on the telicity of the unmarked predicate 	<h2>Outstanding issues and further research</h2> <ul style="list-style-type: none"> states with marked forms: what semantics? some verbs have more than four forms check verbs with comparable contexts (iteration, distribution over locations/arguments/ times) similarities between nominal and verbal plurality? is the distribution of category 2 suffixes really completely arbitrary? 	
Cabredo, Pasquereau & O'Meara	Event plurality in Seri	Toronto, 4 May 2018 39 / 43
Cabredo, Pasquereau & O'Meara	Event plurality in Seri	Toronto, 4 May 2018 40 / 43

Conclusion	Conclusion	
<h2>¡Haxahtiipe!</h2> <p>We thank the Seri speakers for their collaboration and support. This work has been funded by the Arts & Humanities Research Council (UK) under grant AH/P002471/1 ('Seri verbs') awarded to Matthew Baerman. Their support is gratefully acknowledged.</p>	<h2>References</h2> <p>Baerman, M. (2017). Seri verb classes: morphosyntactic motivation and morphological autonomy. <i>Language</i> 92(4), 792–823.</p> <p>Collins, C. (2001). Aspects of plurality in Hoan. <i>Language</i>, 456–476.</p> <p>Comrie, B. (1976). <i>Aspect</i>. Cambridge University Press.</p> <p>Cover, R. T. and J. Tonhauser (2015). Theories of meaning in the field: temporal and aspectual reference. In R. Bochnak and L. Matthewson (Eds.), <i>Methodologies in semantic fieldwork</i>. Oxford University Press.</p> <p>Laca, B. (2006). Indefinites, quantifiers and pluractionals: what scope effects tell us about event pluralities. In S. Vogeleer and L. Tasmowski (Eds.), <i>Non-definiteness and plurality</i>, pp. 191–217. Amsterdam: John Benjamins.</p> <p>Marlett, S. A. (1981). <i>The structure of Seri</i>. Ph. D. thesis, University of San Diego.</p> <p>Marlett, S. A. (2016). Cmique litom: the Seri language. Unpublished grammar (2016 draft).</p> <p>Matthewson, L. (2004). On the methodology of semantic fieldwork. <i>International journal of American linguistics</i> 70(4), 369–415.</p> <p>Moser, E. (1961). Number in Seri verbs. Master's thesis, University of Pennsylvania.</p> <p>Moser, M. B. and S. A. Marlett (2010). <i>Comcaac quih yaza quih hant ihip hac = Diccionario seri-español-inglés</i>. Colección Bicentenario. Mexico City and Sonora: Plaza y Valdés editores and Universidad de Sonora.</p> <p>van Geenhoven (2005). <i>Perspectives on aspect</i>, Chapter Atelicity, pluractionality, and adverbial quantification. Springer.</p> <p>Yu, A. (2003). Pluractionality in Chechen. <i>Natural Language Semantics</i> (11), 289–321.</p>	
Cabredo, Pasquereau & O'Meara	Event plurality in Seri	Toronto, 4 May 2018 41 / 43
Cabredo, Pasquereau & O'Meara	Event plurality in Seri	Toronto, 4 May 2018 42 / 43

List of abbreviations

ABS	absolute	MRK	marked form
ART	article	NMLZ	nominalizer
AW	away	OBL	oblique
DEF	definite	PAS	passive
DEM	demonstrative	PL	plural
FLX	flexible	POS	possessive
FOC	focus	SUJ	subject
INDEF	indefinite	TRNS	transitive
INF	infinitive	UNSPEC	unspecified
IO	indirect object		