A whole new /iw/: The changing syllabification of yod

Aidan Malanoski[1], Bill Haddican[1,2], Kyle Gorman[1], Cynthia Gan[2], Jack Lacey[2], Jack Lynch[2], Donna Shair[2], Andrew Shillingford[3], Samuel H. Sokol[2], Kujege Thiam[3]

Introduction

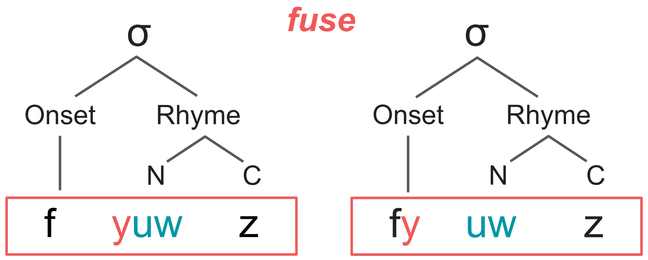
Which pairs rhyme?

BOOT	/buwt/	-	**MUTE**	/myuwt/
DUDE	/duwd/	-	**FEUD**	/fyuwd/
FOOL	/fuwl/	-	**MULE**	/myuwl/
SHOES	/ʃuwz/	-	**FUSE**	/fyuwz/
ZOO	/zuw/	-	**VIEW**	/vyuw/

- Speakers disagree on whether pairs like these rhyme.
- We present apparent-time evidence for change in rhyme judgments for such pairs, and consider the consequences for the phonology of yod in American English (AmE).

Background

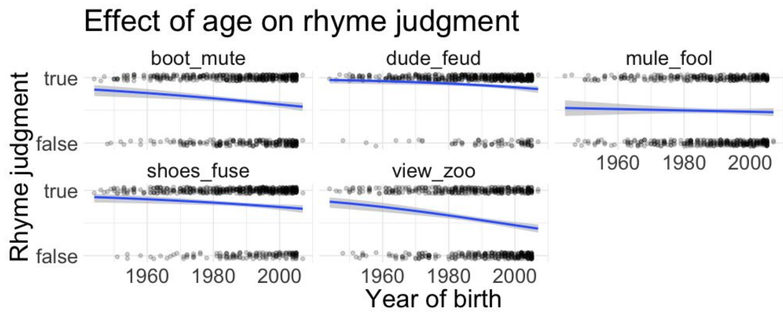
- Historically, [y] only occurred in [CyV] sequences as part of a diphthong /iw/ [yu] [1–3].
- Contemporary AmE provides ambiguous phonotactic evidence for the position of /y/ in /CyV/ sequences [4–5].
- AmE speakers vary in whether they assign /y/ to the onset or nucleus in /CyV/ sequences [4, 6].



Data and Results

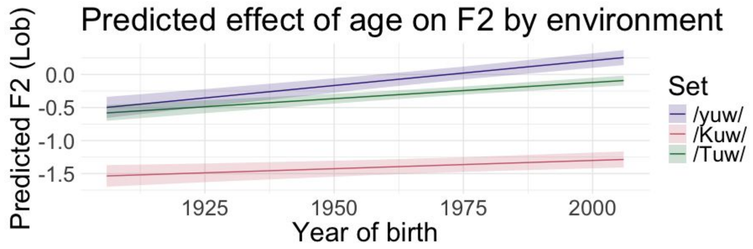
Perception data: Rhyme judgments

- 645 adult native English speakers from Delaware, Maryland, New York, New Jersey, and Pennsylvania recruited on Prolific.
- Provided binary forced choice judgments for five pairs testing /uw/-/yuw/ rhymes.
- Stimuli were presented in writing.
- A generalized linear mixed effects regression model finds that younger speakers are less likely to say that /uw/-/yuw/ pairs rhyme (B=–0.022; SE=0.006).



