Morphosyntactic variation is preserved, not regularized, when an optional form is rare

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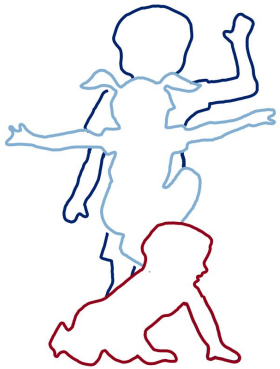


Variation and change

Weinreich, Labov, and Herzog (1968): “not all variability and heterogeneity in language structure involves change, but all changes involve variability and heterogeneity”.

If there is change, there is variation; but variation does not necessarily entail change

Acquisition of Variation

Children regularize (change) unpredictable variation

1. Learning a pidgin or creole (e.g. Sankoff 1979)
2. Learning from late learners (Mayberry & Eichen 1991, Newport & Supalla 1980)
3. Experiments with natural and artificial language show regularization (e.g. Singleton & Newport 2004, Hudson-Kam & Newport 2005)

Children learn and match sociolinguistic variation

1. Children have mastered articulatory constraints on -t/-d deletion early (Labov, 1989; Roberts 1997; Smith et al. 2009)
2. Constraints on word final s-lenition in Spanish (Miller, 2013)

Why do children sometimes regularize variation and other times learn it?

Why are some variants stable while others are targets of change?

Differences in the input

	Sociolinguistic (learned)	Regularization (changed)
Variation in the community	Shared	Noisy
Conditioning environment	Predictable	Not predictable
Speaker fluency	More likely	Less likely
Form of variants	Optional	Alternating

Form of ‘stable’ variants

Phonological Variation
Various deletion or lenition

-t/-d deletion in English
-ing/-in
-s lenition

Morphosyntactic Variation
Various presence v absence

Presence absence of a morpheme
Plural, possessive, 3rd singular (AAVE)
Copula (AAVE)
Subject pronoun expression in Romance langs

Presence or lack of agreement
We was for we were

Two overt forms varying
Que vs. de que (Mollica, 1991)
Nous vs. nous autres (Blondeau 2001)
Is vs. ‘s (MacKenzie 2013)

Optional v Alternating in Natural Language Typology

Optional and alternating case marking: Typology and diachrony (Chappell and Verstraete 2019)

- Argue that optional marking systems are typologically more common than alternating.

Chappell and Verstraete (2019)

TABLE 3 Functions and distributions of optional and alternating marking

Optional A marking		**Optional O marking**	
Distribution	Not rare	Distribution	Not rare
Function	• Focus and/or unexpectedness • Degree of agentivity	Function	• Definiteness, givenness • Topicality • Degree of affectedness

Chappell and Verstraete (2019)

TABLE 3 Functions and distributions of optional and alternating marking

Optional A marking		**Optional O marking**	
Distribution	Not rare	Distribution	Not rare
Function	• Focus and/or unexpectedness • Degree of agentivity	Function	• Definiteness, givenness • Topicality • Degree of affectedness
Alternating A marking		**Alternating O marking**	
Distribution	Very rare	Distribution	Relatively rare
Function	• Focus, potency, volitionality	Function	• Definiteness • Degree of affectedness

Background summary and proposal

- Morphological systems containing unconditioned variation often evolve, becoming more regular over time
- But not all such variation is regularized.
- Optional marking systems are common and do not appear to undergo rapid regularization over time.
- While social or grammatical context may license probabilistic variation in these systems (e.g. Labov, 2011) **we propose optionality itself may play a role.**

Experiment 1

*Is an optional plural marking system **more stable*** than one with two alternating forms?*

*more likely to be regularized

Experiment 1

Participants

- 60 adults on prolific
- Native english speakers ages 18-46

Conditions

Experiment	Condition	Singular	Plural	
			67%	*33%*
1	Optional	−∅	-ka	−∅
	Alternating	−∅	-ka	-po
	Alternating (same as singular)	-po	-ka	-po

