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LINGUISTIC CHANGES IN HERITAGE GRAMMARS

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INTRODUCTION

- Work on heritage languages has emphasized the importance of their study for linguistic theory and the study of language faculty, see e.g. Lohndal et al. (2019) for a recent overview
- In line with this work, I will discuss certain changes observed in the grammar of Heritage Greek and discuss what these tell us about the study of the grammar of Greek in particular and of the language faculty in general
- I will report on joint work on two grammatical phenomena in the nominal domain, the use of indefinite plural determiners and gender agreement mismatches, and one in the verbal domain, the realization of aspect
- The central aim is to achieve a better understanding of processes of language change

WHO IS A HERITAGE SPEAKER?

- a. Heritage speakers are minority language speakers in a majority language environment
- b. Heritage speakers are bilinguals
- c. By the time they are adults, heritage speakers tend to be dominant (i.e. more proficient) in the language of their larger national community

from Lohndal et al. (2019), (cf. Benmamoun, Montrul, & Polinsky, 2013, Montrul, 2016; Polinsky, 2018 Rothman, 2009)

WHY ARE THESE LANGUAGES INTERESTING?

- Benmamoun, Montrul & Polinsky (2013):
 - “heritage languages are a desirable object of investigation, and we need to learn how to use them better to enrich the debate about the nature of the language faculty
 - They help us answer the question: what do we know when we know a language?
 - Just like children, heritage speakers offer us an opportunity to study a language unencumbered by too much irregularity, external factors, and non-structural confounds. Their grammar has the minimal scaffolding needed for a language to stand“

PERSPECTIVES ON HERITAGE LANGUAGES

- **Default design:**

The idea of minimal scaffolding brings Heritage Languages close to e.g. creole languages, as analyzed from the perspective of Bickerton's *Bioprogramm Hypothesis*, see Polinsky et al. (2015)

- **Incomplete acquisition:**

Heritage grammars basically never reach their target state; they are frozen/fossilized

- **Attrition:**

Heritage grammars are subject to language loss or gradual decline (Polinsky 2011)

- Montrul (2016: 218): “attrition and incomplete acquisition are not mutually exclusive: a speaker may show attrition in some areas that are acquired in pre-school age (e.g. gender), and incomplete acquisition in others that take several years to develop (e.g. passives)”

PERSPECTIVES ON HERITAGE LANGUAGES

- **Modeling language change/emergence:**
 1. the grammar of heritage speakers often changes during their lifetime, see Lohndal et al. (2019)
 2. heritage languages can be treated as new dialects/languages (new I-languages), see Pires (2012), i.e. bilingual heritage speakers' competence in their heritage language can be formally treated as a new language, partially or significantly distinct from the linguistic competence of monolingual speakers

- How do languages change and how do new dialects/languages emerge?

HERITAGE LANGUAGES AND REGISTER

- **Language change via bilingualism and register variation**
- H-(eritage) speakers might lack some registers of the heritage language, especially if these are transmitted by formal education, Rothman (2009)
- H-languages are spoken at home they are characterized by a casual, conversational speech style, (Dressler 1991: 101-102)
- This leads to a gradual narrowing of registers among heritage speakers, which is the result from bilinguals' access to more than one language, Chevalier (2004)

HERITAGE LANGUAGES AND REGISTER

- *lack some registers:*

this notion presupposes that we can clearly compare bilingual and monolingual populations on the basis of well-defined register features that lead to variation; monolinguals but **not** bilinguals have variation at their disposal

- Which features are subject to register variation?

- How can we best model such variation?

- Parametric variation from the perspective of *Grammar Competition* (Kroch 2000)?

- Variability within a single system from the perspective of *Combinatorial Variability* (Adger 2006)?

- Support for the latter view

HERITAGE LANGUAGES AND REGISTER

- In our investigation of Heritage Greek, this has been an important concern
- Greek is a very interesting language to look at, since it has been subject to diglossia, described by Ferguson (1959) as a type of register variation involving two divergent registers of the same language:
 - one register is the so-called low variety, acquired naturalistically at home and used for everyday conversation, *dhimotiki*
 - the other register is the so-called high variety, which is a formal register learned through formal instruction, *katharevusa*
 - Although research has identified *katharevusa* vs. *dhimotiki* features, not very much is known about the differences between the two from a formal grammar perspective