Production data: Corpus of New York City English

- 201 speakers from New York City [7].
- A linear mixed effects regression model finds that /uw/ has a similar F2 after /y/ and coronals (/Tuw/), but /uw/ fronts faster after /y/ than after coronals or non-coronals (/Kuw/).



Discussion

Analysis 1: Younger speakers increasingly include part of the onset in evaluating rhymes.

- It's unclear what would trigger a change in rhyme evaluation.
- It is unusual for the onset of a stressed syllable does not affect rhyme [8].

Analysis 2: Younger speakers increasingly have a different allophone following /y/, and this prevents a rhyme.

- Production data suggest that /yuw/ may have a different allophone of /uw/ than /Tuw/ or /Kuw/.
- It's not yet clear whether allophonic differences affect perfect rhyme.

Analysis 3: Younger speakers increasingly place /y/ in the nucleus, so words like *mute* have a different vowel than words like *boot*.

- It's not clear what would trigger this change in syllable structure.

Future Directions

- A **modified Pig Latin task** that tests whether speakers place /y/ in the onset or nucleus (cf. [4]).
- An **expanded rhyme task** that examines the effect of /uw/ allophone (post-coronal, post-yod, etc.) on rhyme judgments.

References

[1] Wells, J. C. 1982. *Accents of English I: An introduction*. Cambridge: Cambridge University Press.
[2] Harris, John. 1994. *English sound structure*. Oxford: Blackwell.
[3] Labov, William, Sharon Ash & Charles Boberg. 2006. *The atlas of North American English: Phonetics, phonology and sound change*. Berlin: Mouton De Gruyter.
[4] Barlow, Jessica A. 2001. Individual differences in the production of initial consonant sequences in Pig Latin. *Lingua* 111. 667–696.
[5] Gorman, Kyle. 2013. *Generative phonotactics*. Philadelphia: University of Pennsylvania PhD thesis.
[6] Barlow, Jessica A. 1996. The development of on-glides in American English. In Andy Stringfellow, Dalia Cahana-Amitay, Elizabeth Hughes & Andrea Zukowski (eds.), *Proceedings of the 20th Annual Boston University Conference on Language Development*, 40–51. Somerville: Cascadilla Press.
[7] Tortora, Christina, Cecelia Cutler, Bill Haddican, Michael Newman, Beatrice Santorini & C. E. Ariel Diertani. In progress. Corpus of New York City English (CUNY-CoNYCE), https://conyce.commons.gc.cuny.edu/.
[8] McPherson, Laura. 2019. Musical adaptation as phonological evidence: Case studies from textsetting, rhyme, and musical surrogates. *Language and Linguistics Compass* 13(12). e12359.

[1]CUNY Graduate Center. [2]Queens College, CUNY. [3]Lehman College, CUNY.

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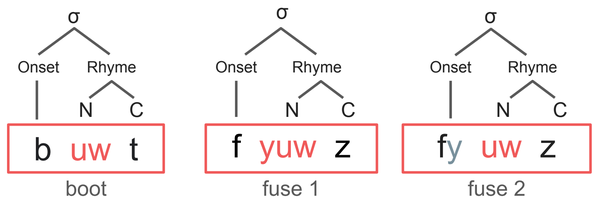
ZOO	/zuw/	-	**VIEW**	/vyuw/

There is disagreement as to if these words rhyme or not. For those who say these words don't rhyme, it seems like the /y/ before the /u/ is affecting rhyme judgments. This poster presents initial findings on apparent-time change in the phonology of /Cyuw/ sequences.

Background

Syllables & Hypothesis



A **Rhyme** contains the nucleus (vowel) of the syllable and anything that comes after it. We hypothesize that some speakers put the /y/ in the onset, and others in the rhyme.

History

Historically, /Cyuw/ sequences developed from the diphthong /iw/. It changed from [iu̯] to [yu] (Harris 1994; Labov, Ash & Boeberg 2006).

