

Abstract Underlying Representations

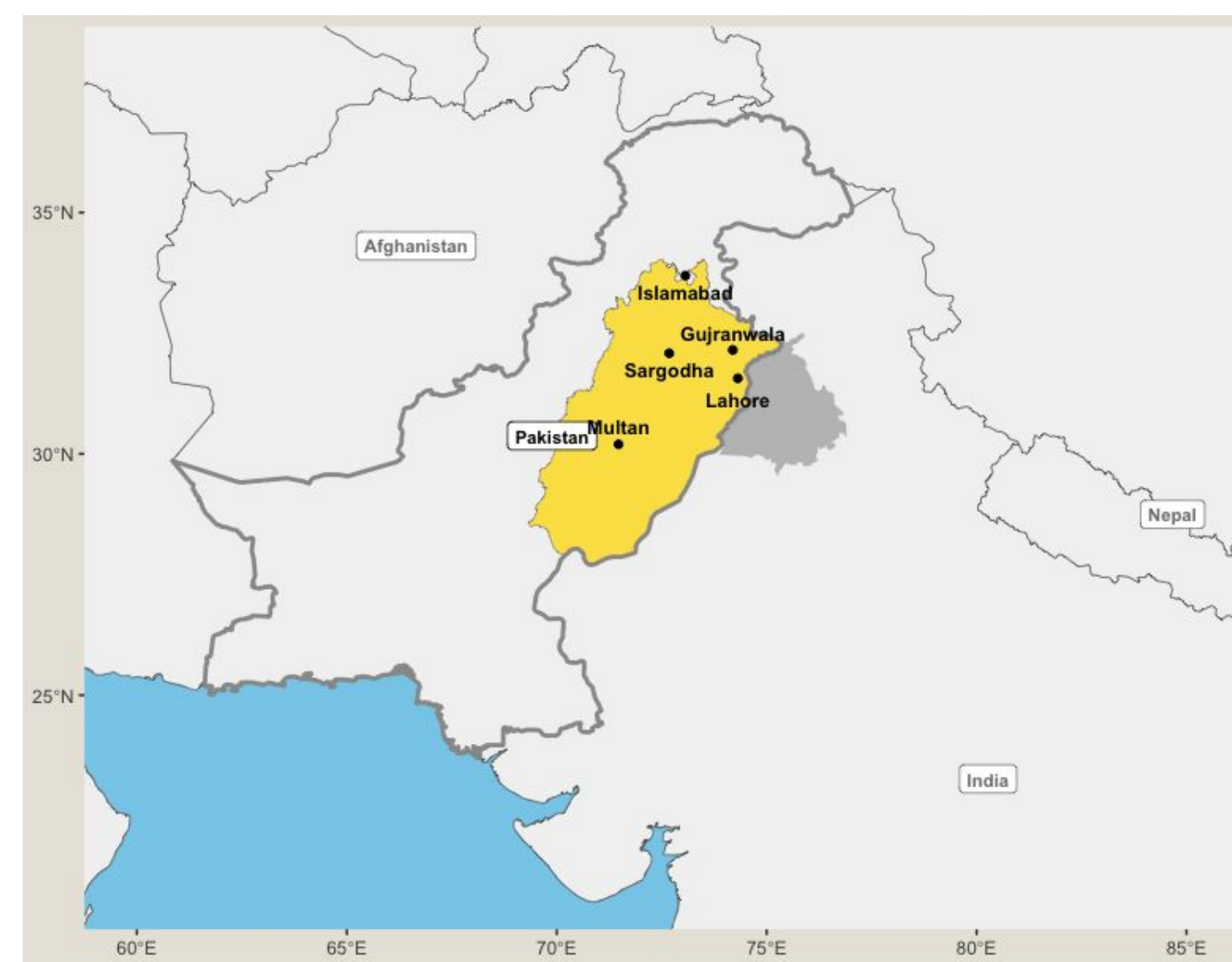
Evidence from nasality in Pakistani Panjabi

Jonathan Charles Paramore | jcparamo@ucsc.edu

Preliminaries

- In Linguistics, there is considerable debate over how individual words are stored in a speaker's lexical inventory
 - Classic generative view:** Words are stored as abstract underlying representations (URs) that can be completely distinct from how they are actually pronounced (Kenstowicz & Kisseberth, 1971).
 - Surface-Oriented view:** Words are stored as abstract URs, but the UR must surface concretely in at least one of its forms
 - Surface-Only view:** Speakers store every word they hear, complete with all phonetic detail.
 - URs do not exist

Panjabi Language



- Native language of more than 78 million people in Pakistan
- Spoken by around 33 million people in India.

