How verbs are placeheld/placeholded in Georgian

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1. Introduction

The placeholder verb (PHV) construction in Georgian is used when a speaker must or wishes to avoid using a verbal lexical item (Amiridze 2010)

- Typical contexts: euphemism, tip-of-the-tongue states, echoes to unfamiliar words
- Comparable to English's placeholder nouns (*thingamajig*, *whatchamacallit*, *you-know-what*)
- Derived transparently from [$_{VP}$ *do that*], but some grammaticization has clearly taken place

(1) /imas **v-** izamt^{h}/ ~ /**v-** izamt^{h} imas/
DIST:DAT **1AGR-** do:FUT.PL **1AGR-** do:FUT.PL DIST:DAT
Both: "We'll do that."

(2) a. /imas- **v-** izamt^{h}/
DEM- **1AGR-** do:FUT.PL
"We'll thatdo 3RD."

b. *?* /ga= imas- **v-** izam/
PART= DEM- **1AGR-** do:FUT
"We'll thatdo 3RD out."

c. *??* /ga= **v-** imas- izam/
PART= **1AGR-** DEM- do:FUT.PL
"We'll thatdo 3RD out."

d. *?* /ga= **v-** imas- **v-** izam/
PART= **1AGR-** DEM- **1AGR-** do:FUT
"We'll thatdo 3RD out."

Emerging, nonstandard, with many morphological variants, PHVs raise empirical & theoretical questions

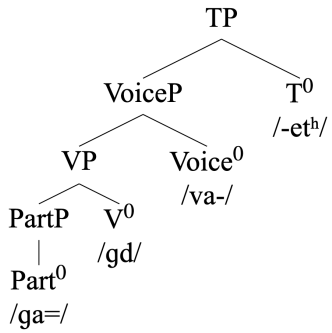
- How are formal and interpretive dependencies between morphemes constrained by locality? (Siegel 1978, Embick 2010)
- What guides morphological reanalysis? What existing structures are recruited or modified?
- What is necessary for a linking theory of complex morphological acceptability judgements?

2. Background

2.1 Morphosyntax of ordinary verbs

Georgian verbs have four major structural positions

- Particle (Part^0) = Prefix (Voice^0) – Stem (V^0) – Suffix (T^0)
- V^0-to-T^0 movement, with Part^0 outside the morphological word



(3) /ga= va- gd -et^{h}/
PART= 1TR- throw -PST.PL
"We threw 3RD out"

The particle (aka 'preverb') heads PartP, a small clause complement of the verb (cf. den Dikken 1995, Ramchand & Svenonius 2002, Svenonius 2004)

- Lexically specific; usually contributes telicity (Ramchand 2008's Result^0?)
- Never participates in allomorphy; Unlike inflectional affixes, it appears in nonfinite verbs

Prefixal inflection can include a 'preradical vowel' (PRV) that typically expresses argument structure

- Shape of the PRV can be lexically determined, but default for transitive verbs is /a-/

(4) /ga= **v-** tʰb -itʰ/ ~ /ga= **va-** tʰb -etʰ/
PART= **1AGR-** warm -PST.PL PART= **1TR-** warm -PST.PL
"We warmed up." (No PRV) "We warmed 3RD up." (Transitive PRV /a-/)

- PRVs distinguish direct and indirect object agreement

(5) /ga= **ma-** gd -es/ ~ /ga= **mi-** gd -es/
PART= **1DO-** warm -PST.3PL PART= **1IO-** warm -PST.3PL
"They threw **me** out." (DirObj Agr) "They threw 3RD out **for me**." (IndObj Agr)

Inflectional suffixes (expressing tense, phi-agreement) exhibit complex allomorphy patterns

- e.g., stem allomorphy in the perfect for active and passive verbs is sensitive to root size (±σ)

(6) a. /ʃe= u- kʰmn **-Ø** -iatʰ/ ~ /gamo= u- kʰliav **-eb** -iatʰ/
PART= 3AGR- create **-ACT.IRREG** -INFL PART= 3AGR- stupefy **-ACT.DFLT** -INFL
"They must've created 3RD." "They must've stupefied 3RD."

b. /ʃe= kʰmn **-il** -an/ ~ /gamo= kʰliav **-ebul** -an/
PART= create **-PASS.IRREG** -INFL PART= stupefy **-PASS.DFLT** -INFL
"They must've been created." "They must've been stupefied."

