Before the rise of um

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September 12, 2019

1 Introduction

One of the most dramatic discourse-pragmatic changes in twentieth-century English has progressed under the radar of laypeople and (until recently) linguists: the rise of *um* as the predominant variant of the 'filled pause' variable (UHM) at the expense of *uh* (Fruehwald, 2016; Tottie, 2011; Wieling et al., 2016). Fruehwald (2016: 43) documents this "textbook" change over 100+ years of apparent time: *um* increases incrementally between generations and the rise is led by women. In this chapter, we investigate (UHM) at an early stage of change to determine what triggered the rise of *um*.

2 (UHM) as a pragmatic marker

We follow Fruehwald (2016), Wieling et al. (2016), and Tottie (2016), among others, in treating *uh* [əː] and *um* [əːm] (also written as *er* and *erm*) as variants of one variable, termed (UHM).

The exact nature of (UHM) as a linguistic feature is not a trivial question. A great deal of ink has been spilled over whether they are produced consciously or unconsciously, and what their purpose is. For example, Maclay and Osgood (1959: 41–42) characterize (UHM) as a floor-management device which speakers insert to indicate that they do not want to be interrupted when hesitating over what to say. Levelt (1983, 1989) describes (UHM) as an involuntary noise produced as a result of production problems: "*er* apparently signals that at the moment when trouble is detected, the source of the trouble is still actual or quite recent. But otherwise, *er* doesn't seem to mean anything. It is a symptom, not a sign" (Levelt, 1989: 484).

One problem with the involuntary "symptom" view is that, as Clark and Fox Tree (2002) point out, speakers have some control over whether or not they produce (UHM)—for example, it can be suppressed in a public speaking context (and indeed speakers are often counselled to do so). They argue that (UHM) is an "interjection" used to signify a delay, with *um* signalling longer delays than *uh*.

Recently, Tottie (2016) has put forward the argument that (UHM) is a pragmatic marker that, in speech, indicates planning. This is on the basis that (UHM) is used more frequently in contexts requiring more speaker planning, such as narratives and responses to questions. Tottie (2017) describes (UHM) as being on a "cline of lexicalization", where apparently-cliticized forms like *and-uh* and *but-uh* are not perceived as words, but *uh* and *um* alone are.

3 Change in progress

The rise of *um* has now been described extensively in the variationist and corpus-linguistic literature, across a number of corpora and speech communities. The typical finding is that women have a higher *um–uh* ratio than men, and that younger speakers have a higher *um–uh* ratio than older ones. This pattern has been demonstrated in various speech communities and contexts in the United States (Acton, 2011; Fruehwald, 2016; Laserna, Seih, & Pennebaker, 2014; Wieling et al., 2016), as well as in England and Scotland (Tottie, 2011; Wieling et al., 2016), both in real and apparent time. Wieling et al. (2016) also show that this pattern extends beyond English to five other Germanic languages: Dutch, German, Norwegian, Danish, and Faroese.

While these accounts demonstrate definitively that a change is underway, an explanation for the change remains elusive. What was the trigger for this "textbook" change? Fruehwald (2016) and Wieling et al. (2016) both suggest that a new meaning or function for *um* may have emerged in English[1]. In this chapter, we investigate data from before the rise of *um* with the goal of evaluating the functional expansion hypothesis.

4 Data and coding

The data for this study are from the *Farm Work and Farm Life Since 1890* oral history collection (Denis, 2016). The corpus consists of oral history interviews with 155 elderly farmers, recorded in 1984. The corpus covers five regions of Ontario, Canada: Temiskaming, Essex, Dufferin, Niagara Region, and Eastern Ontario; for this study, speakers from the latter two regions were considered. Speaker birth years range from 1891 to 1919, just before *um* began to take off per Fruehwald (2016).

We extracted each instance of *uh* and *um* from the transcripts, excluding unrelated instances such as *uh-oh*. Tokens from the two much-younger interviewers was also extracted, and analyzed separately. The transcription protocol emphasized faithful reproduction of *uh* and *um*.

The data were coded for the following social factors: year of birth, gender, and region (Niagara or Eastern Ontario).

To operationalize the functional expansion hypothesis, we coded for utterance position (initial or non-initial).

