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English Adverb Placement in the Vernacular: A Longitudinal Perspective

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Abstract

Research on English variable adverb placement is largely focused on written evidence, with only rare insights from the vernacular. Moreover, no research has investigated adverb placement in longitudinal spoken data, meaning that little is understood about more historical stages in the operation of this system or how they relate to contemporary patterns. Drawing on a large multistage corpus, we pursue the question of what more distal stages of spoken language reveal with respect to patterns of adverb placement in vernacular English. Multivariate regression reveals not only that linguistic constraints condition variation in parallel to what is reported elsewhere, but that social factors are implicated as well. We also uncover diachronic evidence that the overall frequency of pre-auxiliary adverbs decreased between the mid-nineteenth and twentieth centuries, with one notable exception. Specifically, for modal + HAVE constructions, the pre-auxiliary position has historically been a particularly favorable one, and this order has increased significantly over time. Exploration of a possible explanation leads us to suggest that the increase in pre-auxiliary adverbs in modal + HAVE constructions is linked to the decrease in pre-auxiliary adverbs elsewhere, deriving from a parallel increase of HAVE reduction in vernacular speech. The results thus suggest an interaction between apparently independent processes in the verbal syntax of English.

English Adverb Placement in the Vernacular: A Longitudinal Perspective

Emmanuelle Buillon, Caroline JH Allen, and Alexandra D’Arcy*

1 Introduction and Background

When modifying a predicate that includes a finite auxiliary, adverbs typically occur pre-auxiliary adjacent or post-auxiliary adjacent. In pre-auxiliary position, the adverb occurs immediately before the auxiliary verb (1); in post-auxiliary position, the adverb immediately follows the auxiliary verb (2). This variation is a longstanding feature of English it has received little systematic attention, particularly through a variationist lens—critical for elucidating the variable grammar. Rather, the emphasis has been primarily on variable adverbial placement in written data, with only limited evidence provided from the vernacular. One finding is consistent across studies: regardless of variety, register, or mode, pre-auxiliary placement is infrequent; the vast majority of adverbs occur immediately after the finite auxiliary. Nonetheless, several linguistic factors are reported to influence the variability illustrated in (1) and (2), including the finite auxiliary and the adverb itself, as well as its type (temporal, modal, conjunctive; e.g. Jacobson 1975).

- (1) I *probably* would want some. (w/b.1984)
- (2) I would *probably* call it more community. (w/b.1991)

An intriguing aspect of adverb variation in the context of finite auxiliaries is that it appears to be regionally variegated. While the pre-auxiliary position is infrequent overall, comparative analyses of British and North American Englishes reveal more variation in American and Canadian datasets than in British ones. Specifically, pre-auxiliary placement is more frequent in North American varieties than in British ones (Jacobson 1975, Swan 2001, Granath 2002, Waters 2013). Initially believed to be related to whether or not the finite auxiliary is stressed or not (Swan 2001), more recent work has found no support for this claim (Waters 2013). Moreover, this possible difference, which relates to frequency but not, apparently, to the variable grammar, may not affect all registers and modes in parallel. For example, Jacobson (1975) found it only in newspaper writing. Time may also be a complicating factor, implicating the possibility for ongoing change. For example, Granath (2002) finds a significant effect of variety in data from 1961, but none in parallel corpora from 1996. Thus, always infrequent regardless of variety, her results suggest that pre-auxiliary adverb placement is declining in American English, lowering to levels that mirror those found in English English. Notably, Waters (2013)—a variationist, apparent time analysis and the first to consider social predictors in addition to linguistic ones—finds no effect of age in either the Canadian or the English datasets upon which she relies. However, as we suggest here, the strictly synchronic nature of the materials may obscure insights into longitudinal trends.

In this study, we model the methods reported in Waters (2013) and examine variation in adverb placement relative to a finite auxiliary verb. Like Waters, we explore both social and linguistic factors that may condition variation in the vernacular. What we add is a diachronic perspective, enabling us to view the path the variable has travelled over 126 years in real and apparent time. We have two broad aims. We first assess the more recent historical trajectory of variable adverb placement. Is there evidence for change over time? If so, what contexts lead and which hold on? We then delve into the effects of linguistic and social predictors to examine how contextual conditions may impact variation in speech. What emerges from the analyses is a nuanced view of this syntactic phenomenon, one that reveals a complex social and linguistic ecology that is not independent from other ongoing changes in the auxiliary system of English.

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2 Data and Methods

2.1 Data

We draw here on a large, multistage corpus representing most of the history of English in Victoria, British Columbia, Canada. This city, situated at the southern tip of Vancouver Island, was incorporated in 1863 after 20 years as a trading post. It was settled predominantly by internal migration from within Canada (D'Arcy 2015:49). Although immigrants from England have consistently accounted for a non-trivial proportion of Victoria's residents, the historical demographics reveal a settler population that has always been primarily "Canadian." This is reflected in the local variety of English, which both historically and contemporaneously exhibits variable patterns that render its classification as "Canadian English" both uncontroversial and incontrovertible (Roeder, Onosson and D'Arcy 2018, Denis and D'Arcy 2019).