2.2 Properties of PHVs

PHVs seem to behave quite differently from ordinary verbs

- /imas/ "DEM" has no clear structural analogue in ordinary verbs
- Prefixal agreement can vary in position (1), and in preradical vowel (7)

(7) /ga= **v(a)-** imas- **v-** kʰen -itʰ/
PART= **1(TR)-** DEM- **1AGR-** do -PAST.PL
"We thatdid them out"

Regarding prefix variation, some standard inflectional contexts do have double agreement (Harris 2017)

- But it is obligatory, and need not track the same argument

(8) /ga= **vu-** gdi **-v** -ar/ ~ /ga= **gi-** gdi **-v** -ar/
PART= **1AGR-** throw:INFL **-1AGR** -INFL PART= **2AGR-** throw:INFL **-1AGR** -INFL
"3RD must've thrown me out" "You must've thrown me out"

As for their external syntax, PHVs adopt that of the verb they substitute

- NB: If phrasal "do that" takes a patient (9b), it will be an indirect object (DAT, not NOM in past)
- PHVs can take a direct object patient (NOM in past) when intending a monotransitive verb (9c)
    - NB: /imas/ "DEM" is frozen in the dative case

(9) a. /msaχiob-**i** ga= va- gd -et^{h}/
actor-**NOM** PART= 1TR- throw -PST.PL
"We threw the actor out."

b. /msaχiob-**s** is vu- k^{h}en -it^{h}/
actor-**DAT** DEM.NOM 1>3IO-do-PST.PL
"We did that to the actor."

c. /msaχiob-**i** ga= imas- v- k^{h}en -it^{h}/
actor-**NOM** PART= DEM- 1AGR- do -PST.PL
"We thatdid the actor out."

A wrinkle seems to be first and second person patients of PHVs – externally DOs, internally IOs

- Perhaps allomorphy of DO agreement conditioned by the root 'do'?

(10) a. /tʃ^{h}ven msaχiobeb-**i** ga= gva- gdes/
1PL actors-**NOM** PART= 1PL.DO- throw:PST.3PL
"They threw us actors out."

b. /tʃ^{h}ven msaχiobeb-**s** gvi- k^{h}nes/
1PL actors-**DAT** 1PL.IO- do:PST.3PL
"They did that to us actors."

c. /tʃ^{h}ven msaχiobeb-**i** ga= (**gva-**) imas- **gvi-** k^{h}nes/
1PL actors-**NOM** PART= (**1PL.DO-**) DEM- **1PL.IO-** do:PST.3PL
"They thatdid (to?) us actors."

2.3 Summary of morphological variation in PHVs

(11) **Copying:** Does the PHV copy the intended verb's particle?
/imas- **v-** k^{h}enit^{h}/ *or* /ga= imas- **v-** k^{h}enit^{h}/
DEM- **1AGR-** do:INFL PART= DEM- **1AGR-** do:INFL
Both: "We thatdid 3RD (out)"

(12) **Prefixal Position:** Is prefixal agreement inside, outside, or doubled?
/ga= imas- **v-** k^{h}enit^{h}/ *or* /ga= **v-** imas- k^{h}enit^{h}/ *or* /ga= **v-** imas- **v-** k^{h}enit^{h}/
PART= DEM- **1AGR-** do:INFL PART= **1AGR-** DEM- do:INFL PART= **1AGR-** DEM- **1AGR-** do:INFL
All three: "We thatdid 3RD out"

