## The limits of variation: Separable prefixes in Heritage German

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December 10, 2020

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## Overview

- Big picture Q: What tools are at our disposal to model syntactic change and variation?
- Answer: A variant of generative grammar, known as exoskeletal grammar (XS-grammar), is capable of capturing the restrictive nature of language change.
- Empirical proof of concept: Here we take a closer look at separable prefixes in a (moribund) variety of Heritage German (Gottscheerisch)
- NB: This work stems from ongoing collaborative work with Andrew Hoffman (PSU)


## Why bother with formal approaches?

What is a generative grammar?

- A generative grammar is a formal system,
- which is used for carrying out the inference of theorems from axioms.
- This formal system leads to explicit modeling and prediction.

What's at stake here?

- The combination of abstract principles/concepts with explicit data (ex. imaginary numbers used in calculating electrical current)
- This provides a way to distinguish between stored information and computation


## Restricting syntactic change \& variation

## Potential advantages:

- Language change (and acquisition) takes place via conservative, incremental steps (Walkden, 2014; Lightfoot, 2020; Westergaard, 2019, to appear)
- Generative grammars set the outermost boundaries of possible human grammars (Lidz \& Gagliardi, 2015; Yang, 2016; 2018)
- Provide a (internally) consistent, falsifiable system that can test hypotheses.


## Gottscheerisch

- Gottscheerisch is a Southern Bavarian dialect of Kočevje (Gottschee) in southern Slovenia.
- Gottscheerisch shares many features common to other German dialects of the area, e.g. Tyrolian \& Carinthian.
- It is currently spoken primarily in diaspora in Austria, the US, and Canada.
- Today Gottscheerisch is a moribund heritage language, with only a limited number of speakers that remain.


## (negative) imperatives in Gottscheerisch

(1) Gottscheerisch imperatives
a. Et graif dos ūn.

NEG touch.IMP that PRT
'Don't touch that.'
b. Aüf-šraib mər's af a tsēdl.

PRT-write.IMP me=it on a piece.of.paper
'Write it down on a piece of paper for me.'
c. Et vərliəž də höffnünkh.

NEG lose.IMP the hope
'Don't lose hope.'

## (negative) imperatives in Gottscheerisch

(2) a. Voržbint as main āgn. disappear.IMP out my eyes 'Get out of my sight.'
b. Et lūs dər a pārn aüf-pintn.

NEG let.IMP you a bear PRT-bind.INF
'Don't fall for it.'
c. Aüs-luas es khüəl.

PRT-let.IMP it cool.INF
'Let it cool down.'

## (negative) imperatives in Slovene

(3) Slovene imperatives
a. Ne napiši teksta.

NEG write.IMP text.GEN
'Don't write a text.'
b. Napiši tekst.
write.IMP text.ACC
'Write a text.'
c. Ne piši teksta.

NEG write.IMP text.GEN
'Don't write a text.'

## (negative) imperatives in Slovene

(4) a. Piši tekst.
write.IMP text.ACC
'Write a text.'
b. Ne pojdi (na)pisat teksta.

NEG go.IMP write.SUP text.GEN
'Don't go write a text.'
c. Pojdi (na)pisat tekst.
go.IMP write.SUP text.ACC
'Go write a text.'
d. Naj (ne) gre ven.

PTCL NEG go.3SG outside
'(Don't) let him go outside.'

## (negative) imperatives in 'standard' German

(5) 'standard' German imperatives
a. Greif das nicht an.
touch.IMP that NEG PRT
'Don't touch that.'
b. *Nicht greif das an.
c. Schreib das nicht aus.
write.IMP that NEG PRT
'Don't write that out.'
d. *Ausschreib das nicht.

## (negative) imperatives in 'standard' German

(6) a. Verlier das nicht.
lose.IMP that NEG
'Don't lose that.'
b. *Nicht verlier das.
c. Lass das nicht auskühlen. let.IMP that NEG PRT.cool
'Don't let that cool down.'
d. *Nicht lass es auskühlen.
e. *Aus-lass es (nicht) kühlen.

## Key questions

$\mathrm{Q}_{1}$ : Can't we just conjecture that Gottscheerisch has adopted the syntactic structure (as some sort of calque) of Slovene (negative) imperatives?
$\mathrm{Q}_{2}$ : What sorts of key empirical evidence would such a claim ultimately hinge on?

