

Good morning and thanks for being here. I first must acknowledge the hard work of my co-author KaTrina Jackson who wasn't able to be here. KaTrina is a recentlygraduated student of mine and an Idaho native and has been helpful in interpreting this data. If you see her application to your graduate programs, I encourage you to give it consideration. Anyway, let's begin.

"Epitome of Average English"?

Preston (1989:64–65) chapter 3: "Where they speak correct English"

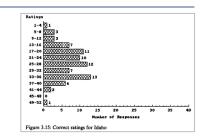
- Indianans ranked all 50 states' English from most correct to least correct
- Mississippi's ratings clustered low.
- Indiana's ratings clustered high
- New York's was bimodal.
- Florida's was uniform.
- Idaho's was normally distributed, centered around the middle.

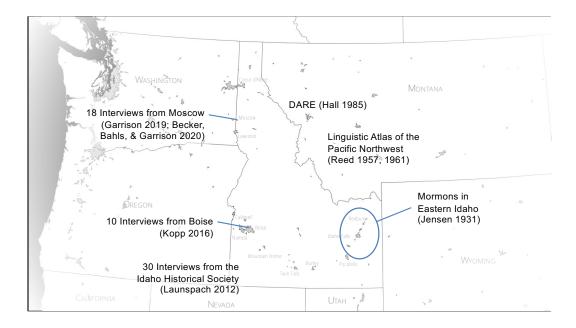
"Idaho... [shows] a remarkably normal histogram... It is, apparently, the epitome of average English for these raters. Perhaps it is a least-caricatured state, meeting the negative definition of Standard English – the variety which displays no known non-standard elements."

First, let me contextualize the quote that we use in the title of our talk. This comes from Preston 1989's book, specifically the chapter called "Where they speak correct English." The procedure was simple: 24 people took a list of all 50 states and ranked them in order from best to worst with regards to the English spoken there. Preston goes into detail analyzing the patterns of some of the states. For example, Mississippi's ratings were clustered pretty low and Indiana's were pretty high. New York was bimodal, with some people rating it high and others very low. Florida's was a uniform distribution so it was equally distributed across the full range.

Then he gets to Idaho. Idaho's plot was normally distributed, centered around the middle of the range. He then says this: [read quote]

This caught my attention because very little research has been done on Idaho English, so it's interesting to see any mention of the state. The purpose of today's talk is to see if this is true based on acoustic data.

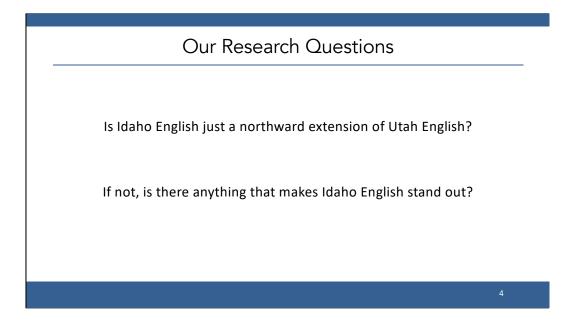




There really hasn't been a lot of research on Idaho. A few early studies mention some lexical things, [*] such was words that Mormons use in Eastern Idaho and [*] results from DARE. [*] Sonja Launspach has presented a few things about non-standard grammar in Idaho based on some legacy interviews. As far as pronunciation, [*] Reed talks about it within the context of the Linguistic Atlas of the Pacific Northwest, but it's mostly lumped together with Washington and Oregon.

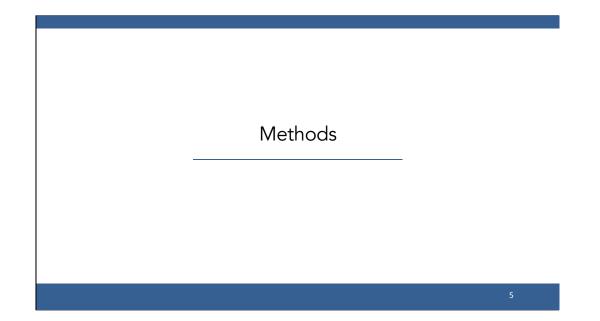
Recently, a few sociophonetic studies have been done. [*] The first is Daniela Kopp's Bachelor's thesis from the University of Bern, which describes the speech of 10 people from Boise. [*] The other is Arthur Garrison's Bachelor's Thesis from Reed College, which examines at the Low-Back-Merger Shift in Moscow. Some of Garrison's findings were presented with Kara Becker and Cecilia Bahls in the 2020 ADS meeting.