The Diachronic Corpus of Victoria English (DCVE) consists of archival oral histories carried out with local Victorians. These individuals were born between 1865 and 1936; all were older at the time of recording, circa 1960–1991. The Synchronic Corpus of Victoria English (SCVE) is composed of sociolinguistic interviews with locals born between 1913 and 1996 (thereby overlapping with the later DCVE speakers); their ages ranged from 14 to 98 years at the time of recording in 2011 (see D'Arcy 2017). The population of Victoria is not known for its diversity (linguistic or ethnic; see D'Arcy 2015). The speakers in the SCVE represent first to sixth generation Victorians. They are nearly exclusively white, and all have family roots that trace to the British Isles. They are assumed to be cis-gender. The materials from all speakers in the DCVE and SCVE were systematically searched for the variable. The resulting sample, outlined in Table 1, includes 178 individuals whose years of birth span the mid 1860s to the late 1990s, providing a window on 126 years of variation.

YEARS OF BIRTH	MEN	WOMEN	TOTAL
1865–1899	14	12	26
1900–1949	38	31	69
1950–1996	44	39	83
total	96	82	178

Table 1: The sample

2.2 Methods

The variable context is defined, following Waters (2013), as adverb adjacency to a single finite modal auxiliary in an affirmative declarative clause with no ellipsis, as in (1) and (2). This excludes a range of clause types in which variation is either not possible or, where it is attested, the meaning is not constant across contexts. With respect to the first scenario, ellipsis of the lexical verb invariably results in pre-auxiliary placement of the adverb, as in (3) (Granath 2002:27). Since such contexts are invariant, they were not included. With respect to the second scenario, as Quirk et al. (1985:494) note, whether or not the adverb falls within the scope of negation (4b) or outside of it (4a) results in meaning differences across structures. Such contexts were also excluded. Syntactic interrogatives that are subject to auxiliary inversion, as in (5), were also set aside. They disrupt adjacency between the adverb and the auxiliary, blocking the variation examined here.

- (3) a. He wanted to keep as far away from the village as he *possibly* could. (w/b.1875)
b. *He wanted to keep as far away from the village as he could *possibly*.
- (4) a. I *really* can't say that. (m/b.1980)
b. I can't *really* say that.
- (5) Have you *really* checked into it? (w/b.1937)

It is also possible for two or more finite auxiliaries to appear within the clause, creating up to four possible syntactic slots for an adverb to occur. This is illustrated in (6).

- (6) a. [...] that *plausibly* could've been emulated.
 b. [...] that could *plausibly* have been emulated.
 c. [...] that could've *plausibly* been emulated.
 d. [...] that could've been *plausibly* emulated. (m/b.1933)

Waters' (2013) quantitative analysis concentrates on structures like (6a) and (6b), on the basis of arguments that scope shifts in cases like (6c) and (6d) (e.g. Ernst 2002). As it happens, structures such as (6d) are extremely rare ($n = 3$); they were excluded here. Although Waters returns to structures such as (6c) in her analysis, she notes that they behave anomalously, thus suggesting that they represent a different context. We followed her in excluding these structures as well.

Finally, null contexts (i.e., those in which no adverb occurs) were not considered part of the envelope of variation. As the examples in (7) demonstrate, the presence or absence of an adverb can impact meaning, where the position of the adverb, once present, does not. Thus, (7a) and (7b) are synonymous, whereas (7a) and (7c) are not (Waters, January 29, 2019).

- (7) a. They'd *sometimes* come in that way. (w/b.1875)
 b. They *sometimes* would come in that way.
 c. They'd \emptyset come in that way.

Once the variable context was delimited, we followed Waters (2013) and used AntConc (Anthony 2014) to search our materials for all attestations of the central modals: *can*, *could*, *may*, *might*, *must*, *shall*, *should*, *will*, and *would* (Quirk et al. 1985:151). Every instance in which one of these forms occurred with an adjacent adverb was identified and extracted (for further details, see Section 2.3).

Because of their sheer frequency, Waters (2011, 2013) did not include auxiliary BE or DO in the envelope of variation (cf. Jacobson 1975). However, she found that modal + HAVE sequences, as in (8a), were crucial to her understanding the variable. Therefore, to more fully examine the relationship between perfective HAVE and adverb placement, she also extracted instances in which it occurred without a central modal, as in (8b). We followed Waters (2013) in extracting all instances of perfective HAVE, with or without a central modal, where it occurs with an adjacent adverb. However, because HAVE is exceedingly frequent, an alternative method to that used for extracting modal auxiliary tokens was necessary. We also required a method that would enable us to replicate Waters' analysis as closely as possible.

