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Post-educator relaxation in the U-shaped curve: Evidence from a panel study of Tyneside (ing)

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Abstract

Age-grading—a cornerstone of sociolinguistic theorizing—is hypothesized to follow a U-shaped pattern. Vernacular forms peak in adolescence, abate in middle age, and increase again in retirement, forming a vernacular tail. A complete understanding of age-grading has been hampered by a lack of empirical evidence across the entire adult trajectory and a relatively narrow understanding of speakers' motivations to change. This paper presents data from a dynamic panel dataset of Tyneside English speakers, covering successive cohorts over the entire adult lifespan. An analysis of (ing) reveals that the U-shaped curve is occupationally niched; only professional educators demonstrate clear retrenchment followed by a tail. Drawing on educational policy research, we argue this effect is largely driven by institutional (and heavily policed) expectations of UK educational policies. We are the first to demonstrate the occupationally niched nature of the U-shaped curve and provide quantitative evidence of the effect of educational policy on linguistic production.

Keywords: age-grading; U-shaped curve; (ing); educators; stable linguistic variable

Age-grading—the pattern whereby individuals change their linguistic behavior throughout their lifetime while the community remains diachronically stable—is one of the theoretical cornerstones of the variationist paradigm. To explain the "regular association of a variant with a particular life-stage" that is characteristic of age-graded changes (Wagner, 2012a:371), sociolinguistic research has traditionally appealed to speakers' changing relationship to marketplace pressures at various points across the lifespan (Sankoff & Wagner, 2020; Wagner & Sankoff, 2011). For example, the adolescent peak, an ontogenetic mainstay of western industrialized societies (Macaulay, 1978; Van Hofwegen & Wolfram, 2010), is understood as an expression of rebellion against normative expectations "when peer group pressure not to conform to society's norms is greatest" (Holmes, 1992:184). Much less is known about intraspeaker malleability after this adolescent "extremism" (Chambers, 2008:187). While the "middle years" have attracted little scrutiny (Eckert, 1997:158), sociolinguistic theory postulates retrenchment toward more prescriptively sanctioned forms, resulting in a

middle-age trough, particularly for individuals in linguistically sensitive occupations. Following this retrenchment in middle age, older life stages are hypothesized to show a "tail" back toward vernacular forms (e.g., in retirement), as standardizing pressures abate (Buchstaller, 2006; Chambers, 2008; Downes, 1998). Across the adult lifespan, this fluctuation in prescriptive expectations results in a U-shaped curve in individual realizations of vernacular forms, which repeats generation after generation, resulting in stable variability at the community level.

The best way to map speaker behavior across the lifespan is with panel studies, which follow speakers as they move into progressively older life stages. Panel research has explored the transition from secondary school to university (Wagner, 2012b), university to post-university life (Mechler, Grama, Bauernfeind, Eiswirth, & Buchstaller, 2022), and the effect of retirement (Beaman, 2021; Buchstaller, Krause, Auer, & Otte, 2017; Grama, Eiswirth, & Buchstaller 2023). Individually, these studies shed light on specific aspects of post-adolescent linguistic behavior, but the diversity of both the variables studied and methods employed make directly comparing their findings difficult (see Bowie & Yaeger-Dror, 2015; Pichler, Wagner, & Hesson, 2018). To date, the sociolinguistic enterprise lacks a coherent understanding of how individual linguistic trajectories are articulated throughout the adult lifespan.

The present paper brings a dynamic multicohort dataset to bear on intraspeaker malleability across the post-adolescent lifespan. The data come from twenty-eight speakers across six consecutive age-brackets collected between 1971 and 2022 on Tyneside in the North East of England. Comprehensive metadata allow us to draw on detailed information regarding individual life experiences. Here, we focus on the variable realization of a stable variable, (ing) (see Labov, 2001). We address two research questions:

- Does vernacular behavior follow a U-shaped curve, and, if so, how malleable are speakers across their lifespans with respect to the realization of (ing)?
- Do we observe linguistic evidence that marketplace pressures are professionally niched?

Our findings indicate that most speakers show high and unchanging vernacular alveolar rates and exhibit linguistic conditioning in line with the existing literature (e.g., Schleef, Meyerhoff, & Clark, 2011). Most strikingly, the U-shaped curve is occupationally niched. Whereas speakers outside of educational spheres demonstrate no retrenchment as they move into older life stages, older educators tend to orient to formally prescribed forms during active teaching practice, exhibiting *post-educator relaxation* as they move out of in-session teaching. Crucially, the use of standard variants by educators is not monolithic; individuals teaching outside of their local neighborhoods show more pronounced effects than those teaching within their neighborhood. We contextualize these findings using sociolinguistic school research in the United Kingdom, which has drawn attention to the intense normative pressures that are placed on educators during teacher training and their ongoing educational practice (see Baratta, 2017; Snell & Cushing, 2022). In doing so, we provide the first panel study that explores the impact of language (self) policing on teachers in British educational settings.

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Background

Panel research and lifespan change

Until recently, age-graded variability has been hypothesized largely on the basis of apparent time and trend data (e.g., Buchstaller, 2006; Downes, 1998). Panel datasets—repeated observations of the same speakers as they age—are crucial to capturing the degree to which individuals change across their lifespans. However, the field continues to be hampered by two key shortcomings.

First, most panel studies cover short time frames, making predictions about the course of lifespan change challenging. Others rely on recordings that were conducted many years apart (e.g., forty-two years in Mechler & Buchstaller, 2019), making it difficult to pinpoint exactly when linguistic changes occurred in a speaker's life history. Other work relies on case studies of single speakers over several years (e.g., Harrington & Reubold, 2021; MacKenzie, 2017; Rickford & McNair-Knox, 1994), which makes it difficult to generalize results. Comparatively few sizeable studies cover longer stretches of the adult lifespan (see Beaman, 2021; Sankoff & Blondeau, 2006). What is needed, then, are dynamic panel datasets that follow cohorts of speakers across their lifespans to capture the range of factors that impact on their linguistic choices as they age.

Second, panel research has largely relied on the concept of the linguistic marketplace (Bourdieu & Boltanski, 1975) to explain patterning across the lifespan. As individuals age, they are assumed to make their way into spaces where styles that reproduce hegemonic expectations of conformity to "standardness" are explicitly valued (especially in positions where authority is overtly reified, as in line managerial positions, corporate environments, and educational institutions; see Chambers, 2008:189–190). Indeed, retrenchment has primarily been observed in stable variants with low symbolic market value (e.g., vernacular variants of (ing), multiple negation; Downes, 1998). After retirement from the professional marketplace, these models postulate that individuals retreat from prescribed norms and revert toward vernacular forms that characterized their speech at an earlier age. Early evidence for this "tail" in older age suggests that this pattern may be the result of the relaxation of prescriptive pressures as individuals leave professional marketplaces (Buchstaller et al., 2017). These models have unfortunately offered little insight into the onset and trajectory of when and how such corrective adjustments occur (but see Wagner, 2012b). This is partly due to the disproportionate attention that has been paid to adolescence and emergent adulthood, with relatively little focus on the behavior of middle-aged and older speakers (see Eckert, 1997; Pichler et al., 2018; Wahl & Kruse, 2005). What is required in addition to models of marketplace pressures, are social-psychologically and sociodemographically realistic motivations for speakers' linguistic behavior (see Buchstaller & Beaman, 2021). Our dynamic panel corpus, covering speakers between nineteen and seventy-eight, is in a unique position to address the impact that professional choices have on speakers' linguistic behavior across the entire adult lifespan. We focus specifically on the question of how educators react to the pressures of the linguistic marketplace (Bourdieu & Boltanski, 1975:20). Our findings provide evidence that educators correct toward the legitimized standard by producing more velar forms while actively employed in school settings. Once these individuals leave these jobs and prescriptive pressures ostensibly abate, they revert to more vernacular choices, a phenomenon we term *post-educator relaxation*.