5 Results

5.1 Proportional frequency

Table 1 shows how our data compare with previous communities analyzed. The first block summarizes our data from Niagara and Eastern Ontario, as well as F-INT and M-INT, the two younger interviewers. The second block summarizes results from previous work on the Switchboard corpus (Godfrey, Holliman, & McDaniel, 1992), the Fisher corpus (Cieri, Miller, & Walker, 2004), the Philadelphia Neighborhood Corpus (PNC) (Labov & Rosenfelder, 2011), and the British National Corpus (BNC) (2007). The numbers for all of these other corpora are drawn from Wieling et al. (2016).

As can be seen in the table, *um* is less frequent in our data compared to the more recent corpora; the female interviewer uses it around half the time, while the male interviewer's rate is

[1] For Wieling et al. (2016), this is a possible explanation for the crosslinguistic nature of the change: a function could have emerged in English and then spread through contact to the other Germanic languages.

Community	Raw N *uh*	Raw N *um*	% *um*	Mean *uh* /1000	Mean *um*/1000	Mean UHM/1000
Niagara	1864	357	16.1	21.3	4.1	25.4
E. Ont.	1563	168	9.7	22.6	2.4	25.0
F-INT	321	318	49.8	12.4	12.3	24.7
M-INT	255	51	16.7	13.2	2.6	15.8
Switchboard	—	—	28.3	22.1	7.5	29.6
Fisher	—	—	64.1	6.8	9.9	16.7
PNC	—	—	27.6	13.2	4.5	17.7
BNC	—	—	46.1	4.5	4.3	8.8

Table 1: Cross-community comparison

comparable to the farmers'. Relative frequency of (UHM) taken as a whole is on par with other corpora, but we are cautious about making such a comparison because each corpus was collected and transcribed differently (for related discussion, see Pichler, 2010).

Looking at individual speakers' rates, we can see that all speakers use both *uh* and *um*, but there is no clear pattern by age (Figure 1) or gender (Figure 2).

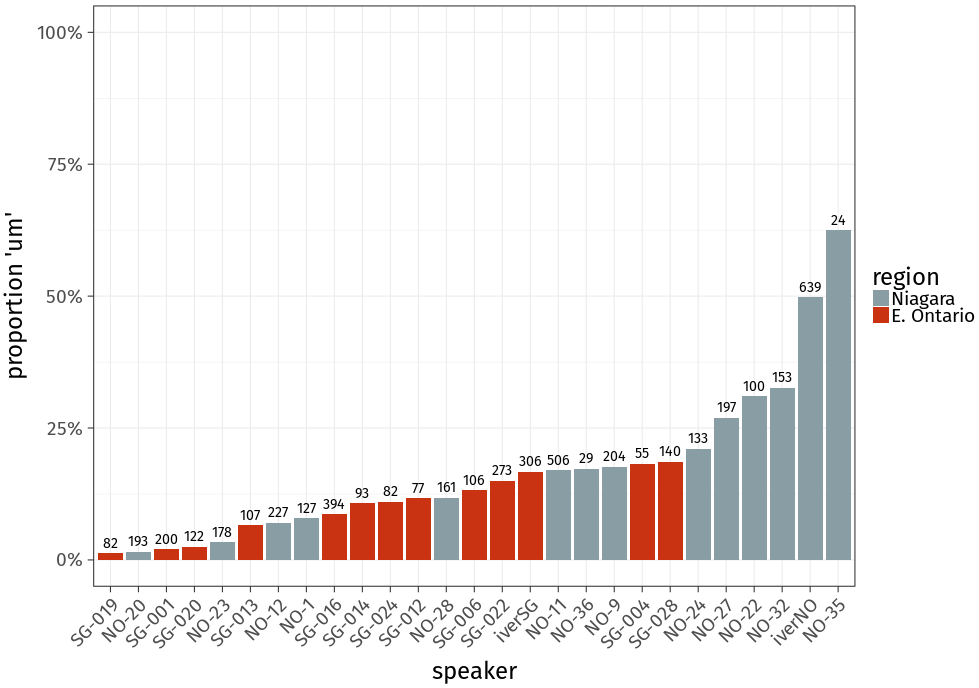

Figure 1: Proportion *um* per speaker by age.

Figure 3 shows the proportion of *um* in apparent time. There is a modest trend upward over time.

Figure 4 shows the pattern when splitting speakers by gender. Starting around 1905, women use *um* slightly more than men do.

