The glide's big fat Greek wedding... to the palatals

Nina Topintzi (TEI of Patras & AUTH)
topintzi@enl.auth.gr
Mary Baltazani (Univ. of Ioannina)
mbaltaz@cc.uoi.gr

What is a glide?

In Greek we have the palatal approximant [ j ]. The best instances in Greek are found in words like γαίδαρος, μαϊνανός, ...

A semivowel (or glide) is a sound that is phonetically equivalent to a vowel sound but functions as the syllable boundary rather than as the nucleus of a syllable.

→ γαίδαρος not γαίδαρος
→ μαϊνανός not μαϊνανός

The "glide" [j] is difficult to understand

(a) Variable phonetic nature and (b) problems with its phonological distribution

Phonetic nature:
- Occasionally, it is a true glide
- majda'nos “parsley”
- But, more often it is not
  - ’poðja ≠ ’poðja
  - 'matça ≠ 'matja
  - ku.'kà ≠ ku.'kja

The "glide" [j] is difficult to understand

Phonological distribution
- It sometimes alternates with [l]
  - ‘poði - ‘poðja “foot-feet” Neut. Noun
  - ’mati - 'matça “eye-eyes” Neut. Noun
- It sometimes seems to be underlying
  - majda'nos “parsley”

Phonetic issues

Phonetic nature:
- If tautosyllabic V+J → J = j (majda'nos)
- If tautosyllabic J+V then
  - if /l/ or /n/ + J + V → J, η (ku.'kà, pa.'ja)
  - if [voiced obstruent] + J + V → J (’po.'jà)
  - if [voiceless obstruent] + J + V → c (’matça)
  - if /m/ + J + V → η (mja)

We leave aside detailed examination of its exact phonetic realization for now
Three phonological questions

- Is the GLIDE underlying?
- Are palatails underlying?
- Can we see patterns in GLIDE distribution where morphology plays a role?

Distribution data in more detail 1

- True glide
  - (1) maj.da.'nos “parsley”
  - ne.'raj.đa “fairy”
  - ko.roj.'đe.vo “mock”
  - 'tro.lej “trolley-bus”

This might mean /j/ is underlying?

Distribution data in more detail II

- [ɪ]–[ɻ] alternations
  - (2) a. 'po.đi - 'po.đa ‘matl - ‘matça
  - b. ku.'kli - ku.'kla pa.'ni – pa.'na

This might mean /j/ → [GLIDE]?

- Elsewhere there are no alternations at all
  - (3) 'še.đi.o - 'še.đi.a vs. 'po.đi - 'po.đa

Why doesn’t /j/ → [GLIDE] work here?

Impasse from the start?

Already the problem is complex enough:

- It seems that sometimes GLIDE is a phoneme (maj.da.'nos)
- sometimes GLIDE is an allophone (’po.đa)
- sometimes GLIDE does not arise at all! (’še.đi.a)

We need to look more widely into the data

Palatals: unrelated data?

- Is the [č] in ‘matça and ’čoni different?
  - We saw that the former can be viewed as one incarnation of GLIDE
  - Can we generalize and include the latter in the same category?
  - Look at
    - (4) ‘cali vs. ‘kali “binocular – beauty”
    - ’čoni vs. ’koni “snow – sticks in”
    - ’nata vs. ’nata “youth – there they are”

And so on for g, j, y, j, l, ĉ.

Are these phonemes?

Palatals: unrelated data?

- We think not. Consider:
  - (5) ‘lu.ća ‘lu.ča “gutter”
  - pu.ţi pu.ţa “reticule”

- If the data in (5) are analogous to ‘matça (2) where the GLIDE plays some role, then perhaps the GLIDE plays a role in palatails more generally as in ’čoni (4)?
Impasse? Let’s try again

It seems that
sometimes GLIDE is a phoneme (maj.da.’nos)
sometimes GLIDE is an allophone (’po.ðja)
sometimes GLIDE does not arise at all! (’sče.ði.a)
perhaps GLIDE plays a role in palatals (’çoni)

Our proposal: 1

- Proposed theoretical representation

\[
\begin{array}{c}
/i/ \\
\text{[i]} \\
\end{array}
\begin{array}{c}
/ɪ/ \\
\text{[ɪ]} \\
\end{array}
\]