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(ing)

The variation between the velar nasal and alveolar nasal, as in walki[ŋ] versus walki[n], has long been characterized as a stable sociolinguistic marker. Apparent time research has highlighted its "long-term community stability" in a number of varieties (Wagner, 2012b:183), where it is stratified by age, class, occupation, socioeconomic aspirations, and gender (Hazen, 2006; Labov, 2001; Trudgill, 1974). Linguistic factors—including priming effects, phonological context, and grammatical category—have a well-documented effect on the realization of (ing) (see Schleef et al., 2011; Tamminga, 2016).

Our research builds on four panel studies that have mapped changes in (ing) across different life stages. In early adolescence, Van Hofwegen and Wolfram (2010) provided evidence of speakers' sociolectal adjustments during primary and secondary schooling, demonstrating that pupils made more standard choices upon entering primary school, followed in adolescence by an upswing in vernacularity. Focusing on later adolescence, Wagner (2012b) explored the linguistic consequences of educational choices at the juncture between high school and university and found that students anticipated the move toward prestigious national universities by producing standard velar variants at elevated rates, while students planning to attend regional schools showed no evidence of such retrenchment. Mechler and Buchstaller (2019) investigated middle-aged and older speakers with different socioeconomic orientations. While social risers (all of whom were educators) showed evidence of retrenchment to standard forms, stably working-class speakers only demonstrated small-scale movements away from the vernacular variant. These patterns are supported by Mechler et al. (2022), who noted that retirement seemed to have a more pronounced effect on speakers' selection of (ing) variants than the progression into early adulthood. Specifically, evidence for the U-shaped curve was restricted to older socially upwardly mobile speakers—again, all educators—who exhibited retrenchment, followed by a post-retirement "tail"; working-class speakers, by contrast, showed a clear preference for the vernacular variant across timepoint.

These panel studies provide a backdrop to lifespan research on a diachronically stable variable. However, because they offer mere snapshots of the lifespan as a whole, they further underscore the need for comprehensive panel datasets that contain data from multiple age groups in the same speech community, collected using the same method, and with similar time-gaps between recordings. Our dataset allows for the modeling of age-graded variables like (ing) across the entire adult lifespan in populations that differ according to both their positionality *vis-à-vis* superimposed norms, as well as the construction of age-specific social identities.

Sociohistorical context: the Tyneside community

Tyneside, the community considered here, has been historically associated with heavy industry. Coal-mining, shipbuilding, and manufacturing have dominated the economy of the North East (Beal, Burbano-Elizondo, & Llamas, 2012). The industrial decline in the 1970s and 1980s saw seismic shifts in the economic backbone of the wider region, leading to upheavals in the social fabric of Tyneside (see Pike, O'Brien, & Tomaney, 2006). Social reforms and investment in new economic sectors (e.g., the medical sciences, sustainable technology) have helped foster an economic upswing in the region.

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But while the Newcastle-Gateshead conurbation has successfully reinvented itself as the retail, cultural, and service economy center of the North of England (Vall, 2007), a significant proportion of the population has been left behind by these recent changes. The North East continues to have some of the highest unemployment rates in the United Kingdom (29.1%; Office for National Statistics, 2022).

Due to a long tradition of sociolinguistic and dialectological research going back to the 1960s, we have a relatively good understanding of the broader socioindexical landscape of language variation on Tyneside (e.g., Allen, Beal, Corrigan, & Moisl, 2007). Evidence points to changing social indexicalities associated with the local variety. Like other post-industrial vernaculars, the local dialect, Geordie, has historically been rated low on status and high on solidarity, but recent work has reported an increase in overall attractiveness ratings (see Montgomery, 2018) in line with the perceived attractiveness of the city and commodification of the dialect (Beal & Cooper, 2015).

Data and Methods

The panel data

The present dataset draws on two heritage collections of Anglo speakers on Tyneside. The oldest speakers (aged 60+ in the 2010s, our calibration point) were initially recorded by the Tyneside Linguistic Survey corpus, which collected data in 1971 (Allen et al., 2007). Six of these individuals were reinterviewed in 2013 as part of a small panel analysis (Buchstaller, 2016); three of these speakers were recorded again (yielding a third recording) in 2021. Speakers in the younger age brackets (aged 19-53 in the 2010s) were originally recorded as part of the DECTE project, a large monitor corpus of North East speakers that has been underway since 2006 (Corrigan, Buchstaller, Mearns, & Moisl, 2012). Although we aimed to re-record as many of these individuals as possible, typical challenges that befall panel data collection (see Sankoff, 2017) restricted our pool to twenty-eight speakers, distributed across six age bands that represent consecutively older life-stages. Table 1 provides an overview over these data. Each cohort is named based on their age bracket at the time of the first recording (T1), except for the 60s+, who are so named because they were in their 60s in the mid-2010s (the T1 recordings of all other cohorts). The other cohorts were re-recorded an average of seven years after the T1 recording, allowing us to investigate their movement into and through stages that "give age meaning" (Eckert, 1997:167). People in their early 20s were captured moving into early adulthood from T1 to T2; a subset of them were recorded a third time after another seven years. Those in their late 20s were captured first in early adulthood, then again as they had moved into middle adulthood. The 30s and 40s, then, represent the period of middle adulthood, with the 50s capturing the move into older age and, for some, (early) retirement. The 60s+ offer a broader snapshot from T1 to T2, as they move from early adulthood to retirement, with T3 capturing speakers settling into post-retirement. Together, this collection represents speakers aged nineteen to seventy-eight in six subsequent age cohorts that form consecutively older life-stages. We call this panel dataset "dynamic" because it does not follow the same group of speakers through all life stages; instead, each cohort provides an independent slice of the lived human experience, the sum total of which can be viewed as a single trajectory. This panel corpus covers a large time-span, which allows

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Table 1. Dynamic panel dataset across cohort and timepoint; age ranges at time of recording in parentheses

	Timepoint		
Cohort	**1**	**2**	**3**
Early 20s	6 (19–22)	6 (24–29)	5 (29–32)
Late 20s	4 (27–29)	4 (36–43)	
30s	4 (30–39)	4 (39–49)	
40s	4 (42–49)	4 (50–61)	
50s	4 (52–53)	4 (61–65)	
60s+	6 (21–32)	6 (63–74)	3 (69–78)

us to explore a wide range of factors that contribute to the "emergence of age-relevant linguistic identities" (Bowie & Yaeger-Dror, 2015:608) and to explore intraspeaker malleability across the entire adult lifespan. Other social characteristics of the panel are discussed in the following section.