The overall trend in these studies is that there's nothing particularly interesting going on. There are a few local words, but nothing you wouldn't hear in other places. There is some nonstandard grammar but nothing you wouldn't hear in other non-standard varieties of American English. As far as pronunciation, there's nothing especially noteworthy. In Boise, the vowels look like they do in other Western regions, including the low back merger. The LBMS was not particularly advanced. So far, it seems like Preston's characterization of Idaho English holds water.



Today, we want to confirm the averageness of Idaho English using a fresh new dataset collected last summer. Furthermore, we wanted to probe a few phonological features that haven't yet been explored in Idaho.

The angle that we're coming from though is that we want to compare Idaho English to Utah English. A lot of Idaho, particularly southeastern Idaho, can be thought of as a northward extension of Utah, culturally, demographically, and geographically. We wanted to see if this is true linguistically as well. As a bit of a spoiler, we went into this project hoping to find that Idaho *is* much like Utah and that the northern boundary of Utah English extends into Idaho. We were wrong, as we'll show in this presentation. In fact, we have no evidence to suggest that Preston was wrong. Basically, we find that Idaho English really could be the epitome of average English.



Linguistic Variables

Utah English features

- prelateral vowel mergers: feel = fill and fail = fell (Petersen 1988, Di Paolo & Faber 1990, Faber & Di Paolo 1995, Baker & Bowie 2010, Baker-Smemoe & Bowie 2015, Stanley & Johnson 2021)
- MOUNTAIN (button, kitten, satin, etc.): mainstream [?n], locally stigmatized variant [?in], hyperarticulated [t^hin] (Eddington & Savage 2012, Stanley & Vanderniet 2018, Eddington & Brown 2021, Stanley 2022)
- (ing): mainstream [Iŋ], "g-dropped" [In], VN+ [Iŋk, Iŋg], others [in, Iŋⁿ, Iŋ^a] (Di Paolo & Johnson 2018
- (thr)-flapping (three, through, throw etc.): [θr.] vs. [θ.] (stanley 2019)
- t-insertion in /ls/ clusters: fa/[t]se, e/[t]se, Ne/[t]son, Che/[t]sea, etc. (Baker et al. 2009, Savage 2014 Stanley & Vanderniet 2018)

Pan-regional features

- pull = pole = dull (Baker & Bowie 2010, Baker-Smemoe & Bowie 2015, Strelluf 2016, Freeman & Landers 2021, Bowie 2000, Arnold 2014, Squizzero 2009, Labov, Ash, & Boberg 2006)
- LBMS (Becker 2019 and many, many others)
- back vowel fronting

As evidence for these claims, we looked at a handful of linguistic features. Since there's been very little work on pronunciation in Idaho, there's not a lot for us to go off of, so we decided to focus our efforts on features known to be variable in Utah. We'll look at two today. The first are prelateral mergers among the front vowels, such that *feel* sounds like *fill* and *fail* sounds like *fell*, which has probably enjoyed the most acoustic analysis out of any other variable in Utah. The other is the pronunciation of words like *mountain*, which includes a mainstream variant (*moun*[?n]), a locally stigmatized variant (*moun*[?in]), and a hyperarticulated variant (*moun*[thin]).

There were a few other variables we examined, but we won't talk about today. We looked how word-final velar nasals are realized, but we heard at least seven different variants and it was too difficult to see the patterns. We looked thr-flapping (which involves using a flap in words like *three* and *through*), and t-insertion in words like *false*, *else*, and *Nelson* but both of these were too infrequent to say much, though we will say that they did pattern more like our control group than like Utah.

I'm more than happy to talk more about any one of these variables and how they play out in Utah, but for now we're going to focus on Idaho, so suffice it to say that these are variable and stigmatized to some extent in Utah. But none have been examined in Idaho, so we wanted to see if they're also found there.

The other category of features we probed were ones that are widespread across the

West and much of the rest of the United States. Today we'll look at two. Prelateral mergers among back vowels have been explored in sort of a patchwork way, here and there in somewhat random cities. The ANAE says it's something that needs to be explored further though, which is partially why we wanted to see what's happening in Idaho. The other is the Low-Back-Merger shift, which, as we've seen from research in the past decade, is found pretty much anywhere where people look for it.

We wanted to look at back vowel fronting but we don't have our control group's data acoustically analyzed yet, so we can't make real meaningful comparisons.