Experiment 1 - language

ITEMS






VERB

gentif

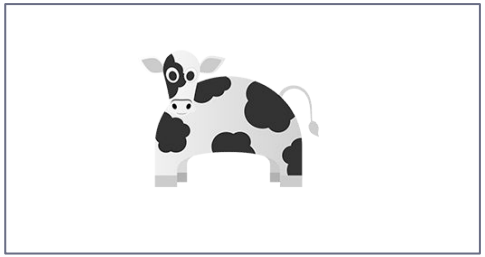
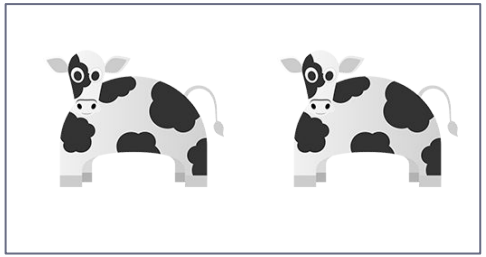
NOUN

mawg
spad
geed
clidam
daffin
flugat

PLURAL MARKER

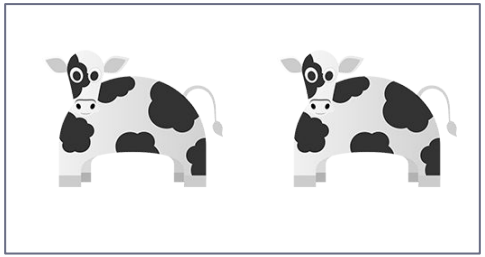
-ø
-ka
-po

Experiment 1 - exposure

	SINGULAR	PLURAL	
			
OPTIONAL	*gentif mawg*	*gentif mawg*	*gentif mawg**-ka***
ALTERNATING	*gentif mawg*	*gentif mawg**-po***	*gentif mawg**-ka***
ALTERNATING (same as singular)	*gentif mawg**-po***	*gentif mawg**-po***	*gentif mawg**-ka***