Figure 5 shows the pattern when splitting tokens by position (initial vs. non-initial). Starting

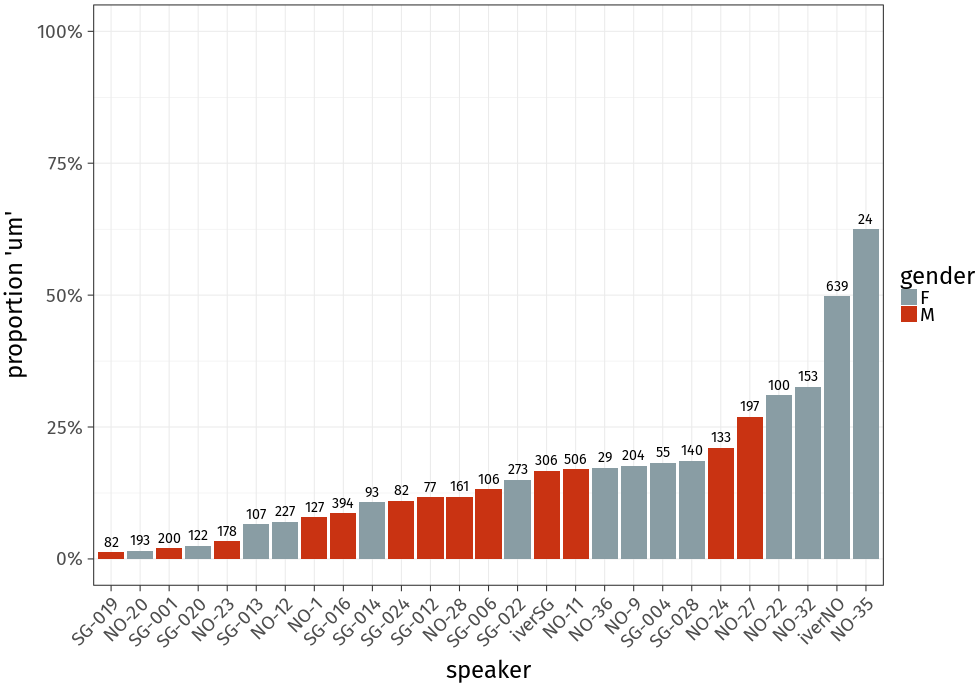

Figure 2: Proportion *um* per speaker by gender.

Figure 3: Proportion *um* in apparent time.

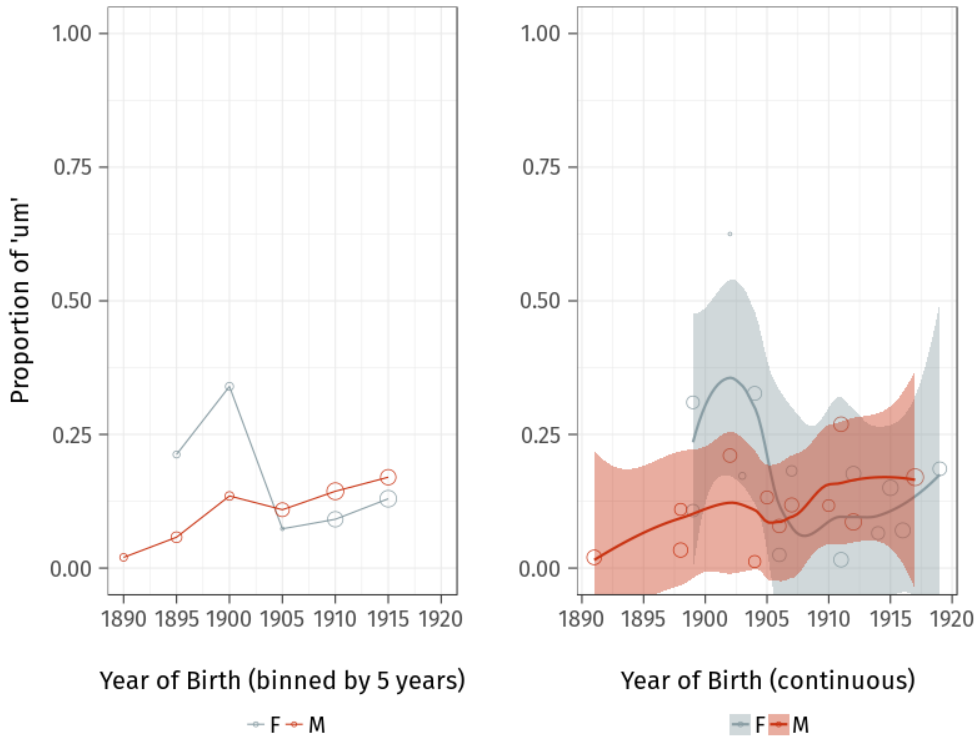

Figure 4: Proportion *um* in apparent time, by gender.

around 1905, *um* is used more frequently in initial position than in non-initial position.