Data

- Put these words into a 200-word wordlist
- Incorporated the wordlist into a survey
 - record themselves reading within the survey itself
 - Asked other questions too (not analyzed in this presentation)
- Distribution
 - Posted it to 14 Idaho-based subreddits (r/Idaho, r/Boise, r/NorthIdaho, r/BYUIdaho, etc)
 - 60 Idahoans, 119 Utahns, and 31 control

The way we collected our data was first we selected around a dozen words of each linguistic variable and incorporated those into a 200-item wordlist. We then put that wordlist into a survey which asked users to record themselves reading it after giving some instructions to find a quiet room and to hold their device steady and a consistent distance from their mouth. The recording interface was incorporated into the survey itself. We also asked them to respond orally to other questions but we're not going to talk about that data for now.

We found our participants on Reddit. Specifically, we sought out any Idaho-related subreddit, and posted a link to the ones that weren't dead, closed, or banned. In the end, we got 60 Idahoans to take the survey. We did a similar method to get our Utah participants and because there were more subreddits, we got twice as many Utahns. We also posted it to a generic survey site and got 31 people to represent a non-Mountain West control group. We'll lump that control group together and call their collective pattern a rough representation of "average" American English.

Processing

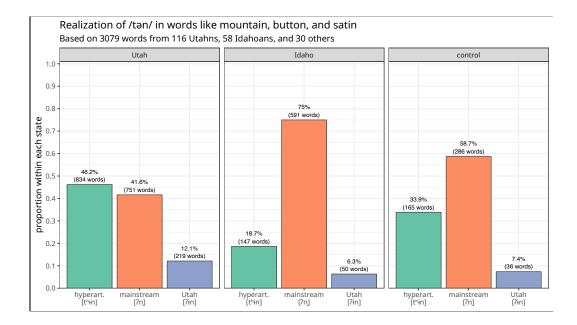
- Consonants
 - Listened to them, with the help of a spectrogram
- Vowels
 - Transcribed manually
 - Fast Track for formant extraction (Barreda 2021)
 - MFA for forced-alignment (McAuliffe et al. 2017)
 - Order of operations recommended by Stanley (2022)

As far as the data processing goes, it was pretty straightforward. For MOUNTAIN, which is our only consonantal variable, we just listened to the tokens and transcribe them phonetically. In ambiguous cases, we pulled up the spectrogram to help.

For the vowels, we used pretty typical methods. The wordlists were transcribed automatically; formant-extracted using Fast Track, and force-aligned using MFA. From there, we followed the order of operations that I recommend in a recent paper, which was to classify tokens into allophones, then remove outliers, then normalize, and then remove things like stopwords, unstressed vowels, and formant trajectories. This order is important to mention because, as we'll see later on, it has an effect on the results.

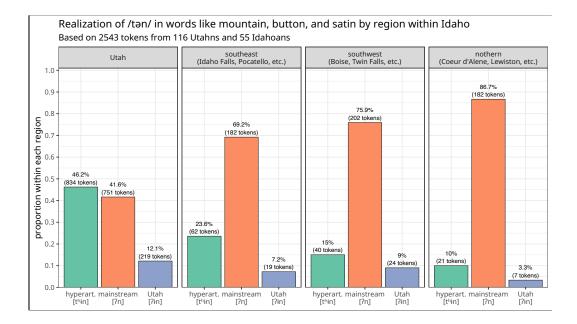


Now let's get to the results. We're taking about a lot of linguistic features, so we'll have to go through each one somewhat quickly.

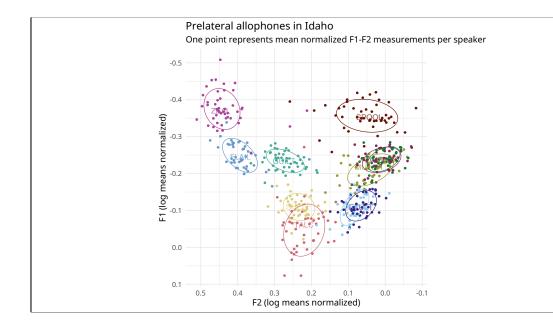


First, when it comes to Utah features, all of them are present in Idaho to some extent, but really not as much. This first plot shows how the unstressed syllable in words like mountain, button, and satin was realized. Utah is the oddball here and uses more of the hyperarticulated variant and more of the local variant than the other two groups. I just gave a presentation on that over at LSA about an hour and a half ago, but please ask me about it during a break later today or something if you want to hear more.