METHOD

- Research Unit *Emerging Grammars in Language Contact Situations* (RUEG: <https://www.linguistik.hu-berlin.de/en/institut-en/professuren-en/ruegl>, Project PI:AL 554/13-1, additional members: Vasiliki Rizou, Fenia Karkaletsou & Nikolaos Tsokanos)
- In our project, we tested two age groups of Greek HSs in Germany and in the US: adolescents and adults; we also tested a control group that consisted of monolingual speakers of the same age
- By testing HSs in two different countries, we wanted to investigate the role of interference
- N=27 adult HSs-Germany, N=21 adolescent HSs-Germany, N=31 adult HSs-US and 32= adolescent HSs-US, N = 32 monolingual adults and N= 32 monolingual adolescents
- A short video (00:42 minutes) of a fictional event was shown to every participant. A non-severe car accident was taking place in a parking lot and the task was to retell what happened to different people imagining that they witnessed the incident. They had to produce both an oral and a written narration in two distinct communication settings



RUEG
stimulus
film

METHOD

written
witness report

formal

voicemail
to police

written



spoken

text
to friend

informal

voicemail
to friend

Wiese (2020): 'language situation' setting is a method that allows researchers to elicit naturalistic data. This set-up provides comparable both oral and written data and in different levels of formality (data sets 2x2).

REGISTER VARIATION

- Register variation is understood as “variation in the form of linguistic expressions according to the formality of the social context of use” (Paolillo 2000: 215)
- Research on register variation focuses on the question to which extent spoken and written registers vary with respect to certain features; this informs theories of cross-linguistic variation
- The comparison between HSs and monolinguals in different communicative situations can help us identify
 - markers of register variation among monolingual speakers
 - which areas of the grammar are subject to register variation
 - the processes that might lead HSs to narrow down register variation

CRASH COURSE IN MODERN GREEK

- Modern Greek (MG):
 - Rich nominal (8 declension classes) and verbal (2 conjugations) inflection, null subject language, variable word order
 - Aspectual opposition: imperfective vs. perfective, the latter marked via suffixation or stem alternation
 - Three genders: masculine, feminine and neuter; neuter is the default gender in L1 and L2 acquisition
 - Articles, adjectives and nouns all agree in case, number and gender in attributive and predicative positions
 - Clitic doubling: clitics agree with their associate DPs in case, number and gender

CRASH COURSE IN MODERN GREEK: FORMALITY

- MG clearly differentiates between formal and informal register: the formal register is related to the artificial high variety, *katharevusa*, while the informal one represents the everyday colloquial speech
- Formality in MG can be expressed in different linguistic domains, including the lexicon, phonology, morphology, and syntax (Anastasiadis-Symeonidis & Fliatouras 2019). Typically, the formal register in MG is characterized by the use of [+learned], i.e. archaic elements
- Such elements are actually acquired late even by monolingual speakers, see Martzoukou et al. (2019) who found out that students of primary education (mean age 11;9) fail to produce and comprehend the pragmatics of the formal register, as students are introduced to it only in secondary education
- A further factor that has been identified in the literature as being a marker of formality is precision, see e.g. Cheng & O'Keeffe (2014), Beltrama (2018)

AN INDEFINITE PLURAL DETERMINER: *KATI*

- Greek determiners are marked for gender, case and number and agree with the nouns they combine with in all these features. *kati* combines with plural nouns only, even mass nouns appear in the plural, Tsoulas (2019):

(1) Agorasa to vivlio /ta vivlia.
bought. I SG the.neut.sg book/the.neut.pl books
I bought the book/the books.

(2) agorasa **kati** vivlia/*vivlio
bought. I SG some books/book
I bought some books.

(3) Agorasa kati krasia.
bought. I SG some wines
I bought some wines.