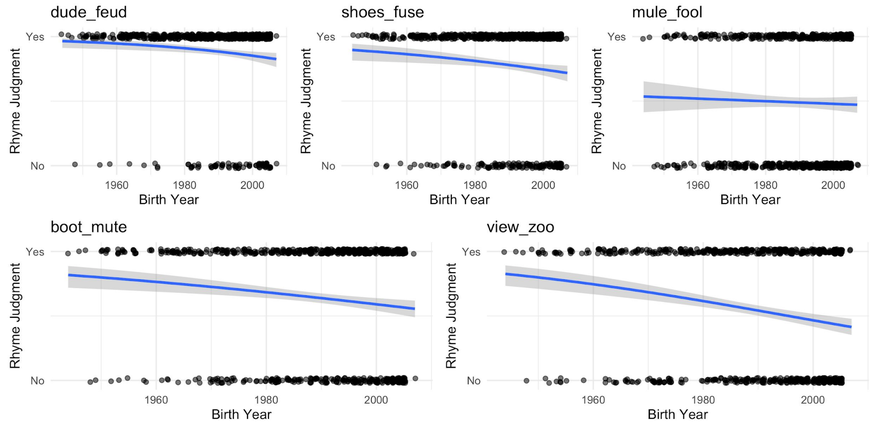
Previous Research

There is variation in treating /y/ as part of the rhyme or not, seen in a pig-latin type task (Barlow 2001).

Data and Results

Data Collection

645 Native English speakers from Delaware, Maryland, New York, New Jersey, and Pennsylvania judged (in a forced binary choice) whether pairs of /uw/-words and /yuw/-words rhymed or not in a survey . They also provided an audio recording of them saying the words.



A binary regression shows that **younger participants** were **less likely** to judge the /uw/-/yuw/ pair as rhyming compared to older speakers, meaning that as time passes, more people are taking the /y/ into account when evaluating the rhyme.

CoNYCE

Data from 201 speakers from the Corpus of New York City English (Tortora et al., in progress) was examined for actual phonological change (CoNYCE is not fully reflective of the participant set for this study, as speakers from other areas of the North Atlantic also participated).

There is an interaction between participant age and fronting speed; /yuw/ is being fronted faster than /uw/ without /y/. These phonological differences may feed phonetic change.

Space for another graph (CoNYCE data)

Discussion

Possible Interpretations

1. Yod remains in the onset, but younger speakers take part of the onset into account into evaluating rhyme.
   - Unclear what would trigger such a change
   - It is standardly assumed that onsets don't play a role in rhyme
2. Yod remains in the onset but conditions a different allophone of /uw/ for younger speakers. Anecdotal evidence suggests that in evaluating rhyme, speakers are not sensitive to allophonic differences, so they do not affect vowel judgments.
   - anecdotal evidence suggests that speakers are not sensitive to allophonic differences in evaluating rhyme

Our Interpretation

Younger speakers tend to place yod in the nucleus rather than the onset, having the diphthong /yu/ - they reject the rhymes because they have different vowels. This is a recreation of the historical diphthong /iw/.

Future Directions

"Cow-Latin" Task

A pig-latin style language game in which the onset cluster is moved to the end of word and syllabified with [u] should be able to reveal whether speakers syllabify /y/ in the onset or nucleus.

e.g. Mute [myut] → [utmyu] or [yutmu]

Corpus/Home Languages?

References

Barlow, J. A. (2001). Individual differences in the production of initial consonant sequences in Pig Latin. *Lingua*, *111*(9), 667–696. https://doi.org/10.1016/S0024-3841(00)00043-7

Harris, J. (1996). *English sound structure* (reprint). Blackwell.

Labov, W., Ash, S., & Boberg, C. (2006). *The atlas of North American English: Phonetics, phonology and sound change a multimedia reference tool*. Mouton de Gruyter.