Great care was taken to ensure the comparability of the recordings. To the extent possible, the original speaker dyads were retained for each recording, and interviews were conducted in either the same or a comparable location using the same (or similar) questions and interview topics. In later recordings, interviewees were reminded of topics they had discussed in earlier recordings and asked whether their opinions had changed.

Data processing and coding

The data were orthographically transcribed in *ELAN* (version 6.5; ELAN, 2023; Lausberg & Sloetjes, 2009) and time-aligned using *LaBB-CAT* (Fromont & Hay, 2012). All candidate tokens of (ing) were tagged in *LaBB-CAT* using regular expressions. After extraction, tokens were double-blind coded (by the second and third authors) auditorily as [n], [ŋ], and two forms which included stop releases [ŋk, ŋg]. Intercoder reliability for the entire sample was 90%. Mismatches between coders were checked independently by the first author and excluded if all coders disagreed or the token was unclear.

The resulting dataset was coded in *LaBB-CAT* and *R* (version 4.0.2; R Core Team, 2021) for a range of linguistic factors known to influence (ing): preceding and following phonological environment, the number of syllables in the word, speech rate, the identity of the preceding (ing) token (Tamminga, 2016), and grammatical category. Grammatical coding was performed by the third author, following established precedent (Huddlestone & Pullum, 2002; Mechler & Buchstaller, 2019; Schleef et al., 2011). Initial coding included an eight-way contrast between grammatical categories; however, because categories that fill similar roles showed roughly equivalent alveolar rates (see patterns in Labov, 2001:79–88; Schleef et al., 2011:212–219), grammatical category was reduced to a three-way distinction, comprising verbal (84.9% alveolar), nominal (70.2% alveolar), and pronominal (46.0% alveolar) tokens. Of note, [ŋk, ŋg] are minority variants that are restricted to pronouns (including those fulfilling a general

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extender function); these forms ($n = 74$) are excluded from analysis (see Schleef et al., 2011:215). Finally, tokens in repetitions, read speech, and those that were unclear or not syntactically incorporated were excluded. These processes yielded a total of 7,448 tokens for analysis.

We considered a range of social factors identified as potential axes of variation: sex/gender was self-assigned by the speaker (male/female); qualitative socioeconomic class assignment (working/middle) was assessed on the basis of occupation (following Baranowski & Turton, 2018); social mobility (upward/stable) was established via comparisons of class assignments across timepoint (see Mechler et al., 2022); and educator status (no/previous/current) was categorized based on speaker occupations in formal schooling, including tertiary education. University students' sociodemographic classification ($n = 9$) was assigned on the basis of their parents' information. Due to the nature of the dataset, many of these factors were highly correlated, and it was unclear which of them would explain patterns in the panel data most effectively. We thus subjected the entire dataset to a random forest analysis using *caret* (Kuhn, 2021) and *randomForest* (Liaw & Wiener, 2002) in *R* to assess the relative importance of each social factor. The social factor with the highest variable importance (following decrease in the Gini coefficient) was educator status.

This weighting informed the prioritization of factors in subsequent logistic mixed-effects models described below. As we argue, educator status is essential to explaining effects in these data; however, it is highly collinear with other factors, in particular, socioeconomic status (since educators are or become middle class by virtue of their profession). With this caveat in mind, we move on to discuss the impact of all relevant factors.

Results

Our data suggest that malleability over the lifespan is mediated by grammatical category, cohort, and occupational orientation. We first turn to linguistic effects and then move to effects that emerge from an investigation of the intersection between individuals and their social characteristics, taking account of cohort- and speaker-specific lifespan orientation.

Broad cohort patterns

Cohort patterns were investigated via a logistic mixed-effects model using *lme4* (Bates, Mächler, Bolker, & Walker, 2015), fit to a subsample of the dataset that excluded T3 recordings (since only the early 20s and 60s+ cohorts include this timepoint); all instances of velar-plus-stop forms (including in priming contexts) were also excluded (see above). The model tested for the effect of normalized timepoint (operationalized as T1, T2), cohort (early 20s, late 20s, 30s, 40s, 50s, 60s+), educator status (here, collapsed into: yes [at some point], never), ternary grammatical category, preceding and following phonological context,[1] and the status of the prior (ing) token (alveolar, velar, no preceding token). Initially, the random effects structure included a random slope for speaker by timepoint, but this model failed to converge, and so it was simplified to include speaker and word as random intercepts. Two- and three-way interactions were

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tested between linguistic and social predictors, with only those interactions kept that improved model fit (by comparing AIC). The final model is reported in Table 2. The threshold for significance for this and subsequent models was set at 0.05.

Linguistic effects

The model reveals several global phonological and priming effects. Preceding dorsals favor alveolar realizations, indicating a dissimilation effect (Schleef et al., 2011:218), and following coronals favor the alveolar variant, indicating an assimilation effect. We also observe priming effects; specifically, velar forms are significantly more likely to appear when the preceding token is also velar, and numerically (but not significantly) more likely when the (ing) token is the first produced by the speaker. Phonological context and priming in interaction with timepoint and cohort did not significantly improve model fit; we thus interpret these as global effects in the current dataset.

Grammatical category is a robust predictor of variation in (ing). Both nominal and pronominal categories motivate higher rates of [ŋ], a relationship that persists across timepoint. The interaction effects structure reveals that the degree to which nouns and pronouns motivate more velar realizations varies by cohort, but is consistently higher than verbal contexts. Post hoc comparisons using *emmeans* (Lenth, 2022) in *R* with Tukey adjustment confirm that pronominals favor [ŋ] in each cohort, particularly in the late 20s cohort where alveolar rates in nominal and verbal tokens are nearly categorical. These findings suggest that pronouns form a natural class separate from verbs and nouns in their relatively high retention of [ŋ], an effect that is niched by cohort. We revisit this finding below. Due to the distinct behavior of pronominals, subsequent analyses exclude them from the variable context.

Age and timepoint effects

The dynamic nature of our sample allows us to view these six age cohorts as consecutive snapshots across progressively older lifespan stages. Conceived of in this way, we might expect to see evidence of a U-shaped curve across the age-bands; that is, we should observe a general increase in speaker adoption of prescribed forms until (post-)retirement, after which we would observe a reversal toward more vernacular forms. However, we see little evidence in the aggregate of such a pattern. The model in Table 2 and the raw proportions in Figure 1 suggest retrenchment occurs only in the 60s+ age group at T2 (noting that this cohort has the largest time gap between T1 and T2). By contrast, most age bands are stable across timepoint (the early and late 20s, 40s, 50s, and 60s+), with only one group (30s) producing significantly *higher* vernacular rates at T2. When conceptualized as successive age bands, then, these patterns do not support the generalized curvilinear prediction postulated in sociolinguistic theorizing for the adult lifespan.