(13) **Demonstrative Case:** Is the demonstrative its /imas/ "DAT" or /is(a)/ "NOM" form?
/ga= imas- **v-** k^{h}enit^{h}/ *or* /ga= is(a)- **v-** k^{h}enit^{h}/
PART= DEM.DAT- **1AGR-** do:INFL PART= DEM.NOM- **1AGR-** do:INFL
Both: "We thatdid 3RD out"

(14) **Transitive Prefixes:** Does outside agreement show default transitive allomorphy (PRV /a-/)?
/ga= **v-** imas- **v-** k^{h}enit^{h}/ *or* /ga= **va-** imas- **v-** k^{h}enit^{h}/
PART= **1AGR-** DEM- **1AGR-** do:INFL PART= **1TR-** DEM- **1AGR-** do:INFL
Both: "We thatdid 3RD out"

(15) **Object Agreement:** What allomorphs (±PRV) do 1ST/2ND object agreement prefixes take?

/ga= **m-** imas- **m-** kʰenitʰ/ *or* /ga= **ma-** imas- **mi-** kʰenitʰ/
PART= **1OBJ-** DEM- **1OBJ-** LV:INFL PART= **1DO-** DEM- **1IO-** LV:INFL
Both: "Y'all thatdid me out"

(16) **Stem Allomorphy:** Do PHVs inherit the inflectional quirks of the bare light verb 'do'?

/ga= imas- kʰn **-il** -a/ *or* /ga= imas- kʰn **-ebul** -a/
PART= DEM- do **-PASS.IRREG** -INFL/ PART= DEM- do **-PASS.DFLT** -INFL/
"S/he must've been thatdone out" "S/he must've been thatdoed out"

3. Analytical hypotheses

Hypothesis 1: PHVs involve compounding

- X^0+Y^0 compounds have outside agreement prefixes (99)
- Archaic X^0+LightVerb^0 compounds have inside agreement (99)
- Prefix variation, like PHVs, is documented for both, but it is rare/archaic (Kalandadze 1979)

(17) /**v-** gulis- χm -obtʰ/ ~ † /(**v-**) gulis- **v-** χm -obtʰ/
1AGR- heart:GEN- voice -NPST.PL (**1AGR-**) heart:GEN- **1AGR-** voice -NPST.PL
"We have it in mind"

(18) /tsʰad- **v-** q'av -itʰ/ ~ † /**v-** tsʰad- (**v-**) q'av -itʰ/
clear- **1AGR-** LV -PST.PL **1AGR-** clear- (**1AGR-**) LIGHT -PST.PL
"We clarified it, made it evident"

Hypothesis 2: PHVs involve a novel particle

- When they also copy a particle, it would need to be a novel type of compound particle

(19) /imas= vkʰenitʰ/ ~ /[ga + imas]= vkʰenitʰ/ (cf. /[ga + mo]= vagdetʰ/)
DEM= do:PAST.1PL [PART + DEM]= do:PAST.1PL [PART + PART′]= throw:PAST.1PL
"We thatdid (3RD)" "We thatdid (3RD) out" "We threw them out hither"

Hypothesis 3: PHVs are structurally parallel to truncated compounds

- Dvandva V^0+V^0 constructions where suffixes on V1 are suspended

(20) /mi= vi- ar (-...) + mo= vi- ar -etʰ/
PART= 1RE- go (-...) + PART′= 1RE- go -PAST.PL
"We went here and there, hither and thither"

- Could PHVs involve [IntV + *do*], with /imas/ "DEM" replacing the intended verb?

Hypothesis 4: PHVs involve sui generis morphosyntactic operations

- What would compel the learner to posit a totally novel structure?