- We will see more details on how exactly this representation works later

Problems for past phonological accounts

- Existence of minimal pairs such as ['a.ði.a] “permission” vs. ['a.ðja] “empty-FEM”
- Problem for **one phoneme** /i/ accounts (Kazazis 1968, Malavakis 1984, Nikolopoulos 1985, Warburton 1976)
- Problem for **underspecified archiphoneme** /I/ accounts (Deligiorgis 1987, Malikouti-Drachman & Drachman 1990)

- Existence of alternations [i]~[j]

Past phonological analyses

- A more general issue/problem: they make recourse to diglossia between katharevusa (purist language) and dhimotiki (people’s language)
- In cases of alternation, [i] is considered more part of katharevusa, while [j] as part of dhimotiki

Our claims: 2

- While not denying the importance of sociolinguistic factors we claim that numerous observations can be made on the grammatical form at the synchronic level
- A large set of data can be understood by looking at the morphophonology interface
- The GLIDE and the palatals are inherently related, thus the latter are affected by whichever analysis is proposed for the former

Data Analysis
The phonemic status of the GLIDE

[i -GLIDE] contrast (+/- semantic affinity):

(6) aôia permission vs. aôja empty
vôastike was raped vs. 'vôastike was in a hurry
'dôio devious vs. 'dôio poor soul
trô'pezia trapezoids vs. trô'pezôa tables
'ôpio opium vs. 'ôpôco whichever
'môdia Medea vs. 'môdja clams

Also from examples like:
- majô'nos “parsley”, korôjia “mockery”, yajô'iros “donkey” vs. zôi'raô “vitality”, eleî'nos “disgraceful”, apôlô'kos “simplistic”

We conclude there must be a GLIDE phoneme

/i/ → [j ] (majdanos, ajitos, yajô'iros, ...)
→ [J ] (aôja, opôco, ...)

Impasse? Let’s try again

It seems that
sometimes GLIDE is a phoneme ✓ (maj.da.'nos)
sometimes GLIDE is an allophone ('po.ôja)
sometimes GLIDE does not arise at all! ✓ ('sce.ôl.a)
perhaps GLIDE plays a role in palatals (’sôni)

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i-GLIDE alternations and lack thereof

Recall (3): ‘sce.ôl.o . - ‘sce.ôl.a vs. ‘po.ôl - ‘po.ôja
The contrast is a matter of noun class. We can predict it, based on morphology only: sceî+o – sceî+a vs. poî+ @ – poî+a

Why? Paradigm uniformity, conservation of # σ:
- po.ôl - *po.ôl.a entails an extra σ
- Solution: i → j, thus i+a becomes tautosyllabic
- Subsequent j → j fortition

Here GLIDE is an allophone of /i/.

Impasse? Let’s try again

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sometimes GLIDE is a phoneme ✓ (maj.da.’nos)
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[i] vs. [J] surface contrast suggests GLIDE is phonemic
[i] ~ [J] alternation suggests GLIDE is an allophone of [i]
Possible conflict is resolved under the hypothesis that:

[i]  [i]

[i]  [j]

Similar situation arises in Karuk, Sundanese and Pulaar (Levi 2008)
Roadmap of the next section

- We aim to show that GLIDE and palatals can be handled by the same account.
- We proceed in 3 steps:

![Diagram of Roadmap](image)

The role of GLIDE in palatals

- morphophonology

  - ‘po.ði - ‘po.ðja and ku.'ci - ku.'ca ought to receive the same account

  - /kuki+ɔ/ → [kuci] simple pal.
  - /kuki+a/ → kuki+a → kuici+a → [kuca] extreme pal.

- Simple palatalization Velar + i, e → Palatal+i,e
- Extreme palatalization Velar + J+V → Palatal+V

Extreme Palatalization

- Extreme palatalization involves palatalization first and then absorption of the pal. trigger by the target, i.e. (cf. Bhat 1978: 73-6, Bateman 2007: 82-3). This is made possible because the trigger (the glide) can be recovered through the preceding palatalized segment.