Of particular importance is the impact of educator status on (ing). A significant main effect of educator status indicates that individuals whose professional experience includes in-session teaching show an increased likelihood of the standard [ŋ] as compared with those who have never served as educators. Moreover, a significant interaction between educator status and timepoint (T1 versus T2) suggests that this preference for the standard variant increases relative to non-educators over timepoint.

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Table 2. Logistic mixed-effects model fit to (ing) at T1 and T2 ($n = 6175$, 20.7% velar); we present odds ratios (OR) instead of log odds (OR<1 indicates disfavoring of [ŋ]; OR>1 indicates favoring of [ŋ])

Predictors	OR	SE	*z*	*p*	*n*	%ŋ
(Intercept)	0.02	0.01	−5.45	<0.001		
Preceding phonological context (ref=Other, $n = 5207$, 22.5%)						
Dorsal	0.50	0.12	−2.80	<0.01	968	11.5%
Following phonological context (ref=Coronal, $n = 2114$, 19.2%)						
Non-coronal	1.90	0.27	4.54	<0.001	1085	22.6%
Vocalic/glottal/final	1.27	0.14	2.20	<0.05	2976	21.1%
Preceding (ing) (ref=Alveolar, $n = 4841$, 12.0%)						
No preceding token	2.20	0.96	1.81	=0.071	53	26.4%
Velar	1.78	0.20	5.06	<0.001	1281	53.6%
Grammatical category (ref=Verbal, $n = 4350$, 13.4%)						
Nominal	3.08	0.72	4.85	<0.001	936	28.6%
Pronominal	3.06	1.42	2.41	<0.05	889	48.3%
Cohort (ref=Early 20s, $n = 1651$, 16.5%)						
Late 20s	0.20	0.24	−1.37	=0.170	882	10.5%
30s	1.55	1.56	0.44	=0.661	870	19.2%
40s	0.90	0.93	−0.10	=0.920	794	9.1%
50s	2.04	2.11	0.69	=0.492	795	20.1%
60s+	2.74	2.50	1.11	=0.269	1183	43.6%
Timepoint (ref=T1, $n = 2554$, 20.3%)						
T2	0.86	0.16	−0.83	=0.409	3621	21.0%

(*Continued*)

Table 2. (*Continued.*)

Predictors	OR	SE	z	p	n	%η
Educator (ref=Never, $n = 4059$, 11.3%)						
Yes (at some point)	7.39	4.90	3.02	<0.01	2120	38.7%
Cohort:Grammatical category						
Late 20s:Nominal	0.29	0.35	−1.03	=0.304	123	0.8%
Late 20s:Pronominal	155.49	92.90	8.45	<0.001	114	76.3%
30s:Nominal	0.85	0.31	−0.45	=0.652	124	26.6%
30s:Pronominal	3.17	1.09	3.36	<0.01	138	47.8%
40s:Nominal	0.51	0.23	−1.47	=0.141	94	10.6%
40s:Pronominal	1.78	0.65	1.58	=0.114	124	24.2%
50s:Nominal	0.36	0.17	−2.11	<0.05	118	27.1%
50s:Pronominal	3.21	1.74	2.15	<0.05	67	40.3%
60s+:Nominal	0.68	0.23	−1.13	=0.258	225	53.8%
60s+:Pronominal	25.34	10.27	7.97	<0.001	164	84.8%
Cohort:Timepoint						
Late 20s:T2	0.73	0.36	−0.63	=0.529	395	9.1%
30s:T2	0.25	0.07	−4.72	<0.001	435	12.9%
40s:T2	1.17	0.38	0.48	=0.632	379	9.2%
50s:T2	0.63	0.23	−1.27	=0.205	454	15.4%
60s+:T2	2.14	0.64	2.56	<0.05	895	43.9%
Educator:Timepoint						
Yes (at some point):T2	1.75	0.38	2.54	<0.05	1362	39.3%

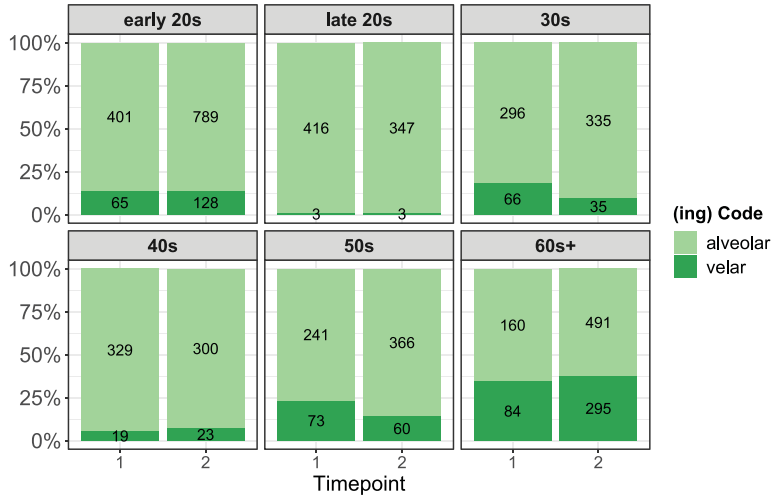

Figure 1. Raw proportion of (ing) variants (excluding pronouns) across timepoint by cohort.

Together, these effects indicate that educators make less vernacular choices compared with non-educators, and that these choices become increasingly less vernacular over educators' working lives. This pattern suggests that these choices are motivated by participation in (or exposure to) linguistic marketplace pressures in the context of the schooling environment. We investigate these findings below by focusing on the behavior of individuals.

Individual trajectories and the effect of (former) educator status

Panel research has demonstrated that the processes underpinning (linguistic) aging are characterized by considerable inter- and intragroup variability (e.g., Buchstaller et al., 2017; Sundgren, Buchstaller, & Beaman, 2021) and complex post-adolescent trajectories (Pichler et al., 2018:3–5). We therefore focus on the individuals that underlie the aggregated data. Not only does this allow us to incorporate the third recording of our bookend panels, we can also undertake bottom-up analyses to locate trends that emerge across speakers along key axes of variability.

Figure 2 plots all twenty-eight speaker trajectories across available timepoints, organized by cohort. In line with previous panel research (e.g., Sankoff & Blondeau, 2006:560), most participants exhibit no major changes in (ing) across timepoint, with several speakers showing functionally categorical alveolar realizations. The 20s cohort is a particularly striking example of this; all speakers show nearly invariable categorical alveolar use. Among the other cohorts, three trajectories stand out. First, some speakers (Jake, Nathan, Margaret, and Richard) show an *increase* in the rate of [n]. Second, one speaker, Aidan, shows *retrenchment* to the prescribed velar form. Finally, a subset of speakers for whom we have three recordings (Amelia, Fred, and Nelly) show evidence of a *curvilinear* U-shaped pattern. We contend that a single explanatory parameter—active employment as an educator—lies behind these findings.

