

# Teaching phonetic fieldwork (recommended)

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Arts & Humanities  
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BEYOND TEXT

- Definition
- Teaching it
- Doing it – the case of Shilluk (second hour)

## **Definition of phonetic fieldwork:**

- Phonetic fieldwork is the study of unfamiliar sound distinctions, with the application of instrumental methods as a crucial ingredient.

## **Characteristics**

- It is particularly useful in relation to distinctions that: are hard to perceive to the non-native speaker; that are typologically unusual.
- Phonetic fieldwork fits well in the ethos of fieldwork and descriptive linguistics.
- This ethos is valuable to academic training.

## **The problem**

- Many descriptive linguists are not well prepared for phonetic fieldwork.

## **The problem**

- Qualitative and quantitative approaches are separated from one another in the teaching of linguistics, in several ways.

## The solution

- We need to **integrate** sound data and their interpretation in the teaching of linguistics.
- Such an effort would yield not just better fieldwork linguists, but, rather more generally, better linguists.

- How to **integrate** sound data and their interpretation in the teaching of linguistics?
- Here are some pointers –
  - A. Without know-how on speech software
  - B. In context of training with speech software
  - C. With know-how on speech software

**Accompany IPA transcriptions with sounds**

## Accompany IPA transcriptions with sounds

- IPA transcriptions are abstractions from a physical reality.
- In relation to unfamiliar sound distinctions, students often have no intuitions of what the abstraction stands for.

Example – breathy voice (Dinka):

r̥o̥oor ‘people’ vs. r̥o̥oor ‘forest’

## Accompany IPA transcriptions with sounds

- It is easy in presentations, using PowerPoint or pdf.
- It is just as easy in papers (pdf version).

Example: Remijsen & Manyang (2009). Luanyjang Dinka. *Journal of the International Phonetic Association* 39(1), 113-124. – then select pdf embedded sound files [free download].

## **Accompany IPA transcriptions with sounds**

- Raise awareness that the phenomenon is primarily language as it is spoken, and that any transcription is an abstraction from a rich and messy signal.
- Arouse enthusiasm for the amazing range of variation in the sound systems of the world's languages.
- And also – prepare for the encounter with unfamiliar and challenging sound distinctions.

ṽ = [high-level]

ǎ = [steeply rising]

ṽ̄ = [mid-level]

ṽ̂ = [steeply falling]

ṽ̇ = [low-slightly-falling]

The  
traditional  
approach  
(example: tonal  
allophony in  
Yoruba)

1. [òṽò] ‘rain’

11. [èkě] ‘liar’

2. [òwò] ‘honour’

12. [ṣègbě] ‘die’

3. [īgbā] ‘200’

13. [fērâ] ‘like’

4. [ēwū] ‘danger’

14. [sílê] ‘put down’

5. [kéré] ‘be small’

15. [ìrěkpô] ‘friendship’

## The alternative: raising awareness of sound

- An example from Matbat (Austronesian):

1. ba 'remain'

2. ba 'on target'

3. ba 'blow, flow'

4. ba 'ancestor'

5. ba 'stiff'

6. bap̚ 'father'