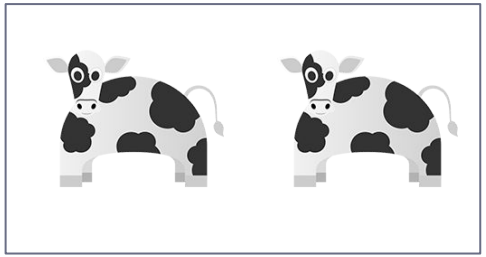
Experiment 1 - test

Optional



gentif mawg *gentif mawg* ka

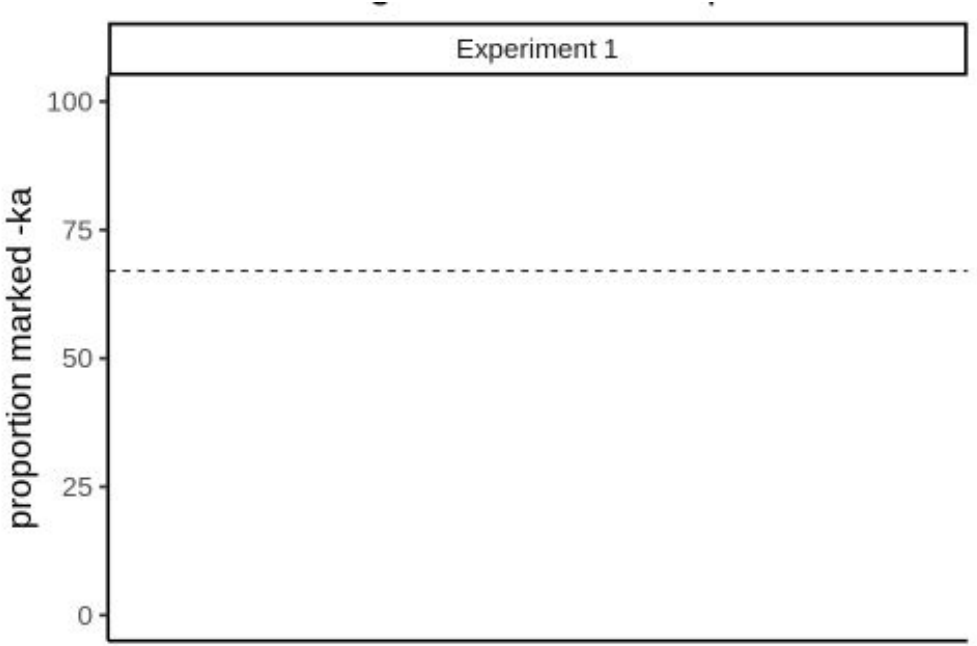
Alternating



gentif mawg po *gentif mawg* ka

Experiment 1 - results

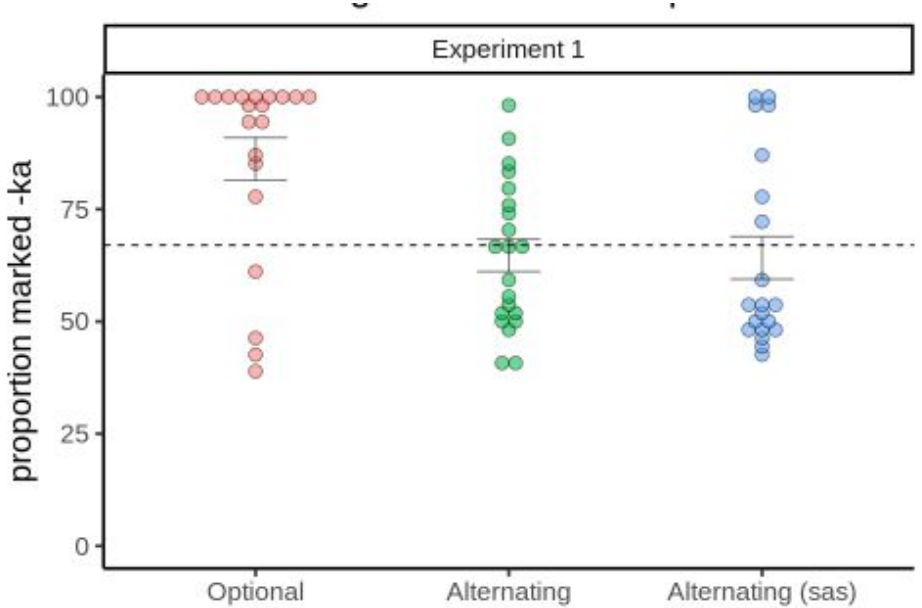
Prediction
Optional marking will be more stable, so participants will regularize more in the alternating conditions



Experiment 1 - results

Prediction
Optional marking will be more stable, so participants will regularize more in the alternating conditions

Result
The opposite!



Why?

- Contrary to our prediction, the optional learners regularized significantly more.
- Perhaps the frequency of the optional form plays a role?
- Persistent variable forms appear more rarely in their optional contexts, and rates of language change tend to slow down as a form becomes more sparse (e.g. Song 1975, Taliamonte & Smith, 2005; Kroch, 1989)

Experiment 2

Participants

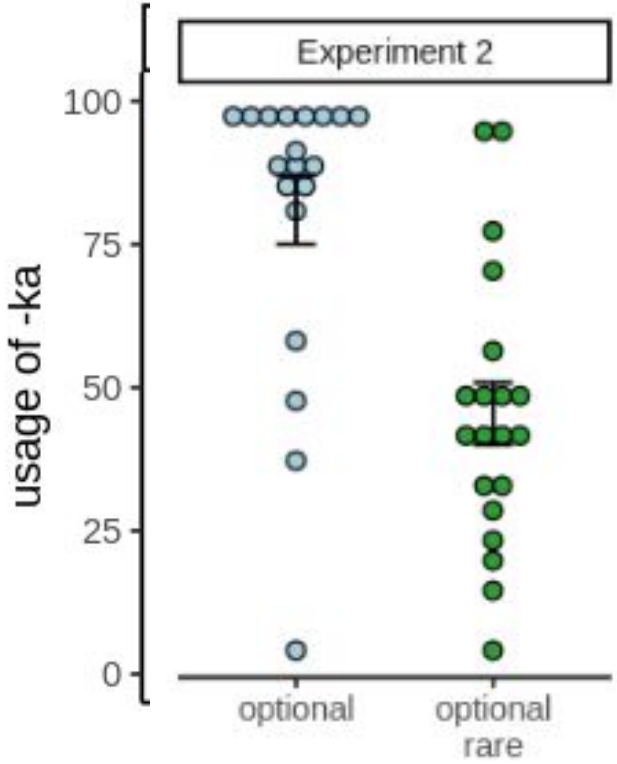
- 40 adults on prolific
- Native english speakers ages 18-46

Experiment	Condition	Singular	Plural	
			67%	*33%*
1	Optional	−ø	-ka	−ø
	Alternating	−ø	-ka	-po
	Alternating (same as singular)	-po	-ka	-po
2	Optional frequent	−ø	-ka	−ø
	Optional rare	−ø	−ø	-ka