Panjabi Phonology

- Pronouncing a vowel with vs. without **nasal airflow changes the meaning of words.**
- This change is **neutralized before nasal consonants** (e.g., n)

| | | | | |
|-----|--------|-----|------|---------|
| tāā | ‘that’ | vs. | taa | ‘fever’ |
| no | CVVN | vs. | CṽṽN | |
- Nasal Harmony** process causes leftward transmission of nasal airflow to all vowels and vowel-like consonants.

| | | | |
|--------|---|---------------------|------------|
| paavēē | → | [pāāvēē] | ‘whether’ |
| ḷaaxāā | → | [ḷaaxāā] | ‘branches’ |
| aavaam | → | ?[aavāām]/[āāvēām]? | ‘public’ |

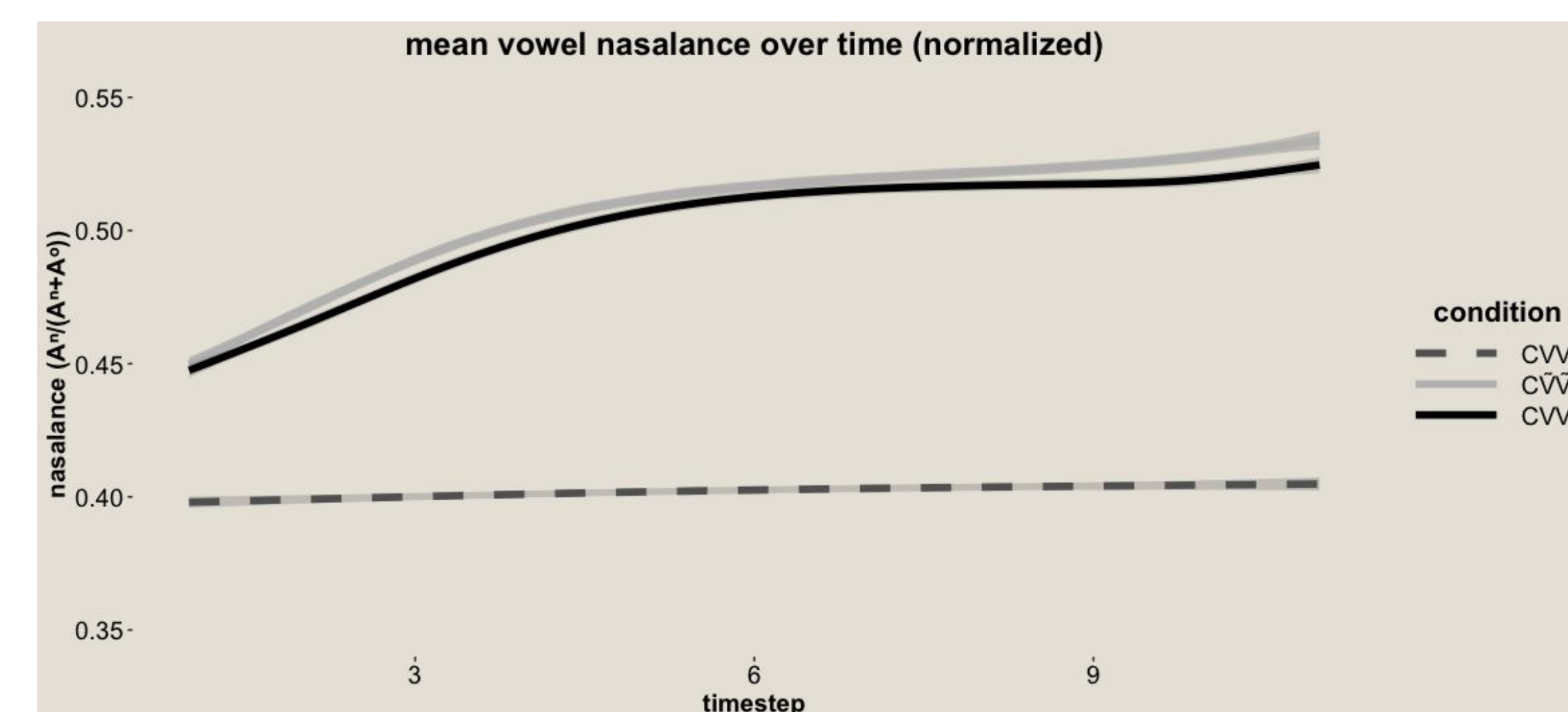
Experiment 1

Research Question: How are vowels before N realized?