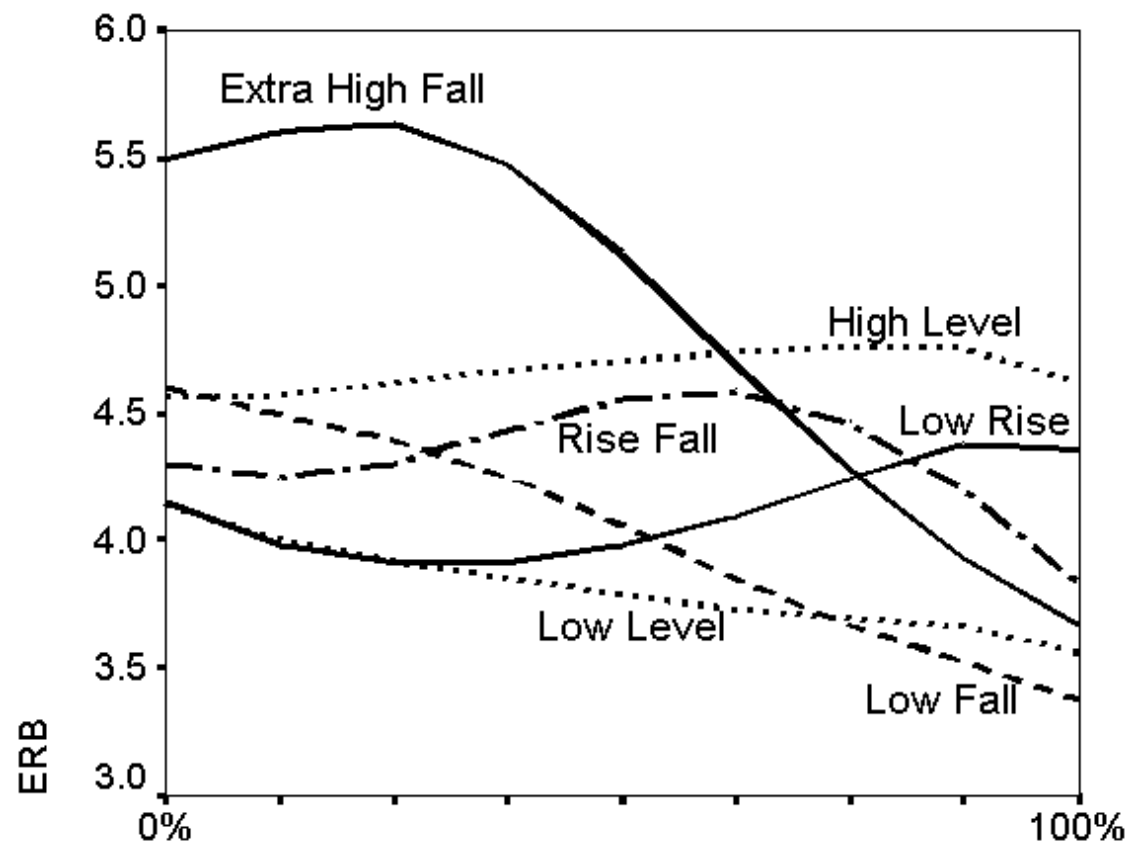


Figure: Fundamental frequency traces for each of the six tonemes of Matbat, averaged over 8 speakers

## The alternative approach

- An example from Matbat (Austronesian):

|    |      |             |                 |
|----|------|-------------|-----------------|
| 1. | bà   | ‘remain’    | Low level       |
| 2. | bâ   | ‘on target’ | Extra High Fall |
| 3. | bâ   | ‘blow,flow’ | Low Fall        |
| 4. | bá   | ‘ancestor’  | High level      |
| 5. | ǎâ   | ‘stiff’     | Rise Fall       |
| 6. | bǎp̄ | ‘father’    | Low Rise        |

- Most students are introduced to instrumental phonetics at some point during their undergraduate degree. This typically involves –
  - (a) Learn to interpret acoustic representations: waveform, spectrum and spectrogram
  - (b) Learn to use specialised software with which to process speech sounds and produce these representations

**Integrate the fieldwork perspective: bring in unfamiliar sound data from unfamiliar languages, in the context of the teaching of instrumental phonetics.**

## **Integrate the fieldwork perspective – my practice**

- The introduction of the acoustic representations (waveforms, spectral features, etc.) is based on English speech sounds
- The step-by-step practicals in Praat involve data from minority languages with unfamiliar distinctions [DATA1, DATA2]

## Integrate the fieldwork perspective – my practice

- [DATA1: a practical to learn the basics of working with Praat. The data relate to correlates of stress, using data from Ma`ya, another Austronesian language.  
<http://www.ling.ed.ac.uk/~bert/data1.zip>]
- [DATA: a practical to learn the basics of working with Praat. The data relate to spectral features of vowels, using Matbat data.  
<http://www.ling.ed.ac.uk/~bert/data2.zip>]

**Once technical expertise is acquired, it can be applied in a variety of ancillary ways in training – just as in fieldwork.**

## **At this point there are many opportunities**

- Exploring sound data in a fieldwork course
- Morphophonology exercise starting from speech data. [DATA3]
- Use of unfamiliar language data in relation to discussions in specialised courses. [DATA4]

- [DATA3: Morphophonology exercise starting from speech data; tone and intonation in Malual Dinka  
<http://www.ling.ed.ac.uk/~bert/data3.zip>]
- [DATA4: Advanced practical on the study of tonal features; includes discussion of segmental perturbation and compression  
<http://www.ling.ed.ac.uk/~bert/data4.zip>]

## **Exploring sound data in fieldwork course / example**

- Descriptive linguistics course on Ronga (Bantu, Mozambique).
- Two elicitation sessions per week with native speaker.

## **Exploring sound data in fieldwork course / example**

- Give the students the opportunity to record items.
- Make these recordings available online.
- Point to literature that will enable the students to interpret the instrumental evidence – e.g. Ladefoged & Maddieson's *The sounds of the world's languages*.

## Exploring sound data in fieldwork course / example

- Here are two items the students asked to record:

tiɬo

eye

na-k<sup>h</sup>anela

1SG-walk

'I am walking'

- A great opportunity to integrate acoustic information along with the other sources (e.g. visual information, classical phonological analysis, etc.).

## **Supporting phonetic investigation in the field**

- Discuss in advance the role of the collection and analysis of phonetic data will play in relation to time management.
- Watch out for a lack of balance. Are challenging distinctions ignored? Are there signs of ‘quantitative escapism’?

- Integrating sounds and the analysis of sound in linguistics training is easy.
- It is valuable to the teaching of linguistics, because it:
  - (a) arouses enthusiasm re. the world's languages
  - (b) gets the students closer to the real thing
  - (c) encourages resourcefulness and technical skill
  - (d) prepares for phonetic fieldwork