AN INDEFINITE PLURAL DETERMINER: KATI

- Tsoulas (2019): *kati* is ungrammatical as an answer to a *How many* question and as a result behaves similarly to a plural indefinite article:

(2) A: Posi fitites irthan na se dhun

A: how-many students came to you see

How many students came to see you

B: *Kati fitites irthan na me dhun

B: Some students came to me see

Some students came to see me

AN INDEFINITE PLURAL DETERMINER: KATI

- Tsoulas (2019): plural indefinites are taken to signal anti-specificity and ignorance of (the identity of) the intended referent, but in Greek this does not seem to hold:

(3) Ksero kati pedia pu zografizun poli orea
know some children that paint very nice
I know some children who can paint very nice

- Since *kati* appears as a complement to a verb like know, it can hardly be taken as denoting complete ignorance
- *kati*: is complex, composed of *kan* = minimizer (Barouni 2018) + *ti* = what

KATI: OUR HYPOTHESIS

- The function of *kati* is to remain vague/imprecise about the number of individuals/entities denoted, presupposition that there is more than one
- Building on Duffley & Larrivée's (2012: 143) analysis of English *some*, we hold that *kati* “produces, not the impression of the non-specification of the identity of the referent, but rather that of the non-specification of the number of referents referred to”; presumably this is related to the scalar nature of *kati* attributed to the presence of a minimizer element in its structure
- Since *kati* triggers the presupposition that there are more than one individuals, it acts like a counter in Borer's (2005) system; specifically, it is a vague counter
- *kati* is a marker of vague language (VL)
- VL is a feature of informal conversations (McCarthy 1998) and of the spoken language (Brown and Yule 1998), i.e. it is found in specific registers and modes

OUR RESULTS

- all speaker groups use *kati*, (4):

(4a) HSs-Germany: i opia kratuse **kati** mila sta heria tis

who was holding some apples in her hands

(4b) HSs-US: pu evaze **kati** lahanika mesa sto aftokinito tis

that was loading some groceries in her car

(4c) monolinguals: kratage mia tsanta me **kati** fruta

was holding a bag with some fruits

KATI: OUR DISCOVERY

- A strong 2 tailed Pearson's correlation with register ($r=0,934$) and oral modality ($r=0,949$)
 $P<0.001$ based on $N=175$ participants
- No correlation with age group
- *kati* appears predominantly in the informal register of monolinguals, while it is overgeneralized in the HSs' data. In the formal register, the monolinguals use **numerals/definite articles** in the same context
- HSs-Germany have more *kati* productions
 - This could be attributed to interference by German indefinites *irgendein/irgendwelche/ein paar*, which, according to SaueLand & Solt (2019), are found in informal registers, and express speaker's ignorance, or vagueness

KATI & SOCIAL MEANING

- A marker *of social meaning*?
- Cheng & O'Keeffe (2014: 344): “speakers’ successful use of vagueness indicates a high level of interactivity, particularly in highly context-dependent conversation where responsibility for meaning making is shared among speakers.”

ASPECT

- (5) agap(a)-o agapi-so
 love.Pres.Impf. I SG love.Pres.Perf. I SG
- (6) graf-o grap-so
 write.Pres.Impf. I SG write.Pres.Perf. I SG

Verbs that do not take the affix /s/ in order to express perfectivity (Christopoulos & Petrosino 2018; Galani 2005) mark perfective aspect via root allomorphy, as shown in (7).

- (7) a. √DRAG ↔ sir- / [+PFV]
 b. √DRAG v ser- / elsewhere

ASPECT: OUR DISCOVERY

- Both monolingual and bilingual speakers instead of using synthetic verbal forms to describe the events witnessed in the video, they make use of periphrastic constructions (PCs)
- These involve the use of the Greek light verb *do*, *kano* + a bare nominal/verbal form, familiar from the literature on code-switching
- We found use of PCs in informal and oral contexts by monolinguals and overgeneralization of periphrasis by HSs

ASPECT: OUR DISCOVERY

PCs	Lexical verb
Kano <u>freno</u> , <u>vazo ta frena</u> , kano brake = do brake	Frenaro= brake
perno attention = take attention	Siniditopio = realise
Perno agalia = take a hug	Agaliazo= hug
Kano erevna= do an investigation	Erevno= investigate
Kano parking= do parking	Stathmevo= park
Den ixo ora na = don't have time to	Prolaveno= catch up
Kano stop= do stop	Stamatao= stop
Kano report=do a report	<u>Katatheto</u> = testify

ASPECT: OUR DISCOVERY

Mode	Register	HSs in Germany	HSs in the US	Control group
No PCs	No PCs	45.8%	50.8%	62.5%
oral	formal	8.3%	9.5%	3.1%
oral	informal	8.4%	6.4%	6.3%
written	formal	0.0%	4.8%	0.0%
written	informal	4.2%	0.0%	1.6%

WHY PCS?