4. Acceptability experiment

4.1 Overview

Materials and procedure

- 192 itemsets comprising 9 subexperiments, each with a 2×2 design;
- Stimuli were distributed across two experimental sessions
- Each session alternated between two tasks
    - Placeholder task: 1–5 Likert Morphological acceptability rating of a PHV relative to a given intended verb
    - (Truncation task: 2AFC Morphophonological judgement of truncated compounds)

Session A		**Session B**	
Block 1	Placeholder task (32 trials)	Block 1	Placeholder task (32 trials)
Block 2	Truncation task (24 trials)	Block 2	Truncation task (24 trials)
Block 3	Placeholder task (32 trials)	Block 3	Placeholder task (32 trials)
Block 4	Truncation task (24 trials)	Block 4	Truncation task (24 trials)
Block 5	Placeholder task (32 trials)	Block 5	Placeholder task (32 trials)

Experimental trial mock-up	
ნაგულისხმევი ზმნა: **მოვატყუებ**	Intended Verb: **/mo= va- t'q'ueb/** **PART= 1TR- deceive:INFL** "I will deceive 3RD"
ჩამნაცვლებელი ზმნა: **მოიმასვიზამ**	Placeholder Verb: **/mo= imas- v- izam/** **PART= DEM- 1AGR- do:INFL** "I will thatdo 3RD"
1 – 2 – 3 – 4 – 5 (ძალიან ცუდი) (ძალიან კარგი)	**1 – 2 – 3 – 4 – 5** (very bad) (very good)

Participants, design, analysis, and results

- 64 native speakers of Georgian living in Georgia, participated via PCIbex (Zehr & Schwarz 2018)
    - All participated in Session A; 36 of them later participated in Session B
- Subexp1–4 had 32 itemsets each; Subexp5 had 40 itemsets; Subexp6 had 12
    - Subexp 7–9 (4 itemsets each, more speculative) omitted for space
- 2 buttonmashing participants were excluded from analysis, as were trials with extreme RTs.
- Visualizations report raw ratings and rating *z*-scores, grouped by participant
- Raw ratings were analyzed with ordinal mixed effects models, using R package *ordinal*

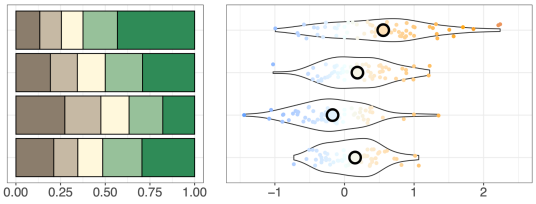
Subexp1: How acceptable are the four major shapes of PHVs? (N

(a) DEM-**AGR-**STEM

(b) PART=DEM-**AGR-**STEM

(c) PART=**AGR-**DEM-STEM

(d) PART=**AGR-**DEM-**AGR-**STEM



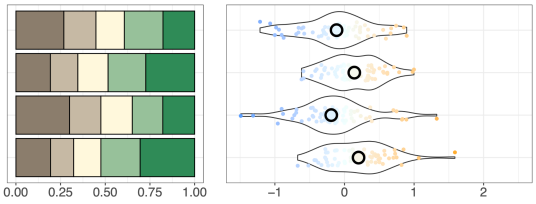
Subexp2: How acceptable is the transitive preradical vowel /a/ in outer position?

(a) PART=**AGR-**DEM-STEM

(b) PART=**AGR-**DEM-**AGR-**STEM

(c) PART=**TR.AGR-**DEM-STEM

(d) PART=**TR.AGR-**DEM-**AGR-**STEM



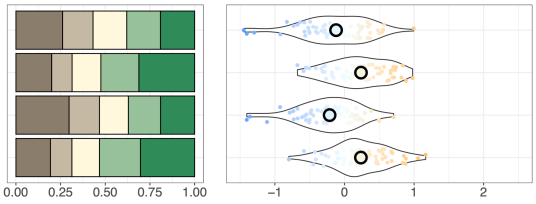
Subexp3: For PHVs with 1OR2 objects, what preradical vowels are possible?