McPherson, L. (2019). Musical adaptation as phonological evidence: Case studies from textsetting, rhyme, and musical surrogates. *Language and Linguistics Compass*, *13*(12), e12359. https://doi.org/10.1111/lnc3.12359

Tortora, Christina, Cecelia Cutler, Bill Haddican, Michael Newman, Beatrice Santorini & C. E. Ariel Dierdani. In progress. Corpus of New York City English (CUNY-CoNYCE), https://conyce.commons.gc.cuny.edu/

[1]CUNY Graduate Center. [2]Queens College, CUNY. [3]Lehman College, CUNY.

Notes

- j or y - either one is fine if it’s consistent
- data - good?
-

Stuff to do

- Tweak data collection (scrap home language thing and add more information/data from the NYC corpus)
- Emphasize interpretation 3
- Change future directions
- acknowledgements
- Size requirement for poster
- Who is submitting?

Poster File Details:

- You may use any application to create your poster.
- The resulting file must be submitted as an image, in .png or .jpg format
- 16:9 aspect ratio is required
  - Minimum width 1000px (24.46 cm)
  - Minimum height 600px (15.68 cm)
- Landscape orientation is preferred (others will require viewers to scroll while you are presenting)
- Maximum file size is 3MB
- Do not use a transparent background.
- Optional: You may create a preview image
  - The preview is half the size of the poster (500x300px)

Presenters

- Cynthia Gan
- Sam Sokol
- Donna Shair - Online
- Jack Lynch - Online
- Yanni - Coming but not author
- Niya - Coming but not author
- (Aidan)

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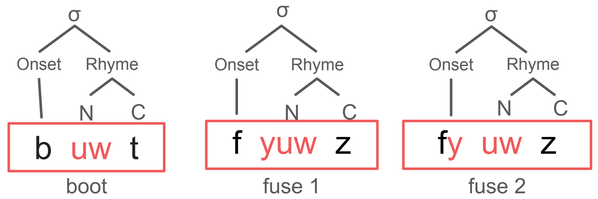
DUDE	/dud/	/fyuz/	
FEUD	/fyud/		
		ZOO	/zu/
FOOL	/ful/	**VIEW**	/vyu/
MULE	/myul/		

There is disagreement as to if these words rhyme or not. For those who say these words don't rhyme, it seems like the yod before the vowel is affecting people's rhyme judgments.

This poster presents initial findings on apparent-time change in the phonology of /Cjuw/ sequences.

Background

Syllables & Hypothesis



A **Rhyme** contains the nucleus (vowel) of the syllable and anything that comes after it. We hypothesize that some speakers put the /y/ in the onset, and others in the rhyme.

History

In the past, yod occurred in this environment as part of the diphthong /iw/, not a consonant cluster (Harris 1994; Labov, Ash & Boeberg 2006).

Previous Research

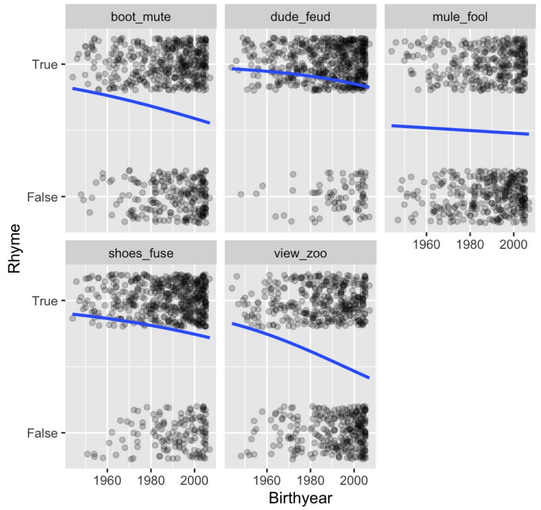
There is variation in treating yod as part of the rhyme or not, seen in a pig-latin type task (Barlow 2001).