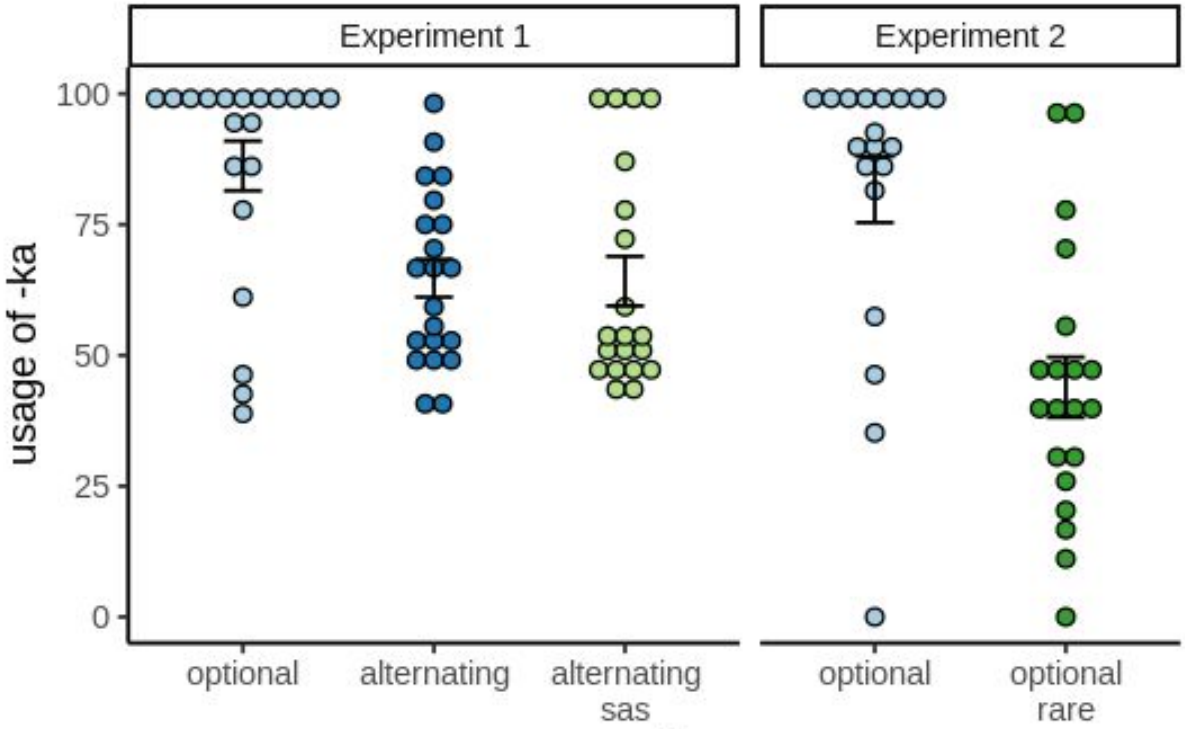
Experiment 2 - results

Prediction
Optional marking used rarely will be more stable, so participants will regularize less in optional rare

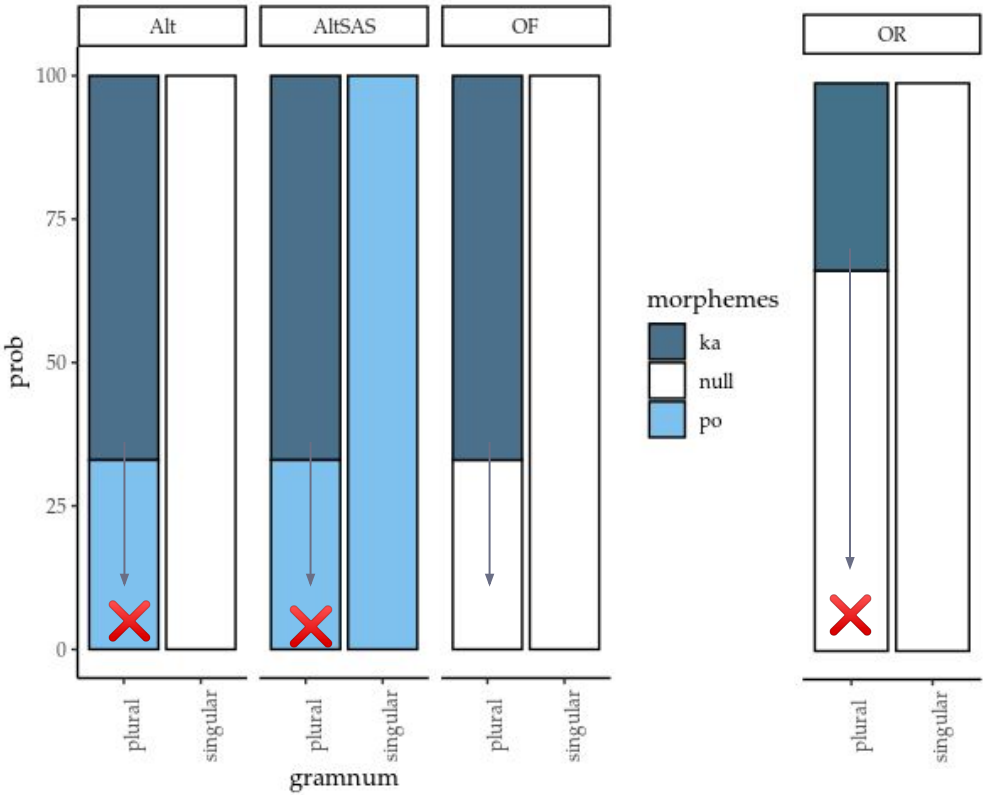
Result
Yes!