The plot for Idaho in the center though, looks more similar to the control group. It uses the mainstream variant far more, even more than the control group does. The Utah variant is present and we do get some hyperarticulation, but the typical realization is moun[?n], rather than moun[t^hin] or moun[?in]. This was our first piece of evidence that Idaho English is not the same as Utah English.

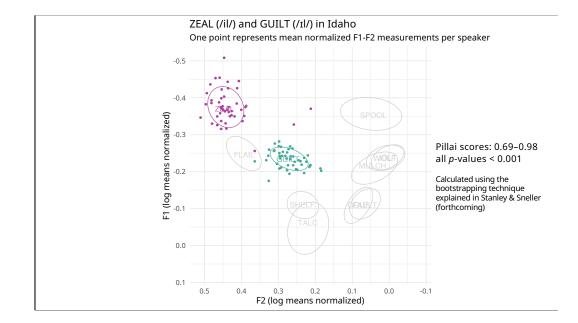


But, we were curious if there was any regional differences within Idaho, so we spit up our participants into three major regions within the state: southeast, southwest, and northern. While they all resembled the control group more than Utah, what was interesting to us was that the closer the region was to Utah, the more it looked like Utah's pattern. So perhaps Idaho Falls isn't the epitome of average English but rather Coeur d'Alene is.



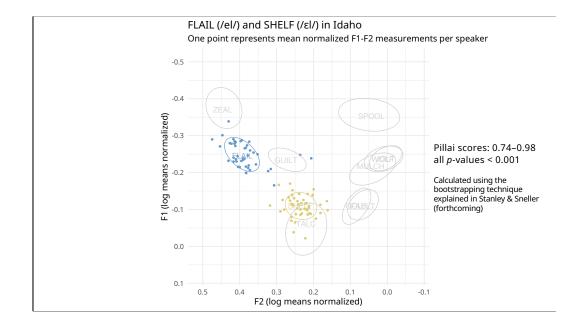
Now let's move on to vowels. Here is an overall view of prelateral allophones of the 11 canonical monophthongs. Because I merge a few of these, it gets difficult to talk about vowel classes like *pull* and *pole*, so I'm going to refer to these allophones using Well-inspired labels: zeal, guilt, flail, shelf, talc, golf, fault, mulch, jolt, wolf, and spool.

Let's begin our discussion by looking at the two pairs of prelateral mergers that can be found in Utah and are stigmatized.



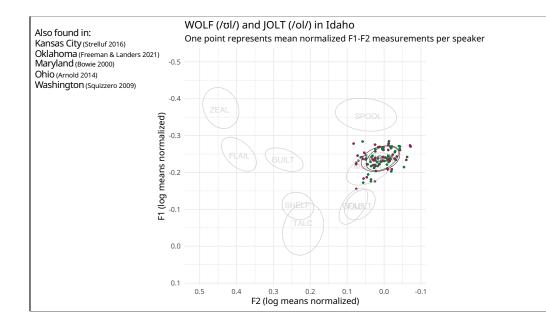
In this plot, we can see the ZEAL and GUILT vowel classes. This refers to what a lot of people call the "feel-fill" merger. While we don't have comparable data from Utah quite yet, we will say that after just listening to them it seems like only about 7% of our Utahns have this merger. In this Idaho data, we didn't really hear any full-on merger, though a few people had a lowered ZEAL vowel. We can measure this more quantitatively though, and using every trick we could think of, like Pillai scores, k-means clustering, and Euclidean distances, there was really not any evidence to suggest a merger among any of our speakers. Specifically, the Pillai scores were all rather high and the *p*-values from those MANOVA models were low, suggesting separation.

Now, you may be looking at this plot and see three people with especially low ZEAL vowels. As it turns out they also had among the lowest GUILT vowels too so there was no real evidence of a merger.



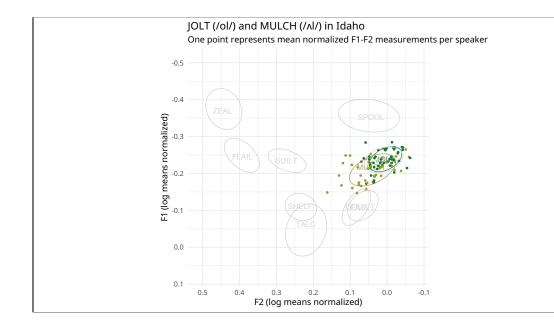
Let's move on to FLAIL and SHELF, or the "fail-fell" merger. We heard it in about 9% of our Utahns, but only in maybe two of our Idahoans. The picture looks pretty similar though: for the most part there is quite a lot of separation, which is supported quantitatively by Pillai scores and a k-means cluster analysis. A few people appear to have especially low FLAIL vowels, but they also have especially low SHELF vowels as well, so there's no merger happening.