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Figure 2. (ing) proportions for all speakers (excluding pronominals) across timepoint.

As reported in Mechler et al. (2022), the 60s+ cohort exhibits socially niched behavior. The three working-class-oriented speakers—Rob, Anne, and Edith—illustrate stable rates of the alveolar variant across their lifespans.[2] For the three middle-class-oriented speakers, by contrast, there is evidence of "post-adolescent adjustments under marketplace pressures" (Chambers, 2008:200). Aidan, Fred, and Nelly support the predictions from the age-grading literature for middle-class occupational trajectories, in that they exhibit modulation toward the standard during their working lives. Of particular note, all older middle-class-oriented speakers are educators: Aidan is a college lecturer, Fred a secondary teacher, and Nelly a nursery school nurse. These speakers fit Bourdieu and Boltanski's (1975:6) characterization of educators as professionals of the language,[3] and individuals for whom linguistic behavior that adheres to hegemonic expectations is highly prioritized. After this middle-age trough at T2, those 60s+ educators for whom we have a third time point (Fred and Nelly) relax their linguistic choices in retirement, resulting in an uptick of vernacularity.

Fred provides metalinguistic commentary at various points in his interviews suggesting that he is both aware that (ing) is socially marked and that he exhibits variation in (ing). When asked about his linguistic choices in professional and private domains

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at T1, he remarks that he is not currently using what he calls his "dole voice," which is the way he spoke in his younger years when he worked at the local job center.[4] As illustrated in (1), Fred singles out (ing) as a feature that his wife would notice.

(1) Fred, T1 (15:48-16:03)

INT: is this a dole voice uh you [know]

Fred: [no] it's fairly normal with me I think

INT: this ((current style)) would be … I mean the way you would talk to your wife for [instance] and your friends

Fred: [yeah]

…

except for the few [ɪŋ]s on the end of the words which she'd probably pick up

We can contrast this with what Fred says at T3, shown in (2), where he reflects on listening to his old recording and comments that he believes he sounded "pretentious" and likely also did as a young teacher. As we discuss in greater detail below, this sentiment is in line with pressures identified in critical school research that educators feel to perform the "legitimised" dialect (Chambers, 2008:195). In particular, this work has identified that teachers uphold the "linguistic conservatism as found within current…educational policy" (Cushing, 2020:426), where English is taught "not only as a set of skills but also as a set of values" (Clark, 2001:32). And while (ing) is not the only variable implicated in Fred's corrective behavior (see Bauernfeind, Ahrens, & Grama, 2023; Buchstaller & Mearns, 2018; Buchstaller et al., 2017; Grama et al., 2023), his comments at T3 suggest that he believes his younger self projected a professional, erudite persona, perhaps disingenuously in line with the hegemonic expectations of educator speech.

Indeed, interviews with UK teachers imply they feel pressure to "modify their accents to varieties deemed more 'professional'" (Baratta, 2017:416). Fred's behavior at T2, when he shows his highest rates of standard forms (92.4% velar), fully aligns with these prescriptive concerns. This is followed by notable relaxation after retirement in T3 (75.8% velar).

(2) Fred, T3: 01:09:45-01:10:08

Fred: I didn't like listening to it because [I'm so]

INT: [LG]

Fred: what a-

I thought I was patronizing

I thought I was pedantic and pretentious I didn't like listening to meself (BR)

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and I think probably as a young teacher
I was probably very similar ((in my mindset))
eh and I think the advice would be there
just talk to people and stop worrying about putting a show on

Nelly reflects on similar pressures. In (3), she describes the pervasive standard language ideologies she encountered while working in the "posh" Newcastle suburb of Gosforth. Nelly recounts feeling the need to adapt to her colleagues, who, like her, were expected to model standard language forms for the children. In line with Cushing's (2020:440) argument that schools reify conformist behavior as positive, Nelly manifests retrenchment toward the prescribed standard at T2, but, like Fred, shows relaxation from her high velar rates post-retirement in T3. The curvilinear behavior exhibited by these speakers (very high rates of [ŋ] when working as educators, followed by a drop in retirement) mirrors their changing positionalities to normative expectations.

(3) Nelly, T2 (48:14-49:09)

Nelly:	I try not to speak like a Wearsider and going to Gosforth I had to alter my accent
INT:	right uh huh
Nelly:	with the children there
INT:	mmm
Nelly:	so uhm it it was difficult but you just adapted
INT:	yeah did you alter it in the sense of becoming more Tyneside or just in th∼ the sense of becoming more kind of neutral and
Nelly:	more neutral and [posh] [yes]
INT:	[mmm] yeah [mhm] and that was~ were the children encouraged to speak like that and you know [would they have been] [yeah right yeah]
Nelly:	[well a lot of them did it naturally] [from one end of Gosforth] uhm and the staff spoke like that
INT:	the the staff spoke naturally like that or they
	…
Nelly:	yes because they came from that area so you just sort of adapted whichever area you went into you adapted

What links these curvilinear patterns among the oldest educators with the middle-aged cohorts? While the majority of speakers remain linguistically stable across their lifespan, Richard, a retired head of school in the 50s cohort, shows a rise in [n] at T2. His withdrawal from prescribed forms after he left his educator role parallels Nelly

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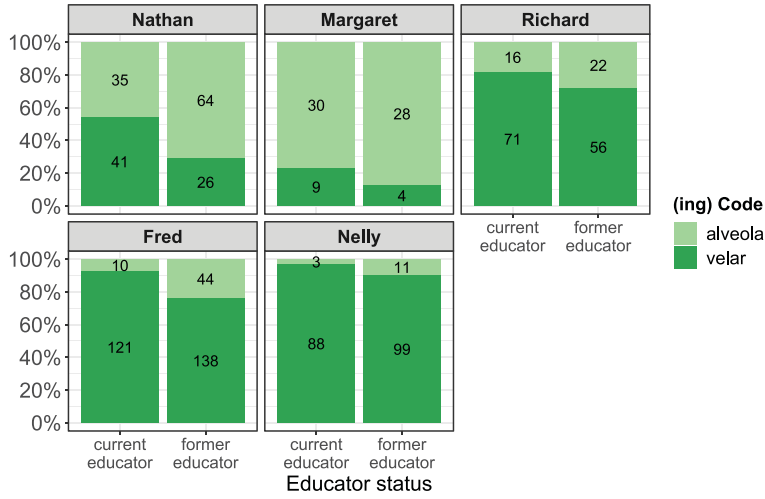

Figure 3. (ing) proportions in subsample of educators before and after leaving the teaching profession.

and Fred's behavior. A similar reversal after leaving teaching is also clear in Margaret (forty-nine at T1, sixty-one at T2), who took early retirement, and Nathan (thirty at T1, thirty-nine at T2), who left employment at a school to pursue a PhD in music.

We thus see a conspicuous effect: all speakers who exhibit elevated rates of [ŋ] followed by a noticeable drop have left occupations as educators. This is made clear in Figure 3, which plots the proportions of (ing) variants when these speakers were actively involved in teaching compared with when they had left. While (predominantly older and middle-aged) educators differ in their proportions of [ŋ], it is clear that each relaxes in their adherence to the prescribed velar form.

