

# Phonetic Variations between Mid-Vowels in Swiss French and Standard French

Anna Buffington, Carly Kleiber, Rebecca Kopps, Dr. Jessica Miller  
 buffinam@uwec.edu, kleibecm@uwec.edu, koppsrj@uwec.edu, millerjs@uwec.edu  
 ❖ Foreign Languages ❖ University of Wisconsin-Eau Claire ❖



## Introduction

### What is Standard French?

Standard French is spoken in the Northern part of France, around Paris. It is considered to be geographically unmarked. ★



### What is Swiss French?

Swiss French is spoken in Romandie, the francophone cantons of Switzerland. There are different types of Swiss French. The one investigated here, Vaudois French, is spoken in the Vaud canton. ★

### What are mid-vowels?

Mid-vowels are pronounced with the mouth neither too closed, nor too open. While English vowels only have three degrees of aperture (high, mid, low), French vowels have four (high, mid-closed, mid-open, open).

There are two types of French mid-vowels, which makes French pronunciation difficult to acquire for English speakers.

French mid-vowels work in complementary distribution: they are categorized by pairs, with one mid-open and one mid-closed phoneme in each pair. Mid-open phonemes are realized in closed syllables, and mid-closed phonemes in open syllables:

- mid-open [ɛ] and mid-closed [e], as in “père” but “pré”
- mid-open [œ] and mid-closed [ø], as in “peur” but “peu”
- mid-open [ɔ] and mid-closed [o], as in “dors” but “do”

### Are French mid-vowels pronounced differently in France and in Switzerland?

## Objectives

- ➡ To show phonetic variation in French
- ➡ To contribute to dialectal research
- ➡ To inform teaching methods

## Data

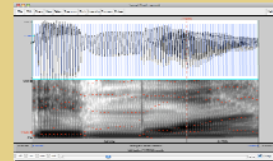
### Six speech samples

- 6 Vaudois speech samples: 3 male and 3 females
- Participants recorded by Dr. Miller in 2005
- They read a list of words containing contrastive phonemes
- No samples from standard French analyzed, but existing data were used

## Methods

### Formant analysis

- Formants represent resonating frequencies and can be measured in Hz
- The quality of vowels can be described through formant analysis
- Formant 1 describes open/closed; Formant 2 describes high/low



Each mid-vowel pair was tagged and examined in the speech analyzer Praat, illustrated here with formants shown in red.

A script automatically retrieved F1 and F2 values for each tagged vowel.

## Results

### [ɛ] and [e]

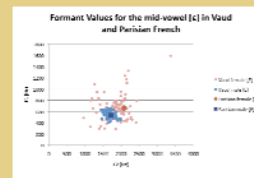


Figure 1 : F1 and F2 values for [ɛ]

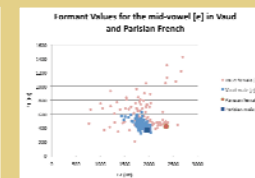


Figure 2 : F1 and F2 values for [e]

### [œ] and [ø]

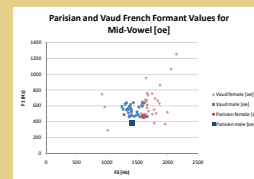


Figure 3 : F1 and F2 values for [œ]

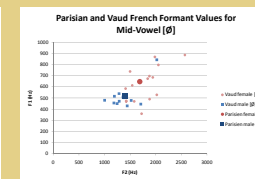


Figure 4 : F1 and F2 values for [ø]

### [ɔ] and [o]

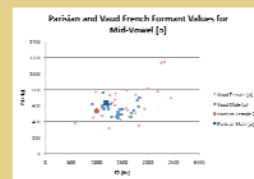


Figure 5 : F1 and F2 values for [ɔ]

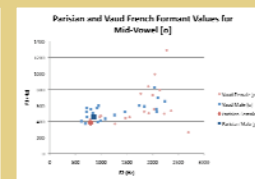


Figure 6 : F1 and F2 values for [o]

## Conclusion

### Dialectal differences

4 out of 6 mid-vowels display observable difference across dialects:

- [e] shown in Figure 2
- [œ] shown in Figure 3
- [ɔ] shown in Figure 5
- [o] shown in Figure 6

**This supports our hypothesis that some mid-vowels are pronounced differently in France and in Switzerland.**

## Applications

### Travel

Knowing how dialects differ in the francophone world can make international business and traveling more efficient.

### Foreign Language Teaching Implications

By studying dialectal variation in mid-vowels, students can better understand how they are realized. They can improve their perception and pronunciation skills while learning about the francophone culture.

Instructors should thus point out dialectal differences and prepare learners to listen for and identify those features in order to understand and be understood by speakers from the French-speaking world.

But questions arise:

- Should all French dialects be taught to some extent? If not, which ones?
- Would those differences be too confusing for learners?
- How should those distinctions be approached in class?

## Acknowledgements

We would like to thank Differential Tuition at the University of Wisconsin-Eau Claire for its poster printing support, and the University of Illinois at Urbana-Champaign for their support with the data collection process.

## References

1. Goslin, J., and Frauenfelder, U. H. 2008. “Vowel Aperture and Syllable Segmentation in French”. *Language and Speech*. 51: 199-222.
2. Nguyen, N. and Fagyal, Z. 2003. “Acoustic aspects of the vowel harmony in French”. *Proceedings of the XIVth International Congress of Phonetic Sciences*. 3029-3032. Barcelona, Spain.
3. Map from europe.ski.com/\_images/maps/Regions/map-europe.jpg
4. List of words provided by PFC (Phonologie du Français Contemporain). More info at [www.projet-pfe.net](http://www.projet-pfe.net).
5. Praat speech analyzer software available for free download at [www.praat.org](http://www.praat.org)