So, based on these results, the feel-fill and the fail-fell mergers that are found and somewhat stigmatized in Utah, appear to be mostly absent in Idaho. At least in our sample. The lack of these two two vowel mergers in Idaho is further evidence that Idaho English is not the same as Utah English.

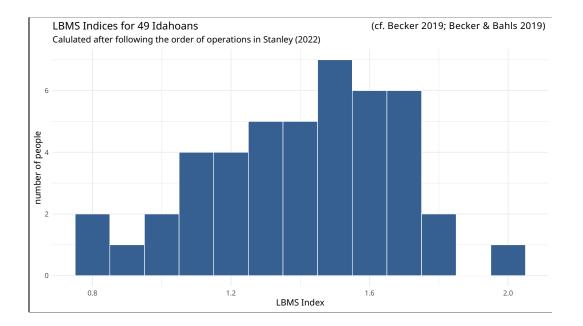


We now move on to linguistic features that are not specific to Utah, but are found all over the United States. First is what I'm calling the WOLF-JOLT merger, or the merger of P-U-L-L and P-O-L-E. Most people that have looked at prelateral vowels have found this merger. This includes Kansas City, Oklahoma, Maryland, Ohio, and Washington.

In Idaho, we can see that this merger seems to be the default configuration. The two vowel classes are on top of each other. Pillai scores suggest that the difference between the two classes was significant for just 9 of our 43 speakers, or 21%. The rest showed every indication of a merger, both quantitatively and auditorily. As far as who the people are that don't have this merger, it seems like they're mostly born before 1990, but it was a pretty weak trend.

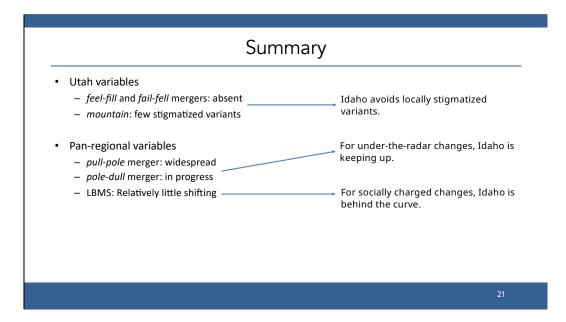


We also wanted to mention the merger of MULCH with JOLT. Here we see that it's not quite as merged as JOLT and WOLF, but it's getting there. Pillai scores suggest that 15 of our 43 people (or 35%) did not have this merger, and those people tended to be older. None of our Gen Zers distinguished between them and none of our Gen Xers merged them. It seems to be something that got started among Millennials.



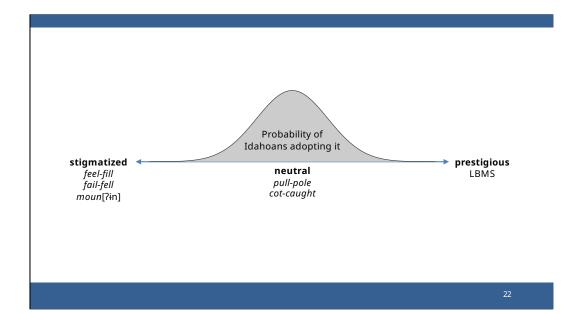
Finally, we get to the LBMS index. Recall that this is the average Euclidean distance between the front three lax vowels and FLEECE in the Lobanov-normalized vowel space, as described in Becker (2019). Larger values indicate more shifting. Now, as I point out in my 2022 paper, the way that you process the data can drastically affect LBMS indices. For example if you remove outliers before normalizing compared to removing them after normalizing. So for this plot, I used the order of operations I recommend in that paper.

For those of you that are familiar with LBMS indices, you may notice that these values are quite low. More innovative communities like in California had values up to 2.8 or so, while the more conservative communities like in rural Washington had ones around 1.8. Again, we can't really compare apples to apples because we don't know what the order of operations was in those studies. But, the point is, the values you see here are quite low. Lower than I've seen in any study that uses LBMS indices. This is likely a product of methodological differences. But some of it may be real. It may be the case that the LBMS just hasn't quite caught on in Idaho yet.