Proportional differences between active- and post-educator life among these older and middle-aged teachers are reinforced by a logistic mixed-effects regression analysis. Table 3 reports the output of a model fit to (ing) for this subsample of educators. Independent variables include the same linguistic predictors tested in the overall model, with speaker (Nathan, Margaret, Richard, Fred, Nelly) added as a dependent variable. All other operationalized socioeconomic indicators were tested (see above), but none improved model fit over educator status. Word was included as a random intercept. Initially, models were constructed with a random slope of speaker-by-educator status to account for speaker-specific trajectories. However, these models yielded singular fit, suggesting they were overly complex. Speaker was then included as a fixed effect in interaction with educator status. However, this, too, did not significantly improve model fit, suggesting that speakers exhibit roughly the same degree of retrenchment as they move out of their educator positions. The model was thus simplified to include speaker and educator status as fixed effects, outside of interaction. For speaker, we used deviation coding (or sum contrast coding; Brehm & Alday, 2022) to aid model interpretability, which compares the mean of each level of a factor to the overall group mean. Post hoc comparisons were again performed with *emmeans*, using Tukey adjustment.

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Table 3. Logistic mixed-effects model fit to (ing) to a subsample of educators ($n = 913$, 71.4% velar; OR<1 indicates disfavoring of [ŋ]; OR>1 indicates favoring of [ŋ])

Predictors	OR	SE	z	p	n	%ŋ
(Intercept)	2.18	0.64	2.65	<0.01		
Speaker						
Fred	3.15	0.60	6.00	<0.001	312	82.7%
Nelly	10.00	2.97	7.75	<0.001	201	93.0%
Margaret	0.07	0.02	−7.87	<0.001	70	18.6%
Nathan	0.28	0.06	−6.32	<0.001	166	40.4%
Richard	1.61	0.33	2.34	<0.05	164	77.4%
Grammatical category (ref=Verbal, $n = 708$, 69.8%)						
Nominal	2.37	0.67	3.07	<0.01	205	77.1%
Preceding phonological context (ref=Other, $n = 751$, 74.8%)						
Dorsal	0.23	0.07	−4.56	<0.001	162	55.6%
Following phonological context (ref=Coronal, $n = 287$, 64.1%)						
Non-coronal	1.13	0.32	0.45	=0.653	164	68.3%
Vowel/glottal/final	2.81	0.65	4.50	<0.001	462	77.1%
Preceding (ing) (ref=Alveolar, $n = 242$, 44.6%)						
No preceding token	2.48	2.25	1.00	=0.317	10	70.0%
Velar	1.59	0.36	2.01	<0.05	661	81.2%
Educator status (ref=Current, $n = 422$, 78.0%)						
Former	0.35	0.07	−4.90	<0.001	491	65.8%

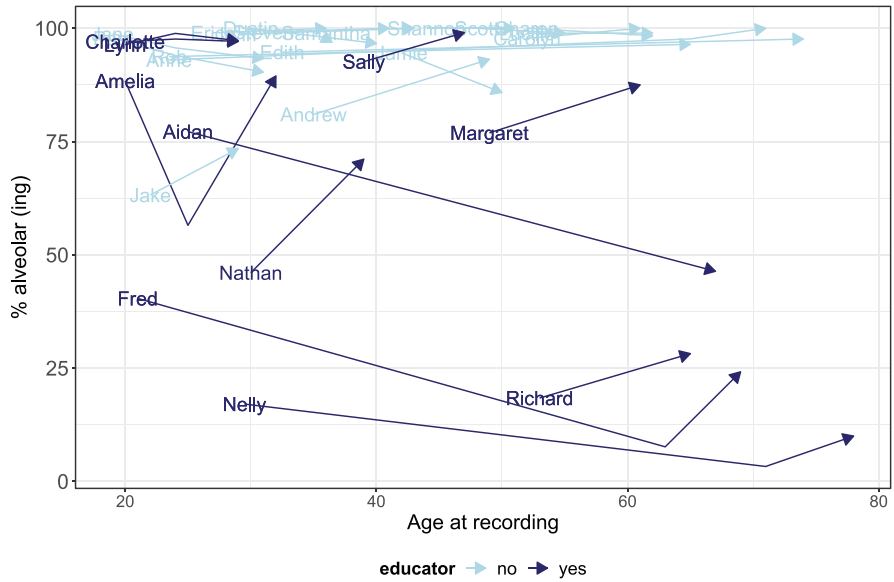

Figure 4. Proportion [n] for each participant across age at time of recording; educators (dark) and noneducators (light).

This model reveals that the subsample of former educators orient to the classic linguistic constraint system of (ing) outlined above. Predictably, we observe high levels of speaker variability. Nelly and Fred are far more likely to exhibit velar forms, followed by Richard, then Nathan, and finally Margaret, who is the most vernacular. Crucially, we again observe a significant effect of educator status, whereby speakers are less likely to produce [ŋ] after they have left their role as an educator.

The model supports our contention that middle-aged and older educators exhibit trajectories that are in line with linguistic marketplace predictions, but this behavior cannot be generalized across the entire panel dataset. Figure 4 plots the percentage of vernacular (ing) for each individual by age at the time of the interview. With a few notable exceptions (discussed below), these educators (in darker font) clearly stand out with depressed alveolar rates. Fred and Nelly again show evidence of the U-shaped curve, while Nathan, Margaret, and Richard show post-educator relaxation. Of note, Aidan exhibits the predicted retrenchment from T1 to T2 as he maintains his professional occupation as a college lecturer; though we have no T3 for him, we hypothesize that he, too, would undergo post-educator relaxation in retirement.

Contextualizing current educators

In addition to former educators, the panel sample includes speakers who currently hold posts as teachers. These four participants all show trajectories that appear to diverge from our hypothesis that educational settings reinforce adherence to prescribed norms. We discuss these participants in turn.

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Sally, a middle-aged English teacher, reflects on the pressures of her linguistically sensitive profession, where she is expected to model "proper" English to her students. At T1, Sally in (4) expresses a stance of resistance toward these expectations, describing her strong dialectal pride and her refusal to engage in *verbal hygiene* (Cameron, 2012). Her linguistic behavior mirrors this resistance, with vernacular rates over 90%. While Sally's defiance of prescriptive norms persists as she ages, she reflects on the beginning of her career when she was acutely aware of her "strong accent" (5) and admits she likely changed it to fit expectations. While we lack data on Sally's speech as a young educator, her assessment matches her linguistic behavior, which has shifted even closer to being categorically vernacular (99%) at T2.