(a) PART=DEM-**AGR-**STEM

(b) PART=DEM-**IO.AGR-**STEM

(c) PART=**AGR-**DEM-**AGR-**STEM

(d) PART=**DO.AGR-**DEM-**IO.AGR-**STEM



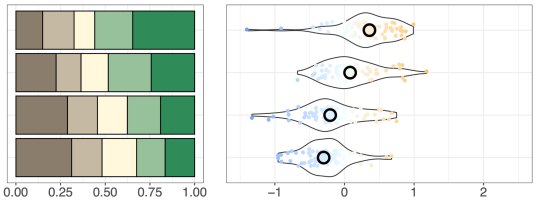
Subexp4: How acceptable are PHVs with nominative demonstratives?

(a) PART=DEM.DAT-**AGR-**STEM

(b) PART=**AGR-**DEM.DAT-STEM

(c) PART=DEM.NOM-**AGR-**STEM

(d) PART=**AGR-**DEM.NOM-STEM



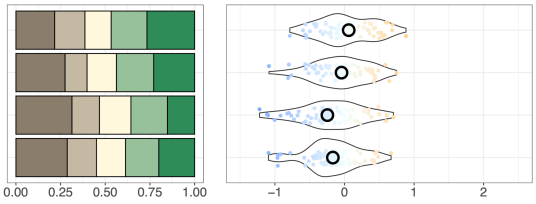
Subexp5: How do agreement position and stem allomorphy (irregular/default) interact?

(a) PART=DEM-**AGR-**STEM:IRR

(b) PART=**AGR-**DEM-STEM:IRR

(c) PART=DEM-**AGR-**STEM:DFLT

(d) PART=**AGR-**DEM-STEM:DFLT



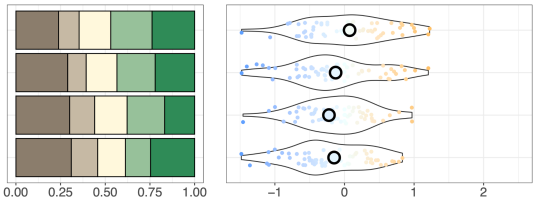
Subexp6: How good is 3IO agreement when placeholding monotrans/ditrans verbs?

(a) Monotr ~ PART=DEM-STEM

(b) Monotr ~ PART=DEM-**IO.AGR-**STEM

(c) Ditr ~ PART=DEM-STEM

(d) Ditr ~ PART=DEM-**IO.AGR-**STEM



Findings for Subexp1: Cost of including a preverb, cost of outer agreement

- Main effect of Preverb (a vs. b,c,d): β=0.44, SE=0.082, z=5.4, p<0.001
- Main effect of InnerAgr (a,b,d): β=0.31, SE=0.084, z=5.4, p<0.001
- Main effect of OuterAgr (c,d): β=0.53, SE=0.086, z=6.1, p<0.001

Findings for Subexp2: No significant effect of including an initial PRV

- Main effect of AgrPosition (a,b vs. c,d): β=–0.45, SE=0.057, z=–7.8, p<0.001

Findings for Subexp3: Including PRVs ameliorates acceptability

- Main effect of PreRadV (a,c vs. b,d): β=–0.51, SE=0.058, z=–8.7, p<0.001

Findings for Subexp4: Dative demonstratives are best; the NOM-cost is less for PHVs with outer Agr

- Main effect of DemCase (a,b vs. c,d): β=0.54, SE=0.058, z=9.3, p<0.001
- Main effect of AgrPosition (a,c vs. b,d): β=–0.23, SE=0.057, z=–4.0, p<0.001

Findings for Subexp5: Cost to default stem, ameliorated in PHVs with outer Agr

- Main effect of StemAllo (a,b vs. c,d): β=0.28, SE=0.051, z=5.5, p<0.001
- Main effect of AgrPosition (a,c vs. b,d): β=0.31, SE=0.10, z=3.0, p<0.05

Findings for Subexp6: No significant effects (because of fewer observations?)

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