So to summarize, here's what we found. When it comes to variables that are stigmatized in Utah, Idaho seems to lack them almost entirely. To our surprise, Idaho English is not the same as Utah English.

For the pan-regional features, we saw two patterns. For the prelateral mergers, Idaho seems to be doing exactly what people in other parts of the country are doing. Now, as far as I can tell, there hasn't been any research on how these back vowel mergers are perceived and if they're stigmatized. My impression is that they're mostly floating under-the-radar. Meanwhile, indexicality of LBMS has been studied extensively across the country. Idaho seems to avoid this shift though.



To abstract somewhat, here's a theoretical continuum of linguistic features that an Idahoan could adopt. It ranges from stigmatized variants, like the *feel-fill* merger, to prestigious variants, like the Low Back Merger shift. In the middle is a neutral territory where things like the cot-caught merger or the pull-pole merger are. What seems like is happening, based on this data from this sample, is that the likelihood of Idahoans adopting a particular feature is low if people are aware of that feature. So if it's on either end of the continuum. But if it's in the middle, that neutral ground of changes that are spreading without anyone noticing, Idahoans adopt it. So, here's a visual representation of that probability curve. In other words, Idaho is staying out of anything that people could comment on. They're not adopting stigmatized features but they're also not adopting too many incoming features as well.

Discussion	
	23

Who cares?

- Our sample suggests there's nothing special about Idaho English.
- Perhaps avoidance of Utah-indexing features because of animosity towards Utah?
- · Why is this oft-overlooked region to close to the standard?

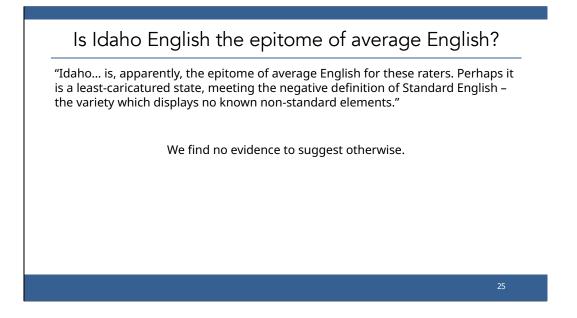
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So, what does this all mean? Well, this is partly a null result: there's really nothing that makes Idaho stand out. As far as I can tell, based on our current sample, there's nothing unique about Idaho English. It's just the least common denominator of a lot of other varieties. Now, it is likely the case that this needs to be clarified with additional data. My co-author KaTrina points out that rural Idahoans likely have more nonstandard features in their speech. And the closer you get to Utah, particularly in places like Preston, Idaho (which is where Napoleon Dynamite was filmed), you probably get more Utah English features.

KaTrina also suggests that one reason why there aren't a lot of Utah English features into Idaho, even southeastern Idaho where there's a lot of cultural and demographic overlap, is because of animosity towards Utah. A lot of Idahoans just don't like Utah and love the fact that they're not Utahns. Anecdotally, when I was going to school in Utah, I heard some guys down the hall talking. There were from Idaho but were in Utah for school. Well so they drove home one weekend and when they crossed the border into Idaho, they pulled over, walked to the border, and stood in Idaho and urinated on Utah. I can't imagine folks like them would want to adopt linguistic features that index Utahness. Perhaps this mentality is somewhat widespread in the state—maybe not quite as crassly as that—but it might explain the differences we saw here.

What to me is the most curious thing of all is this: why is it that an oft-overlooked,

rural region of the United States—somewhere that a lot of Americans probably can't even point to on a map—have such a standard, mainstream sounding accent? If you look at other countries, the standard variety of that language is most often the one spoken in the capital or largest urban center: London, Paris, Seoul, Sao Paolo, Beijing, and probably many others. Meanwhile, rural places far from the capital typically have quite stigmatized varieties of those languages. In the US, we certainly don't think of Washington DC as where standard English is spoken. Large cities like New York, Chicago, and even Los Angeles have varieties that most Americans point out in drawa-map tasks. The stereotypical New York and Chicago accents are stigmatized and even California has negative associations like Valley Girls and Surfer Dudes. Yet an older, uneducated, working class farmer from little ol' Pocatello Idaho is likely to sound pretty darn close to standard English. Why? For now, we don't have a clear answer, but I think it's something to think about.



So, we'll end our talk where we began: with Preston's quote: [read quote].

It does seem to be the case that Idaho English displays no known non-standard elements. So, is Idaho English the epitome of average English? Based on our data, we have no reason to suggest otherwise.

References

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