(4) Sally, T1: 59:21-59:32

Sally: the older I got the more stubborn I've become about my accent
and it's kind of like I refuse to change
whereas I used to try
now I kind of embrace the Geordiness of it all. I quite like being a Geordie

(5) Sally, T2: 20:35-20:51

Sally: I've always had quite∼ I think I've got quite a strong accent and I'v∼ I've never
when I first started teaching I was very conscious of it
ehm and I would perhaps modify the way that I∼ I spoke ehm
but I try not to now I try to actually just be me

While Sally's linguistic choices might appear unexpected for a secondary school teacher of English, they are locally unmarked (consider Mechler et al.'s [2022:103] finding that the Tyneside community is almost categorically alveolar). Sally's school is located in her own neighborhood, and she reports speaking with the same accent with colleagues and students. By engaging in shared linguistic practices, Sally models an authentic, local persona, which has been shown to promote feelings of solidarity and supportive learning environments (see Snell, 2018). At the same time, and from a critical school research perspective, Sally's intransigence can be seen as resisting "the imposition of macro-level linguicism, eschewing prescriptive language ideologies in a local context" (Cushing, 2020:443). Her linguistic behavior is also mirrored in her anti-elitist professional choices. At T2, she comments that she could not imagine being employed at a private school *because* of her localized accent (on the divide between private and public schools in the United Kingdom, see Green & Kynaston, 2019). While critical school-based research has shown that many non-fee-paying schools subscribe to policies where language is "disciplined, controlled and monitored" (Cushing, 2021:23), Sally's school choice can also be viewed as a conscious decision that allows her to embrace her local dialect.

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The same accretion of localized pride, professional choices, and accent patterns is observable in Lynn, an early-20s panel member who became a secondary school teacher who exhibits consistently high vernacular rates. Like Sally, Lynn lives and works in the same neighborhood, but she also teaches in the high school she once attended as a pupil. Lynn regularly encounters colleagues and students outside of school and remarks that some of her current colleagues were her teachers. In (6), Lynn frames her linguistic choices in this context. Her sustained high vernacular rates may be motivated in part by her orientation to shared vernacular norms, signaling her membership in the community (see Hall-Lew, Paiva Couceiro, & Fairs, 2019). Lynn's avoidance of standard forms, then, eschews the pretentious (and non-local) connotations these forms carry, in spite of ideologies enshrined in UK educational policies.

(6) Lynn, T2 (30:36-30:43):

Lynn: if I was in a different school I would have to ((change my accent)) more

…

but the school where I teach is like literally like ten

minutes from where I live so

…

I kind of have the same accent as a lot of the kids, really

Charlotte, a university lecturer, parallels Lynn in her consistent use of the vernacular. One possible explanation for this stability might be that teaching staff at institutions of higher learning are not bound by Ofsted-imposed exigencies.[5] Another possibility is that Charlotte's professional background as a social scientist with expertise in ethnographic methods and data collection in the North East, where she also earned her PhD, has afforded her a deep understanding of the social indexicalities of vernacular choices. In her T3 interview, she comments that she "say[s] "walki[ŋ]" when she is teaching, suggesting the production of legitimized language in classroom settings. Though we lack recordings of Charlotte in classroom situations, metalinguistic comments like this implicate style-shifting between work environments and more informal interactions, a hypothesis we explore in future research.

The final teacher, Amelia, illustrates a pattern that we have discussed above for the older educators, namely a steep drop in alveolar realizations between T1 and T2, followed by increased vernacularity at T3. The initial downward trajectory suggests she, too, exhibits retrenchment toward the standard as she moves into the constraints of in-classroom teaching. How then do we explain Amelia's reversal to vernacular forms in her 30s?

An important cue for Amelia's behavior can be found in how she positions herself *vis-à-vis* professional expectations. At T2, Amelia is a substitute teacher and reports feeling insecure in her job, particularly due to pressures to adhere to Ofsted-imposed benchmarks. One such example is shown in (7), where she details her concerns surrounding an impending visit.

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(7) Amelia, T2 (15:57-16:28):

Amelia: you're like "oh my God I've got to do this u∼ because Ofsted"
and it's funny
it is funny ['cause it's the] stuff that you do normally

Paul: [it's silly]

Amelia: but you feel kind of under a bit more pressure to do it almost
but yeah so we'll [see]

Paul: [so the] clock's ticking for that

Amelia: clock's ticking
…
to be honest I wish they'd just come
I really do I just think
I just think it's one of those things it's adding like pressure

Amelia's worries evoke the climate of "pre-emptive self-surveillance partly driven by fear of…the acute consequences of receiving a 'satisfactory' or 'inadequate' grading" (Cushing & Snell, 2023:364) identified in critical school-based research. Viewed in this light, Amelia's shift from T1 to T2 (a 30% increase in [ŋ]) gels well with the patterns of retrenchment discussed for older speakers and underscores the effect language ideologies can have on language practices (see Snell, 2013). Amelia's later behavior clarifies the context-specific nature of this pressure. In her T3 interview, she shows little evidence of her previous concerns with institutional oversight. Having settled into her educational role, she emphasizes how much she enjoys working with "the little ones," and her interview features lighthearted reflections of banter with her students. Amelia also reveals that she is studying toward a specialized degree as a speech and language therapist. This newfound confidence is reflected in her linguistic behavior, with vernacular rates returning to those she exhibited at T1.

These pieces of evidence together suggest that Amelia's retrenchment at T2 reflects situationally specific pressures, which have not contributed to lasting change in her grammar. Amelia's trajectory, especially in contrast to that of Lynn and Sally, brings to the fore the importance of speaker-specific linguistic choices resulting from the "continuous modification and reconstruction of…linguistic identity over the course of the lifespan" (Dickson & Hall-Lew, 2017:249).

Discussion

Reflecting on the course of lifespan change

Stability in post-adolescent adult grammars is traditionally assumed and frequently attested in panel studies, but a growing body of work on lifespan change has provided insights into the modifications some individuals make to their grammars as

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they age (see Sankoff, 2019). The present study builds on this work with a unique panel dataset that follows six speaker cohorts as they move into progressively older life stages. This allows us to make a number of contributions. First, we corroborate the widespread finding that most speakers remain relatively stable post-adolescence. Second, for the speakers that do change, malleability can largely be contextualized in terms of professional expectations and individual positioning *vis-à-vis* prescriptive pressures. Most notably, the hypothesized U-shaped curve in our data is strongly tied to whether a speaker currently holds a job in education. These individuals demonstrate clear retrenchment, followed by an increase in vernacularity after leaving the education sector. While Mechler et al. (2022) contend that this behavior characterized only the older middle-class cohort (all of whom were educators), we show that these patterns apply equally to speakers in middle adulthood. Finally, there is evidence of a cohort effect in our data: educators that do not exhibit retrenchment are all members of younger cohorts (30s and below). As evidenced by comments during the interviews, all educators in our panel sample show heightened sensitivity to the pressures associated with teaching professions in the United Kingdom. We argue these patterns are best encapsulated by the professional pressures of traditional language pedagogies that bear on these speakers, a discussion to which we now turn.