Data and Results

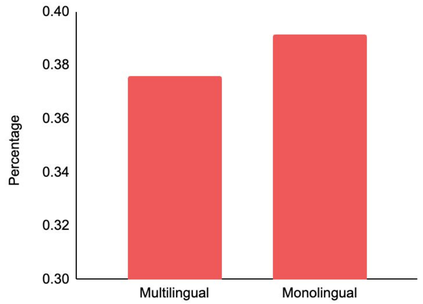
Data Collection

645 Participants (Native English speakers from Delaware, Maryland, New York, New Jeresey, and Pennsylvania) judged whether pairs of /uw/-words and /yuw/-words rhymed or not in a survey, and also provided an audio recording of them saying the words. Statistical analyses were conducted using the rhyme judgment data, and phonological analyses of formants were conducted using the audio recordings.

Judgments of /yuw/-/uw/ rhymes by birth year



Younger participants were **less likely** to judge the /uw/-/yuw/ pair as rhyming compared to older speakers, meaning that as time passes, more people are taking the yod into account when evaluating the rhyme.



Participants from **bilingual** or **multilingual** homes were less likely to judge the /uw/-/yuw/ pair as rhyming compared to participants from English-only homes.

Discussion

Interpretation 1

There is a change in rhyme evaluation: yod remains in the onset, but younger speakers take part of the onset into account into evaluating rhyme.

Interpretation 2

Yod remains in the onset but conditions a different allophone of /uw/ for younger speakers. Anecdotal evidence suggests that in evaluating rhyme, speakers are not sensitive to allophonic differences, so they do not affect vowel judgments.

Interpretation 3

Younger speakers tend to place yod in the nucleus rather than the onset, which amounts to having a diphthong /yu/. Thus speakers with this diphthong reject *boot* and *mute* as rhyming

Future Directions

Cow-Latin Task

Pig-latin style language game in which onset cluster is moved to end of word and syllabified with [u]:

- Mute [mjut] → [utmju] or [jutmu]

Can reveal whether speakers syllabify [j] in the onset or nucleus.

Home Language

A more fine-grained analysis based on specific home language(s) can be conducted.

Acknowledgements

Citations

[1]CUNY Graduate Center, [2]CUNY, [3]CUNY Queens College, [4]CUNY Lehman College

The changing syllabification of yod

Cynthia Gan - CUNY Queens College
Bill Haddican (CUNY Queens College), Aidan Malanoski (CUNY Graduate Center)

Introduction

Which pairs rhyme?

BOOT	/but/		
MUTE	/mjut/	**SHOES**	/ʃuz/
		FUSE	
DUDE	/dud/	/fjuz/	
FEUD	/fjud/		
		ZOO	/zu/
FOOL	/ful/	**VIEW**	
MULE	/mjul/	/vjuw/	

Some people don't agree if these words rhyme.

A **Rhyme** in linguistics contains the nucleus (vowel) of the syllable and anything that comes after it.

The *voiced palatal approximant,* also called the **yod**, is the sound that the english Y makes, like in *yellow.* It is written as /y/ or /j/. This sound is a consonant, even though approximants could be vowel-like.

For those who say these words don't rhyme - it seems like the yod before the vowel is affecting people's

Method

Main Data Collection

645 Participants judged whether pairs of /uw/-words and /yuw/-words rhymed or not in a survey, and also provided an audio recording of them saying the words. Statistical analyses were conducted using the rhyme judgment data, and phonological analyses of formants were conducted using the audio recordings.

Additional Pilot Survey

12 Participants were given a Pig Latin type task where they moved the onset of a single syllable word, where the yod should be moved if it is part of the onset, and kept if it is part of the rhyme. In addition to the new task, participants also answered the original rhyme judgment task.

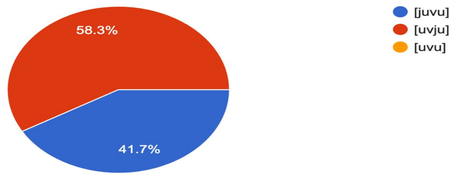
Previous Research

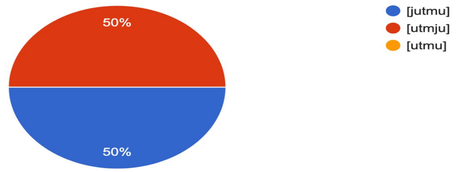
Historically, /Cyuw/ environments originated from the diphthong **/iw/,** meaning that the /y/ came from a vowel, /i/ (Harris 1994; Labov, Ash & Boberg 2006).