## How 'German' is Gottscheerisch syntax nowadays?

Gottscheerisch still displays:

- (some version of) Asymmetric V2
- Separable-inseparable particle distinction
- German-style negation


## V2 in Gottscheerisch matrix clauses

(7) a. Dār hüngrigə rēdət von proatə.
the hungry talk.3sG of bread
'The hungry (man) talks of bread.'
b. Bompmvlakkhə is i von taigl et gearn.
tripe eat.1sG I from devil NEG gladly
'I really don't like eating tripe.'
c. Haint hon i's gətrābikh.
today have.1sG $\mathrm{I}=$ it rushed
'Today, I'm in a hurry.'
d. Ben a diərnle bərt gəpoarn, jō̈knt də when a girl become.3SG born.PTCP weep.3PL the vēgəlain.
birds
'When a girl is born, the birds weep.'

## Verbklammer in Gottscheerisch

(8) a. Abakh hot də khüə in tsākəvits gəhot. once have.3sG the cow a udder.infection have.PTCP
'Once, the cow had an udder infection.'
b. Ar hot niš khen moxxn.
he have.3SG nothing can.INF do.INF
'He couldn't do anything.'
c. Dər jaükh bərt in žneap vrassn.
the jauk become.3SG the snow eat.InF
'The jauk will eat the snow.'

## Asymmetric V2 in Gottscheerisch

(9) a. ... bai žai žō šean žingənt.
... because they so beautifully sing.3PL
'...because they sing so beautifully.'
German: ...weil sie so schön singen
b. ... buas i von dər štot məs $_{1}$ pringən 2 .
... what I from the city must.1SG bring.INF
'...what I must bring from the city.'
German: ...was ich von der Stadt bringen muss $_{1}$
c. Ben an voššonkhtūgn vil bərt $_{1} \quad$ gətontsət $_{2} \ldots$ when on Carnival much become.3sG dance.PTCP
'When there is a lot of dancing during Carnival...'
German: Wenn an den Faschingtagen viel getanzt ${ }_{2}$ wird $_{1} \ldots$

- Gottscheerisch has not adopted a predominantly SVO-order as found in Slovene.


## Evidence of separable prefixes in Gottscheerisch

(10) Separable vs. inseparable prefixes
a. Dər vēgl khlüštərt ži aüf. the bird ruffle.3SG ANPH PRT 'The bird ruffles its feathers.' German: Der Vogel plustert sich auf.
b. Dər biəštnar tsəbüələt an gontsə guərtə. the mole disturb.3sG the whole garden 'The mole makes a mess of the whole garden.' German: Der Maulwurf zerwühlt den ganzen Garten.

## Evidence of separable prefixes in Gottscheerisch

(11) Separable vs. inseparable prefixes
a. A tsrākəlitsə hot diə gontsn vēglaštlain
a magpie have.3sG the all bird's.nests.DIm aüsgərābət.
PRT.rob.PTCP
'A magpie robbed all the little birds' nests.'
German: Eine Elster hat alle Vogelnestlein ausgeräubert.
b. Də hiəndər hont as gontsə roppox
the chickens have.3pl the whole garbage.heap tsəkošpət.
spread.around.PTCP
'The chickens spread the garbage heap around.'
German: Die Hühner haben den Abfallhaufen zerscharrt.

## Cluster creepers

(12) a. ... heantar dər khriəkh aüs-išt-gəpröxxn.
... before the war PRT-be.3SG-break.out.PTCP
'...before the war broke out.'
German: ...bevor der Krieg ausgebrochen ist.
b. I hon də pöpplmüəmə aüsar-žāhn-gean.

I have.1SG the midwife PRT-see.INF-go.out.INF
'I saw the midwife go out.'
German: Ich habe die Hebamme herausgehen sehen.
c. Nüə't ar ži hettnai dürrai mərxxə
now = have.3SG he ANPH such scrawny nag
ūn-lūt-heng.
PRT-allow-hang.on.INF
'now he's got himself such a scrawny old nag.'
German: Nun hat er sich so eine dürre Mähre anhängen lassen.

## Clausal negation in Gottscheerisch

## Negation in matrix clauses

(13) a. $\overline{\mathrm{I}}$ dərlāb dər's et, vrūgn tüə ammain nöx I allow.1SG you=it NEG ask.INF do.IMP mother still abakh.
again
'I won't let you, ask your mother again.'
German: Ich erlaube es dir nicht, frag noch einmal die Mutter.
b. Ār't žain boart et gəhautn. he=have.3SG his word NEG hold.PTCP 'He didn't keep his word.'
German: Er hat sein Wort nicht gehalten.