- The observation that HSs make use of periphrastic options is not novel, but it is novel for Greek HSs
- Maher (1991) considers the replacement of synthetic forms by periphrastic constructions a common restructuring process in language contact
- Polinsky (2008) notes similar effects in Russian
- Boon (2014) notices that synthetic verb forms occur less frequently in Heritage Welsh, a fact she attributes to the reduced processing load of the periphrastic construction

WHY PCS? OUR DISCOVERY

- The use of PCs correlates with the [+learned (= *katharevusa*)] features of the verb in question, whereby HSs avoid using synthetic forms for [+learned] verbs; such verbs contain archaic prefixes, e.g. *kata-theto* 'testify'
- Importantly, monolingual speakers use PCs as well: they use PCs in informal settings and in oral mode
- The use of PCs is found in perfective aspect, as HSs overgeneralize the perfective form over the imperfective, especially in narration tasks

- In sum: in two areas, our results are suggestive of register narrowing in the grammar of Greek HSs in line with what previous literature on other heritage languages
- We identified register features that haven't been previously discussed in the literature

GENDER AGREEMENT MISMATCHES

Adult Female US bilingual speaker, informal written task:

- (8) i bala tu ksafniase ena skilo...ke pige ja na to piasi
the ball-FEM his surprised a dog and went so that it catches
'His ball surprised a dog who ran to catch it.'

Monolingual speaker:

- (9) Ke to skili ide tin bala ke tin kiniguse
And the dog saw-.3SG the ball-FEM and cl-FEM chase-IMP.PAST.3SG

- Agreement is strictly formal in MG but not in Heritage Greek

OUR RESULTS

category	HS USA: adults			HS USA: adolescents		
	correct	errors	%	correct	errors	%
Clitic agreement	166	29	14.8	211	47	18.2

category	Monolingual Adults			Monolingual Adolescents		
	correct	errors	%	correct	errors	%
Clitic agreement	233	0	0	198	1	0.5

OUR RESULTS; DEVELOPMENT OF A SEMANTIC AGREEMENT SYSTEM

- No correlation with formality and mode; no significant differences between monolinguals and HSs in Germany
- Overgeneralization of neuter gender; this is a pattern we know from changes in Greek dialects and L1 and L2 acquisition (phase of neuterization, neuter as default, Tsimpli & Hulk 2013)
- Karatsareas (2011):
 - a major development in gender agreement patterns in two Asia Minor dialects, Pontic and Rumeic: **semantic agreement**, i.e. inanimate masculine and feminine nouns trigger agreement in the **neuter** on the various targets controlled by them
- Distance Principle (Corbett 2006: 235):

targets on the right might show semantic agreement

attributive > predicative > personal pronoun > relative pronoun

WHY DO ADULTS FARE BETTER?

- We noticed that adults fare better than adolescents
- Our US adolescent group consists of primarily of 3rd generation immigrants and mixed generation participants (i.e. participants with one foreign parent), who are bound to be more deviant than 2nd generation participants
- Shows that learning continues through adolescence
- Adults have higher exposure to literacy practices than adolescents

DISCUSSION

- Changes in Heritage Greek in three areas:
 - Register levelling in two areas in one direction **informal -> formal**
 - **informal register features**
 - morphological complexity (aspect)
 - vagueness (*kati*)
 - Gender agreement is not affected by register, we find re-semanticization, a general process of language change
 - Why?

the nouns in our production data do not allow variability in gender. In the other two cases, the monolingual grammar has two alternatives, each guided by the particular communicative setting

DISCUSSION: MODELING

- **A proposal:** change is the result of competition between two forms, along the lines of Adger's combinatorial variability; it is about variation within a single system with respect to the realization of structure

(10) [DP [#P counters [DivP [nP]]]]

DP structure, Borer (2005)

- (10): choice of a particular realization is associated with added layer of meaning, precise counting (numeral) as opposed to vague counting (*kati*)

(11) [TP [AspectP/VoiceP [vP]]]



clausal structure, Christopoulos & Petrosino (2018)

- (11): in agreement with Embick (2010), synthetic and analytic forms involve distinct morpho-phonological packaging of an identical structure; HSs and informal settings avoid synthetic forms that come with high processing cost

CONCLUSION

The study of Heritage Languages

- informs theories of language variation and change
- tells us more about what we know when we know our native language, which is highly complex
- provides further insights into the interplay of factors responsible for language change:
 - contact
 - variability (competition)
 - loss of distinctions (retreat to default)



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