Figure 6 shows the pattern when splitting tokens by cliticization with *and* or *but* and position.

Figure 7 shows a conditional inference tree for all farmers.

Figure 8 shows a conditional inference tree for the two interviewers.

Taken together, these results show the beginning of the change toward *um* that has been observed by other researchers. While other work has shown that women lead this change, in our data, older women actually use more *um* than the younger women.

Looking at internal factors, we can see that cliticized forms, like *and-uh*, favour *uh*. There is some evidence for positional divergence, possibly consistent with a new utterance-initial discourse function that favours *um* (cf. Fruehwald, 2016, who found no turn-positional difference). Conditional inference trees confirm that the internal constraints persist with the younger speakers, while their baseline *um* rate is higher.

5.2 Relative frequency

Fruehwald (2016) tests the hypothesis that functional expansion triggered the rise of um by considering changes to the relative frequency of variants over time (e.g., frequency of *um* or *uh* per 10 000 words). When a new discourse-pragmatic function emerges, we expect that these functions would add to the relative frequency of the feature, and if the new function is restricted to one variant, the relative frequency of that variant should rise, with little change to the relative frequency of the other variant. In other words, we expect a fishtail pattern as with *computer* and *typewriter* over time: once *computer* gained its contemporary meaning, its relative frequency grew additively as that meaning became more frequent. This is illustrated in Figure 9 (Figure 3 from Fruehwald, 2016): looking at the proportion of *computer* over *typewriter* (left graph), *computer*

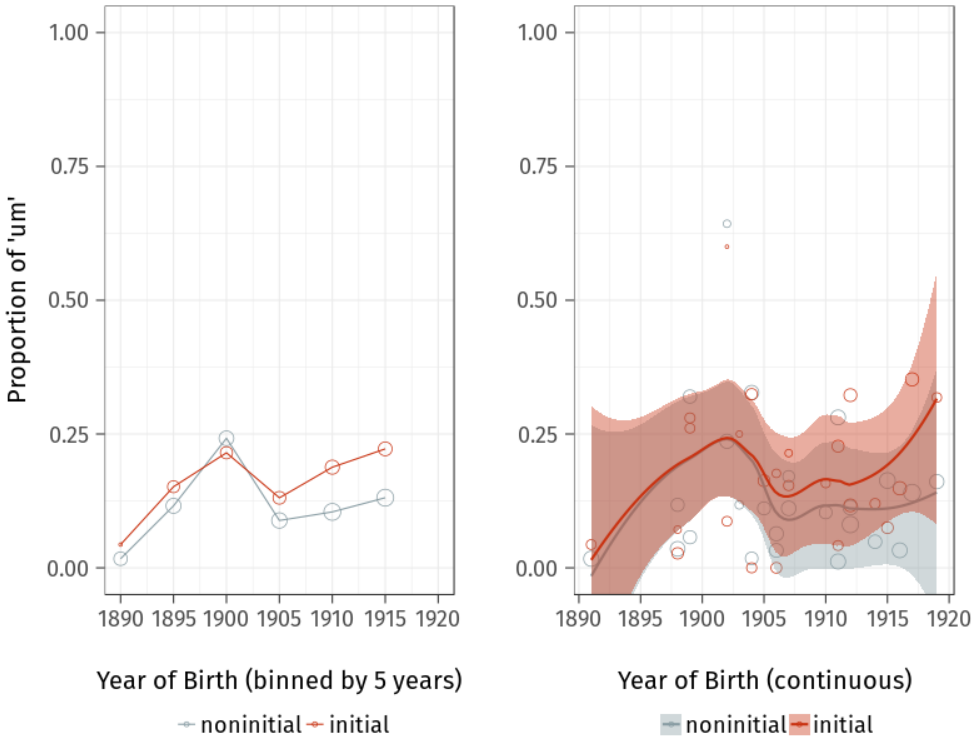

Figure 5: Proportion *um* in apparent time, by position.