- 20 Native speakers of Panjabi
- 67 words from three conditions (2,640 total tokens)
- measured nasal airflow on vowels



Results



- Takeaway:** vowels produced before nasal consonants are identical to normal nasal vowels on the surface.

Predictions for experiment 2

- Hypothesis 1:** vowels before nasal consonants trigger nasal harmony

| | | | |
|--------|---|----------|----------|
| aavaam | → | [āāvēām] | ‘public’ |
|--------|---|----------|----------|
- Hypothesis 2:** vowels before nasal consonants do not to trigger nasal harmony.

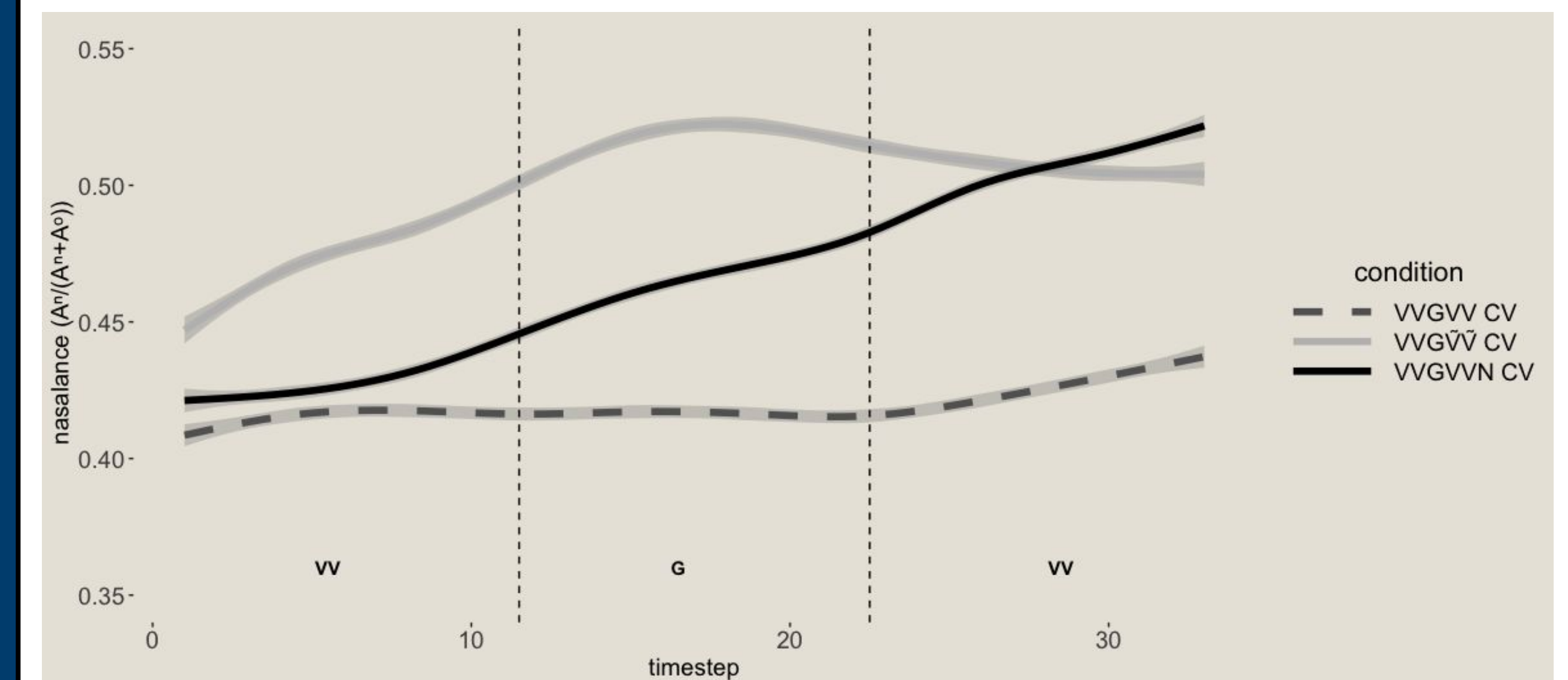
| | | | |
|--------|---|----------|----------|
| aavaam | → | [aavāām] | ‘public’ |
|--------|---|----------|----------|

Experiment 2

Research Question: What is the UR of vowels produced before nasal consonants?

- 16 Native speakers of Panjabi
- words from three conditions (2,496 total tokens)
 - VVGṽṽ CV
 - VVGṽṽ CV
 - VVGṽṽ CV
- measured nasal airflow on vowels

Results



- Takeaway:** vowels are represented differently than contrastive nasal vowels in our mental lexicons.

Narrowing down theories of URs