Note: extreme pal. can happen in front of /a/ too; cf. /yjos/ /jąs/ “son” / /yj/ /j/ “sons” / /ye/ /je/ “son-VOC”; in such cases, the contrast between [C”] and [C”] is neutralized

The role of GLIDE in palatals

- phonology

  - Extreme palatalization can also explain the palatal obstruents in (4), e.g. [cali]
  - It extends to palatal sonorants [ʃ] & [n] too (but consider dialectic differences, e.g. in NW Peloponnese, such sonorants undergo simple palatalization too)

  - Summary:
    - /kipos/ → [kipos] simple pal (phonological)
    - /kial/ → kial → [kali] extreme pal (phonological)
    - /niæ-i/ → niæa → niæ -> [niæa] extreme pal (morpho-phon)

Conclusion: [c, ʃ, j, ʝ] are not underlying but the output of either /velar/ or /velar+]/

Impasse? Let’s try again

- It seems that sometimes GLIDE is a phoneme ✓ (maj.da.’nos)
- sometimes GLIDE is an allophone ✓ ( ‘po.ðja)
- sometimes GLIDE does not arise at all! ✓ ( ‘sce.ði.a)
- perhaps GLIDE plays a role in palatals ✓ ( ‘çoni)

Lack of palatalization

- Lack of palatalization with labials & remaining coronals
  - (7) ’pçano “l grasp”  ku’pça “oars”
  - ’ftçari “shovel” ’maçça “eyes”
  - ’go “two” ’poðja “feet”
  - ’zarja “dice”

- The GLIDE surfaces fully and does not get absorbed
- Well-attested pattern: Labials do not palatalize fully, while coronals can show different behaviour even in the same language (cf. Bateman 2007: 219, 226)
Answers to the phonological questions

- Is the GLIDE underlying? → IT CAN BE
- Are palatals underlying? → NO
- Can we see patterns in GLIDE distribution where morphology plays a role? → YES (cf. domatio podi)
- We will try to extend the analysis to a larger part of the lexicon

Open issues

- We’d like to categorize derivational affixes according to preference for combining with [i] vs. [j] bases
- Few clear cases exist
- Most are fuzzy
- Presentation of some of these data for feedback

Morphology again!

- Examination of various derivational suffixes mentioned in Ralli (2005). Creation of database from words found in:
- For many suffixes, strong tendency to contain [i] or [j] based on the stem, indicating output-output correspondence
- Corroborating evidence can easily explain variation as in:
  ημι[ι]ώνω < ημίων < ημία but also ημι[ι]ώνω < ημία
  ενοικ[ι]άζω < ενοίκια but also ενοικιάζω < ενοίκια

Morphology again!

- The above identifies a well-attested tendency, but it is not infallible
- Consider –ιζω
  - What about C-ending stems, e.g. why do we get εντυπώσια < εντύπωση, νευριάζω < νεύρω with [i] vs. αραχνιάζω < αράχνη, μουχιάζω < μούχλα?
    - How can we explain the contrast?
    - Why do these stems select –ιζω in the first place, rather than –όω, e.g. κοτάλω, μαράλω, αράδω, αφάδω… (what’s the stem for the latter case?)
- What about words where the stem is not easily identifiable: κατιάζω, ακρωτιρίζω, etc.?

Affix selection

- Beyond output-output correspondence, certain affixes function as if they choose the stem they attach to
- Hypothesis: (some?) affixes placed on a sort of continuum along which orthographic i’s are preferably pronounced as [i] or as [I]

<table>
<thead>
<tr>
<th>[I]</th>
<th>[i]</th>
</tr>
</thead>
<tbody>
<tr>
<td>−ωδης</td>
<td>−ακος</td>
</tr>
</tbody>
</table>

Affix selection

- -άρω: ακομπανιάρω, κοπιάρω, μακιγιάρω, μπανιάρω, σινάρω
- -ώδης: αιτιώδης, γωνιώδης, μακιγιώδης, παιγνιώδης, σκιώδης
- -ακος: as virtually all stems are of the type -iV, due to O-O correspondence, we’d expect [i-]akos rather than [i-]akos
- Considerable variation though, e.g. πτυχακός, καρδιάκος, επιχακός, γωνιάκος, etc.
- Interesting alternations too: μανιάκος vs. μανιώδης
Morphology again!

- Is there any principled way to account for variation?
- Age and education do not seem to play much role
- For instance, between us MB is more of an *i*-er*, NT is more of a *glider*
- Suggestions??

Wrap-up

What we achieved
- A uniform account for the GLIDE and palatals
- Argumentation for the existence of
  - [J] as an allophone of /i/
  - [J] from input /i/
- Fortition and absorption of GLIDE under certain circumstances
- An analysis whereby i-GLIDE alternations or contrasts are attributed for the most part to grammar, highlighting the interaction with morphology

What we need to do
- Expand to more morphemes and provide formal analysis
- Explore variation more systematically

Selected References


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Thank you!