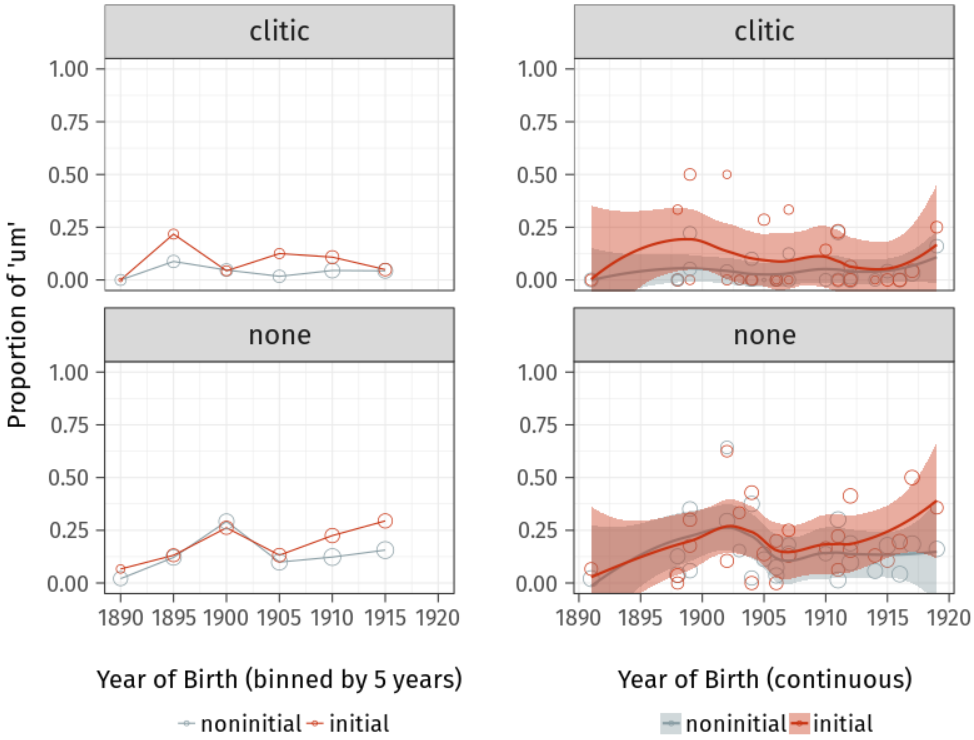

Figure 6: Proportion *um* in apparent time, by position and cliticization.

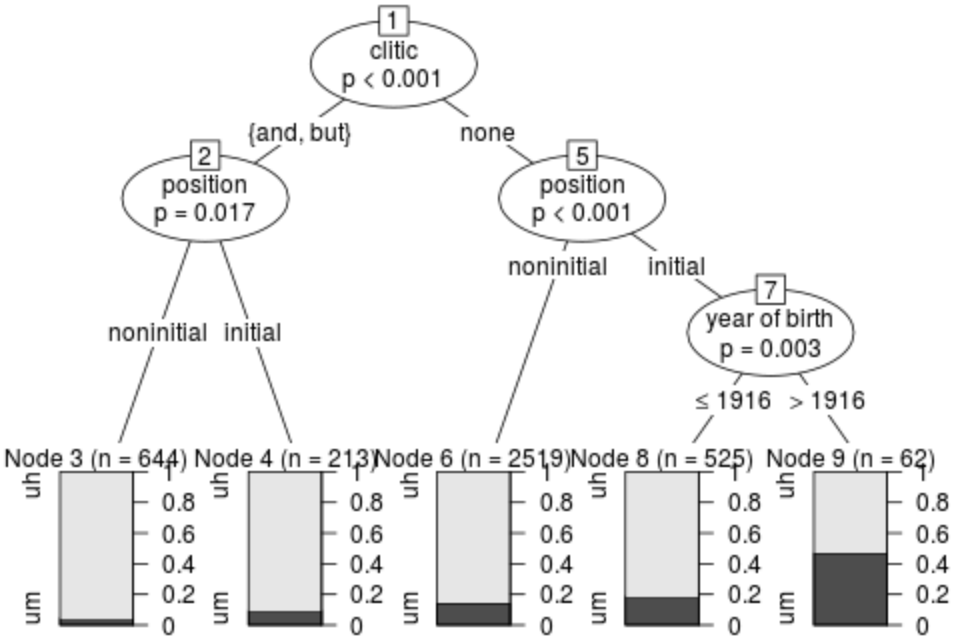

Figure 7: Conditional inference tree for farmers.