Exps 1 and 2 together



But, why?


Alt
AltSAS
OF
OR
100
75
50
25
0
prob
plural
singular
gramnum
morphemes
ka
null
po

Are null forms handled differently?

Alternating forms

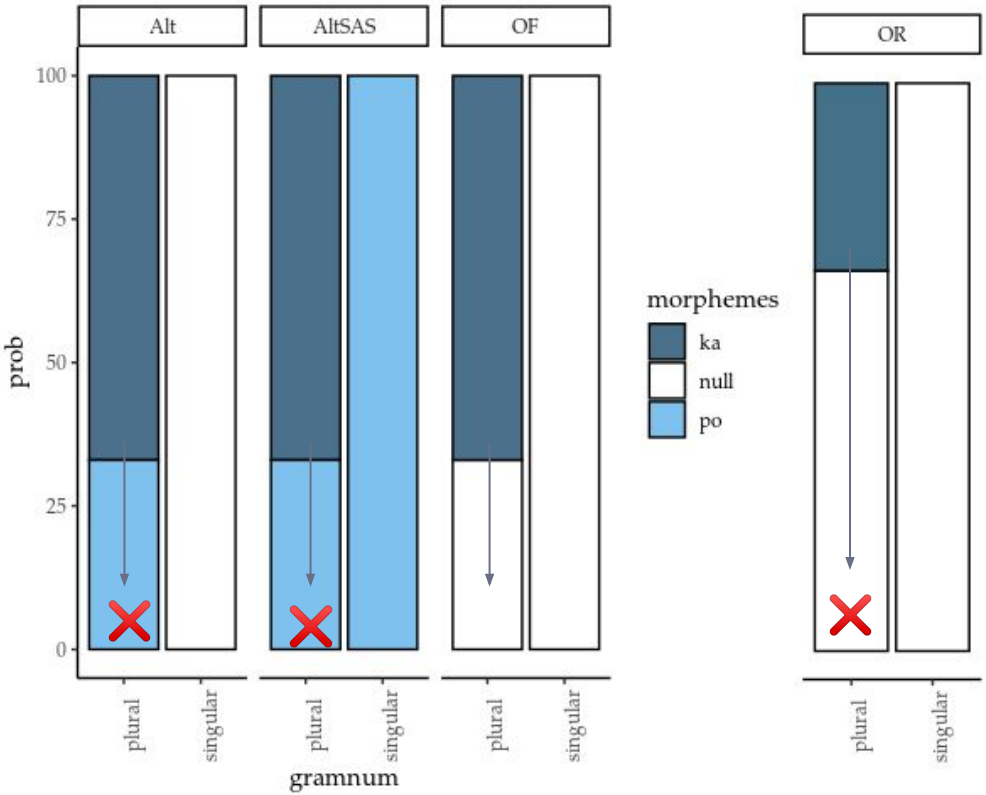
1. Two realizations of the same morpheme
2. Two different morphemes (or words)

Optional forms

“what’s in a null?”

1. Not expressed in the syntax
2. Expressed in syntax, but not occuring
3. Null allomorph
4. Not present phonologically
5. Phonologically present, but neutralized

What null is depends …



Conclusion

- Experiments should focus on both what leads languages to change, but also what leads to stability
- Null forms might play an important role in stable variation, and this may be derived from what a null can be
- Do learners presuppose null can be many things? Or do they need to learn it from their language experience? If so, how?

Thanks

To the Language and Cognition lab, Language Evolution lab, and the Tamminga and Embick labs for helpful comments. And especially to Laurel Mackenzie, Meredith Tamminga, Charles Yang and Dave embick for helping to shape the way we think about variation and null forms in language.

Questions