Educators and standardization pressures

The original conceptualization of the "marché linguistique" ('linguistic marketplace'; Bourdieu & Boltanski, 1975:4) assigned educators to a special "marché scolaire" ('marketplace of the school'; Bourdieu & Boltanski, 1975:7), who operate in especially linguistically sensitive spheres as professionals of the language. Research on language policies in UK schools suggests that teachers feel under pressure to perform the legitimized language (Cushing, 2020:428) and that adherence to hegemonic language forms is widely policed, with policies equally visible at the national, school, and teacher level. In particular, Cushing (2020:438) pointed to the *Teachers' Standards*, a set of benchmarks used to evaluate teachers during, for example, teacher education programs, appraisals, and Ofsted inspections. These benchmarks include the promotion of "high standards of literacy, articulacy and the correct use of standard English" (Department for Education, 2013:11). Cushing and Snell (2023:363) pointed to another recent example of this institutionalized linguicism in an Ofsted (2019:3) report, which lamented that "[t]oo many staff make errors in their standard spoken English…teach incorrect grammar…[and] need to do more to correct pupil's poor language or vocabulary."

While the links between "language, ideology and behaviour are well established within critical educational linguistics" (Cushing, 2020:427), these connections have been mainly supported on the basis of interviews with teachers (see, in particular, Baratta, 2017). The present study is the first to demonstrate the effects these pressures have on individual linguistic production. Older and middle-aged speakers serving active roles as educators produce lower rates of vernacular (ing), despite the overwhelming local use of such forms, and show a clear rise in vernacularity after leaving active duty (largely irrespective of chronological age). Here, the tail of the U-shaped curve is a reflection of speakers exiting a system where English is most stringently

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monitored and disciplined. The exceptions to this are those younger educators who are embedded in the same local communities they teach in.

These quantitative data are supplemented with qualitative interviews that corroborate teachers' awareness of their role as upholders of "language subordination" (Lippi-Green 2012:66–77). In environments where hegemonically sanctioned English is endorsed as the only desirable variety, teachers function as both models and arbiters of these practices (Cushing, 2020). The consequences of these pressures are plainly expressed by Sally in (8).

(8) Sally, T1 (58:27–58:42)

Sally: well as a teacher I k∼ I kind of often change the way that I talk

ehm I don't know that I necessarily lose the Geordie accent but obviously I make sure that everything that I say is standard English

…

[ehm] particularly important in the job that I do and obviously on job interviews and things like that

Along with statements from other participants (especially Nelly and Fred above), Sally frames "standard English" as a requisite for her profession, where pressure to adhere to hegemonic expectations is disproportionately high. By juxtaposing "Geordie" with "standard English," she balances her loyalty to her local dialect with her role as a "language policy [manager]" (Cushing, 2021:23).

However, the use of standard variants by educators is not monolithic. Occupation interacts with the educator's relationship to the local context since individuals teaching outside their local neighborhoods feel more pressure to use standardized language than those teaching within their neighborhood. The regularity of these overall patterns provides support for Pichler and colleagues' (2018:5) call to move away from narrow conceptions of aging in favor of those that aim to understand "experiences and changes that are relevant or even exclusive to the…[professional] life-course."

The stability of (ing) on Tyneside

Generally, age-grading is characterized as some degree of individual change over the lifespan in a variable that shows community-level stability diachronically (e.g., Wagner, 2012b:180). We submit, however, that this definition is somewhat open to interpretation. A strict interpretation of age-grading would hold that rates *as well as* linguistic and social constraints would need to remain stable across the community, although we are not aware of work that has taken such a rigid interpretation. Most studies treat variables as age-graded simply if they retain stable rates of use in real-time (e.g., Macaulay, 1978; Wagner, 2012b). In our analysis, we identify that (ing) does indeed remain stable across the community over time for a professionally niched subsample of non-educators. This is evident in Figure 4, where non-educators (except for Jake and Andrew) produce high and stable rates of alveolar realizations. In terms of its linguistic constraints, (ing) *may* show some evidence of change (see Table 3), whereby younger cohorts show greater

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differentiation between pronominal and non-pronominal (ing) than older cohorts. However, this may be due to subtle shifts in weightings across cohort rather than a diachronic change in grammatical constraints. The sole factor that seems to have changed over time is the *value* ascribed to (ing)'s variants in educational settings. This is especially obvious when comparing teachers in older cohorts (like Nelly and Fred) as opposed to younger educators who teach in their local communities (like Sally and Lynn) and who are largely stable over time. Future re-recordings will tell whether the youngest panel members, too, succumb to the pressures to "modify their accents to varieties deemed more 'professional'" (Baratta, 2017:416).

Conclusion

This paper brings dynamic panel data to bear on the linguistic and social mechanisms underlying age-grading, allowing us to map speaker trajectories across the entire adult lifespan. Individual trajectories are socially and linguistically niched (MacKenzie, 2017; Mechler & Buchstaller, 2019). Choices in (ing) are linguistically conditioned as predicted by grammatical and phonological principles (e.g., Schleef et al., 2011).

Most importantly, our results suggest that retrenchment toward the standard and the subsequent "tail" is a function of the specific pressures exerted by educational occupations. Against a community backdrop of principally alveolar forms, in-session teachers show movement toward the velar variant, a type of retrenchment, we argue, that is a reaction of educator orientation to formally prescribed norms, and, as such, part of the "pervasive…practice [of] linguistic conservatism and linguicism of current UK curriculum policy" (Cushing, 2020:443). After leaving the teaching profession, whether by occupational change or retirement, we observe *post-educator relaxation*—a clear increase in vernacularity consistent with the hypothesized "tail" in the U-shaped curve. Until recently, accounts of speaker's self-correction have been based on introspective commentary (Baratta, 2017; Cushing, 2020), or inferred on the basis of panel data from younger age brackets (Wagner, 2012b). Our data produces the first panel-based evidence that educators systematically correct toward the standard during their years of active service, in part, due to the hegemonic pressures enacted within educational institutions.

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Competing interests. The authors declare none.

Notes

1. Due to uneven token numbers, preceding phonological context was expressed binarily (dorsal tokens versus all other contexts); following phonological context was a three-level factor: coronal, non-coronal (comprising dorsal and labial tokens), and vocalic/glottal/final (which included tokens followed by a vowel, /h/, or in utterance-final position).

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2. Mechler et al. (2022) reported that these speakers become slightly *more* vernacular, a finding that holds only if pronominals are included.
3. "Qui doivent leur position à la maîtrise des instruments de l'expression" ('those who owe their position to mastering the use of the instruments of expression'; our translation).
4. In UK social services, the "dole office" refers to the job center. Sundgren, Buchstaller, and Beaman (2021) discussed how young, especially male, public-sector employees rely on vernacular forms to index localized expertise. This would seem to apply to Fred *before* he was recorded at T1 and is equally relevant for Jake (early 20s), who, between T1 and T2, rose through the Newcastle city administration, from dole office clerk to lower management of the local authority.
5. Since 1992, the Office for Standards in Education, Children's Services, and Skills (Ofsted) has monitored educational agencies and teacher training, which includes "regular inspections…which comment on various aspects of educational provision, including teachers' and students' spoken language" (Cushing & Snell, 2023:363). Although Ofsted is not involved in tertiary-level educational contexts, here, too, reports of accent discrimination can be found (see Paterson, 2019).

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