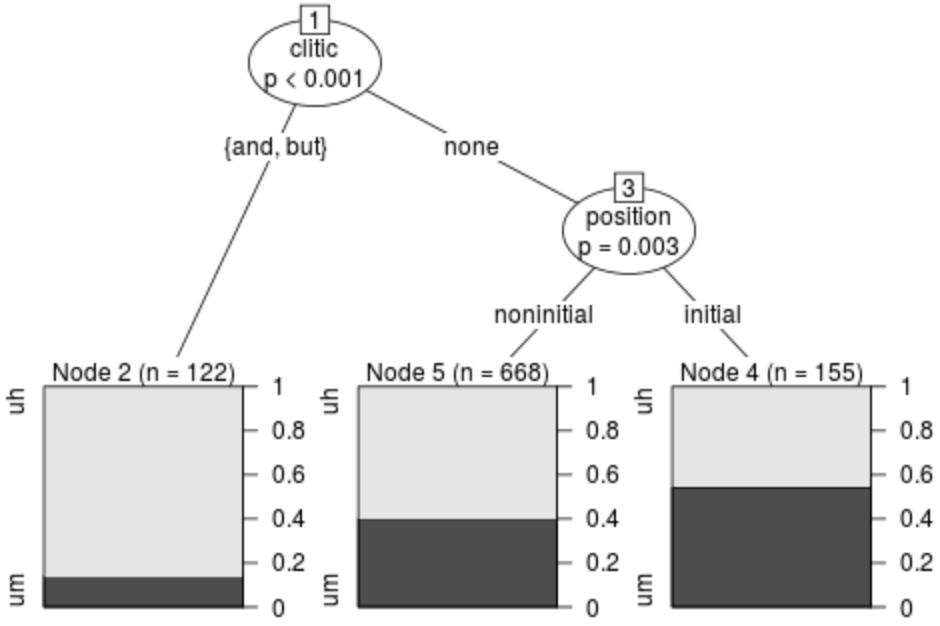

Figure 8: Conditional inference tree for interviewers.

appears to replace *typewriter* over time; but looking at the relative frequency of each word (right graph), it's clear that *typewriter* remained stable as *computer* took off.

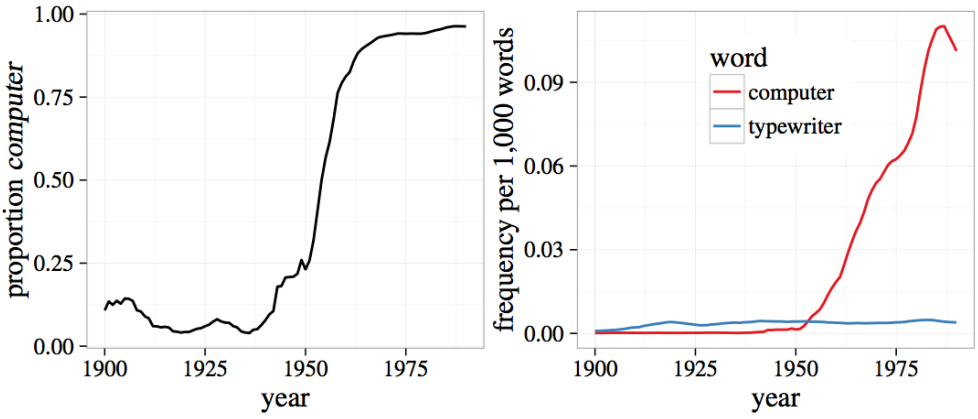

Figure 9: Proportional frequency and relative frequency of *computer* and *typewriter* (Figure 3 from Fruehwald, 2016).

If a new discourse function is what led to the rise of *um*, we should expect to see a similar fishtail pattern, with *um* rising and *uh* remaining stable. Conversely, if *um* were straightforwardly replacing *uh*, we should expect *uh* to fall concurrently with *um*'s rise.

Figure 10 shows the frequency of *um* and *uh* per 1000 words for each of farmers. There is some evidence of a fishtail pattern, but in the opposite direction as expected: *uh* is increasing as *um* remains relatively stable. The pattern is more extreme when we split the data by position, as in Figure 11. In initial position, both *um* and *uh* are largely stable, whereas in noninitial position, *uh* alone is increasing. Splitting the data again by gender, we can see that the increase can be attributed to the female speakers—there is no apparent increase over apparent time for male speakers, but the older female speakers have a relatively lower *uh* rate, rising to match the male speakers by the 1910s.

6 Discussion

Exploring data from before the rise of *um* has failed to yield insight on its dramatic rise. Looking at the proportional frequency, we do find that for a few of the younger farmers, *um* appears more frequent than *uh* in initial position, and the same is the case for the two (much younger) interviewers. Alone, this could be taken as suggestive (but not definitive, given the low number of speakers involved) evidence in favour of a new, initial-position function for *um*.