## Clausal negation in Gottscheerisch

## Negation in subordinate clauses

(14) a. Ix pin gonts dərlābət, bai ar et išt

I be.1sG completely disappointed because he NEG be.3sG khām.
come.PTCP
'I upset, because he didn't come'
German: Ich bin ganz enttäuscht, weil er nicht gekommen ist.
b. Pšt, štellə žai, as žai enš et hearnt. psst quiet be.IMP that they us NEG hear.3PL
'Psst, be quiet so they don't hear us.'
German: Pscht, sei still, dass sie uns nicht hören.

## Clausal negation in Slovene

Clausal negation in Slovene is a proclitic that appears at the leftedge of finite verbs (on T):
(15) Janez ne bo pisal.

Janez NEG be.FUT.3SG write.IMPF.SG.MASC. 'John will not write.' ('John will not be writing.')
(16) Ùpamo, da se ne bóste jezíli, če bomo hope.1PL that you NEG be.FUT angry if be.FUT.2PL málo zamudíli.
somewhat late
'We hope that you will not be angry if we are a little late.'

- Gottscheerisch has not adopted Slovene negation patterns in declaratives.


## Intermezzo

Gottscheerisch at its core still shows traits of (Bavarian) German syntax

Wider implications:

- Following Polinsky (2018), Bousquette \& Putnam (2020), \& Lohndal (2021), and a host of others, heritage language syntax remains largely intact across the lifespan.
- This casts serious doubt on any calque-based analysis (and we'll see additional evidence against this proposal shortly).


## Theoretical assumptions: Basics of XS-grammar

Key features:

- Syntax consists of hierarchically-organized $\operatorname{syn}(\operatorname{tax})$-sem(antics) features
- Morphology after syntax
- Operations take place within the syntax (adjustment/movement and Agree)


## The structure of imperatives

(17) Primary types of imperatives ( $\mathrm{A}=$ Speaker, $\mathrm{B}=$ Addressee, C=Performer)
a. Canonical imperatives

$$
\left.\left[\mathrm{CP} \text { C-[IF*] [vP A }\left[v v^{*} \text {-prescribe }[v \mathrm{vP} / \mathrm{C}[\vee v \ldots]]\right]\right]\right]
$$

b. Extended imperatives
 VP []J]J]]]

## Proclisis at the edge of $v P$

## Proposal:

- Separable particles in Gottscheerisch compete with the negative particle et
- This competition takes place at the edge of the $v P$-structure, or at the edge of a phase (Chomsky, 2001 et seq.)
- In the absence of the clitic negation marker et, the separable particle must occupy this position (at the edge of $v \mathrm{P}$ )


## Analysis: Canonical imperatives w/ negation

(18) Et graif dos ūn.

NEG touch.IMP that PRT
'Don't touch that.'


## Analysis: Canonical imperatives w/o negation

(19) Aüf-šraib mər's af a tsēdl.

PRT-write.IMP me=it on a piece.of.paper 'Write it down on a piece of paper for me.'


## Analysis: Extended imperatives

(20) Aüs-luəs es khüəl.

PRT-let.IMP it cool.INF
'Let it cool down.'


## Discussion

- Separable particles assume proclitic status in Gottscheerisch imperatives...
- ...but they retain their 'expected', German-like distribution in all other environments.
- Patterns observed in extended imperatives make an impressive case for the generation of these structures rather than the storage of an idiosyncratic chunk/construction.


## In progress: Particles in Zarzerdeutsch

(21) de žunne gēət āuf the sun rise. 3 SG PRT 'The sun rises.'
(22) de henne tóət $\left[v \mathrm{P}\right.$ āu $\int-\mathrm{pink}_{\mathrm{i} k} \chi_{\mathrm{n}}$ de veigilar the hen do.3SG PRT-pick.INF the chicks 'The hen pecks the chicks.'
(23) ì tȯən et $[v \mathrm{P}$ vgr hųmmr $(\check{\jmath})$

I perceive.1SG NEG PRT hunger(GEN)
'I feel no hunger.'
cf. Ger. Ich nehme keinen Hunger wahr.

- Zarzerdeutsch reveals a mixed pattern (when compared with Gottscheerisch), but
- The edge of $v \mathrm{P}$ appears to play a key role.


## Concluding thoughts

- Using a generative grammar - here an XS-grammar - to model syntactic change enables precision and prediction.
- An XS-grammar can be used in the analysis of corpus data as well as other off- and online measures.
- The Gottscheerisch data adduce support for a later-insertion model of morophology.