There is variation in treating yod as part of the rhyme or not, seen in a pig-latin type task (Barlow 2001).

Results: Additional

Participants **did have variation** in how they treated the yod in the pig latin-type task; some moved the yod, treating it like an onset, and some kept it in place, treating it like it's part of the nucleus.



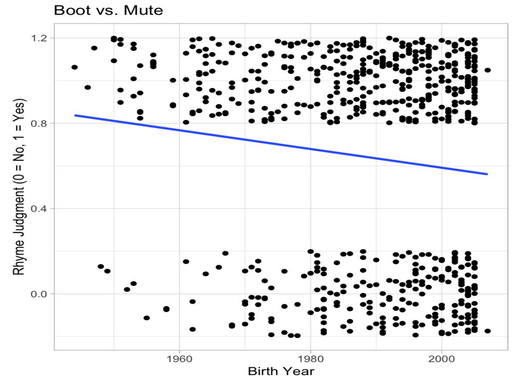


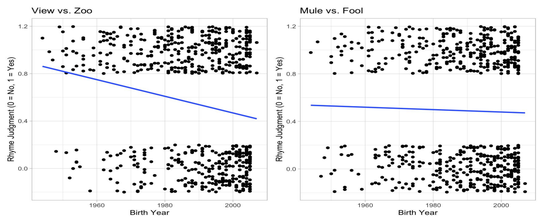
Participants were mostly consistent in if they moved the yod or not throughout the task.

	view	feud	mute
1	MOVED	MOVED	MOVED
2	MOVED	MOVED	MOVED
3	MOVED	MOVED	MOVED
4	KEPT	KEPT	KEPT

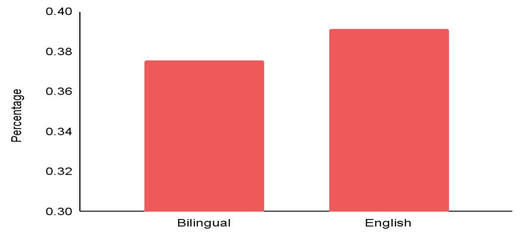
Results: Main

Younger participants were **less likely** to judge the /uw/-/yuw/ pair as rhyming compared to older speakers, meaning that as time passes, more people are taking the yod into account when evaluating the rhyme.





Participants from **bilingual** or **multilingual** homes were less likely to judge the /uw/-/yuw/ pair as rhyming compared to participants from English-only homes.



Discussion

Why is this happening in the first place?

There are some possible interpretations of this phenomenon. One is that younger speakers are taking part of the onset into account when judging. Another is that younger speakers are placing the yod in the nucleus rather than the onset. The additional survey was created to investigate this issue.

Additional Survey

One issue with the survey I had is how the pig latin task and the rhyme judgments didn't align as expected. It can be argued that participants who moved the yod and say the pair didn't rhyme has the system of the former hypothesis, but I don't know how to interpret the participants who kept the yod in the nucleus and say the pairs didn't rhyme.

Conclusion

language(s) can be conducted in the future.

1. There is **variation** in whether speakers consider /uw/-/yuw/ pairs as rhyming or not.
2. More and more people consider /uw/-/yuw/ pairs as **not rhyming** as **time passes**.
3. One possible interpretation is that the yod is acting more like a vowel, and is becoming **part of the nucleus**.

Acknowledgements

Thank you to Professor **Bill Haddican** and **Aidan Malanoski** for letting me work on this project.

Works Cited

Barlow, Jessica A. 2001. Individual differences in the production of initial consonant sequences in Pig Latin. *Lingua* 111. 667–696.

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