Looking at the relative frequency, however, we see that the pattern is not driven by an increase of *um* in initial position—like Fruehwald (2016), we do not find strong evidence that a new, utterance-initial function for *um* is behind the dramatic rise of *um*. Instead, we find evidence of a different change: an increase in *uh* in non-initial position.

See Extracts 1 and 2 for examples of speakers who use (UHM) frequently and infrequently, respectively.

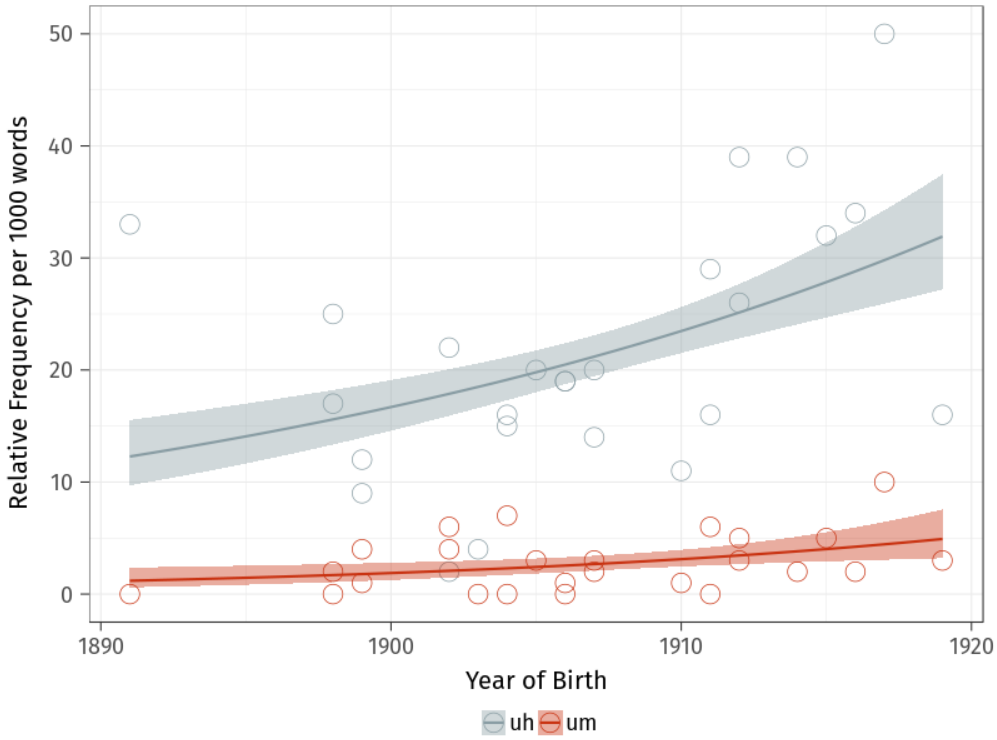

Figure 10: Name

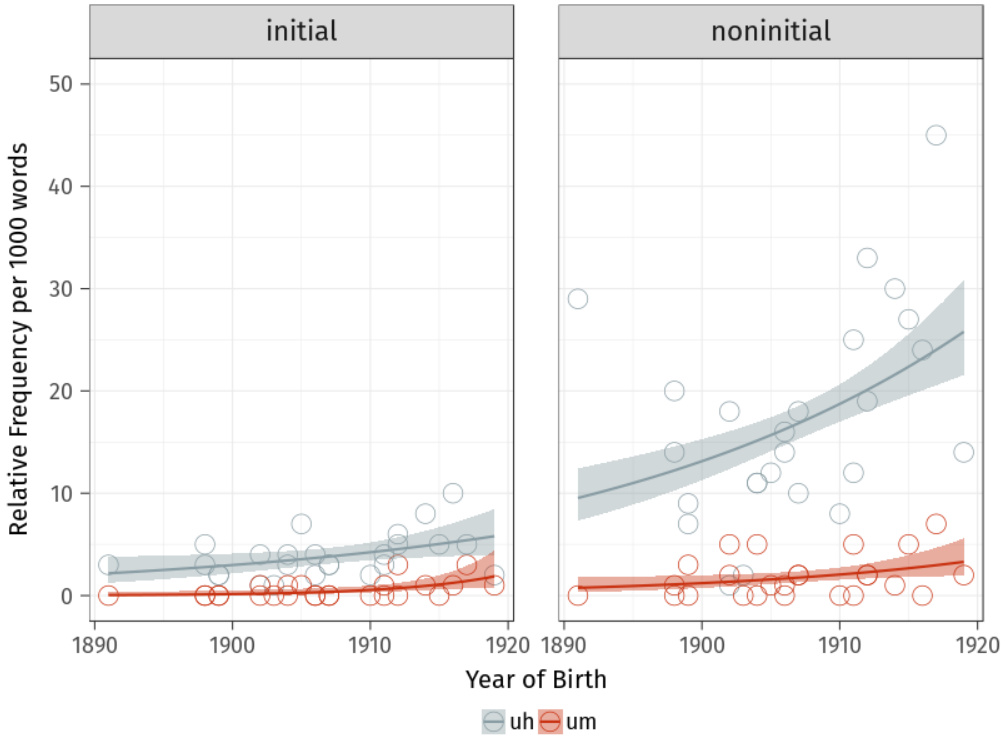

Figure 11: Name

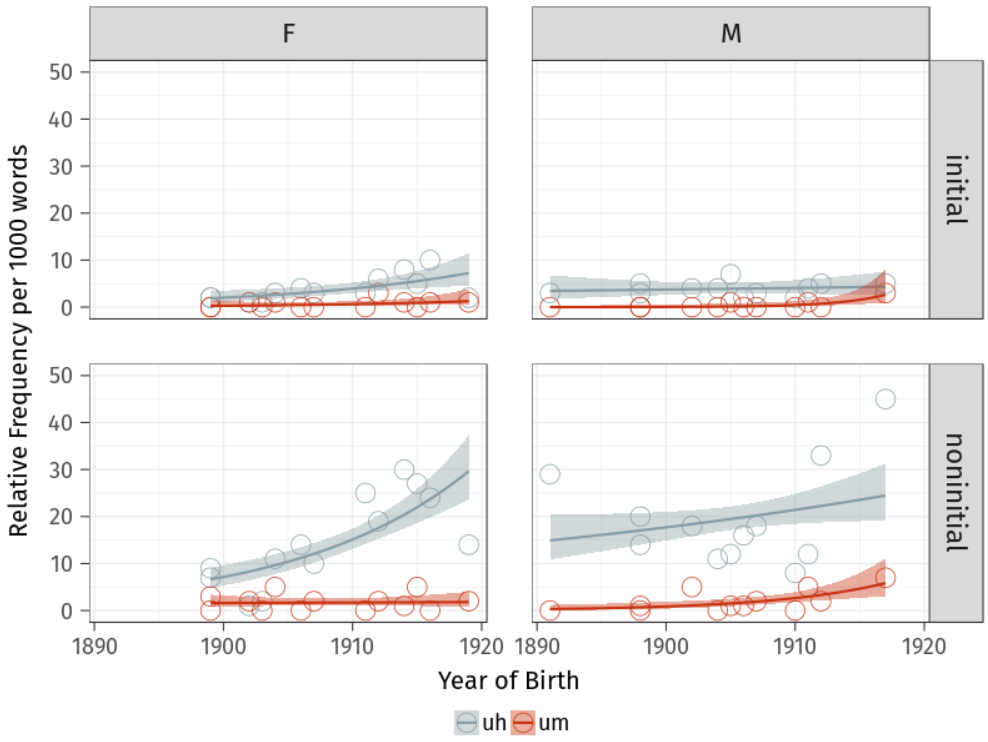

Figure 12: Name

INT: And what types of fruit (.) did you grow?
NO-11: Well the **uh** (.) originally **uh** when they came- **uh** grandfather bought the property in nineteen hundred and **uh** (.) **um** (.) to begin with there was very- there were very few fruit trees on it and they planted (.) **uh** (.) our orchard of **uh** (.) peaches. And **uh** waiting- while they waited for the peaches to come into bearing, they planted raspberries between the rows, so it started out as principally a raspberry farm I suppose but (.) it evolved into a farm that **uh** principally grew peaches and cherries, mainly sweet cherries.

Extract 1: High (UHM) user

INT: Okay. And how much (.) older was the very oldest?
NO-36: The oldest was born (…) in eighteen ninety two (…) and then my sister Lianne, eighteen ninety four (…) Greg, eighteen ninety eight (.) Sally nineteen hundred and one (…) I was born nineteen hundred and three (.) and that's it.
INT: Okay, and how old was your dad when you were born? At-
NO-36: (…) I- (…) how old was my dad when I was born? Oh.
INT: I think we had figured out that he was probably somewhere around forty five.
NO-36: Oh yes.
INT: And your mom was?
NO-36: Thirty (.) five?
INT: Thirty- oh-
NO-36: Is that it?
INT: Yup. Good.

Extract 2: Low (UHM) user

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