- (8) a. I *probably* would have looked further afield. (m/b.1973)
 b. I think was the first time our kids have *ever* heard him yell. (w/b.1953)

As such, we extracted all collocations of *have*, *has*, and *had* (and their contracted forms), limiting our search to the twelve most frequent adverbs in Waters (2013), plus an additional two adverbs which were exceedingly frequent in our own materials: *actually*, *always*, *certainly*, *eventually*, *maybe*, *often*, *obviously*, *never*, *probably*, *really*, *sometimes*, *still + ever* and *perhaps*.

After following these procedures, a total of 2401 tokens were extracted from the corpora and retained for analysis.

2.3 Predictors

As noted in Section 1, one goal of this study is to examine the role of both language internal and language external factors that constrain variation in adverb placement in finite auxiliary clauses. Another is to assess this variation over time. To address this latter goal, we consider speaker year of birth as a proxy for diachrony. To address the former goal, we consider three linguistic factors (lexical adverb, adverb type, auxiliary verb) and two social factors (speaker gender, education).

For the social factors, gender is treated as a binary distinction between women and men (no participants identified another gender). Education is also treated as a binary predictor, where we differentiate between speakers who had some post-secondary education versus those who had none. This educational information is only available consistently for the more recent SCVE materials, however, and so we are not able to track what effect, if any, this predictor had for speakers born prior to 1913.

For the linguistic factors, we continue to replicate the methods used by Waters (2013). We therefore consider the effect of lexical adverb (e.g. *really*, *actually*, *probably*, etc.) as well as that of adverb type.¹ Ernst (2002) classified adverbs into two categories: functional and predicational. Functional adverbs include adverbs of frequency, duration, and focus (e.g. *often*, *never*, *sometimes*), while predicational adverbs “are not quantificational” and “represent gradable predicates taking (at least) events or propositions as their arguments” (Ernst 2002:41). They are typically speaker- or subject-oriented (e.g. *certainly*, *maybe*, *probably*). We also include a third category: manner adverbs. Waters (2013) also initially extracted these forms as well, but they behaved categorically in her datasets, limited to post-auxiliary position (2013:184), and were thus excluded from analysis. Although her result is consistent with claims in Ernst (2002), it turns out not to hold fully in our own materials, as we discuss shortly.

Finally, we consider the auxiliary verb itself, which includes the central modals, *have*, and modal + *have*. All of the central modals were attested in our materials, though inevitably some appear with adverbs exceptionally infrequently. There were just seven tokens of *may* and *must*, and only one of *shall*. Also infrequent were *might* ($n = 20$) and *should* ($n = 35$). While these are retained in the analyses overall, we have removed them from the inferential statistics when we consider the effect of auxiliary verb in constraining variant choice.

3 Results and Discussion

Consistent with previous research (e.g. Jacobson 1975, Granath 2002, Waters 2013), the overall frequency of pre-auxiliary adverb position is low in the Victoria materials, just 9.6% ($N = 2401$). Nonetheless, this aggregated view suggests a local system that is characterized by more competition than has been reported for casual speech elsewhere. Indeed, Waters (2013:186) reports a significantly lower overall frequency in Toronto, another Canadian city, where pre-auxiliary adverbs account for a mere 6.1% ($N = 1067$) of the data (χ^2 ($df = 1$, $N = 3468$) = 11.8 $p < 0.0005$). To explore what may be driving this difference, we first turn to distributional, longitudinal evidence. We then examine the variable grammar underlying adverb placement in detail, using both distributional and inferential lines of evidence.

3.1 The Longitudinal Perspective

As discussed in Section 1, the analysis in Waters (2013) draws on contemporary, synchronic data, and although she did not find evidence for change in apparent time, the literature suggests that pre-auxiliary placement declined between the 1960s and the 1990s in American English. Because it is drawn from a multistage corpus, the Victoria dataset enables a longitudinal view of the variable, one that extends beyond the living speech community.

The diachronic trajectory is presented in Figure 1, where time is captured by speaker year of birth. This view of the data reveals two things. First, always a minority option, pre-auxiliary adverb placement has become increasingly infrequent over time. Second, this declination is evident across the historical data and the first decades of the contemporary data, but then appears to have stabilized among speakers born in the middle of the twentieth century; since then, rates have remained constant, hovering around 6.5%. Notably, not only does this extended stretch of stability overlap to some extent with the span captured in Waters (2013) but the frequency of pre-auxiliary placement in Victoria English throughout this period is indistinct from that reported for vernacular Toronto English; statistically there is no meaningful difference (χ^2 , ($df = 1$, $N = 2471$) = 0.3, $p = 0.5923$).

Situating these results in the broader context, we can infer a number of things about how the change toward lower rates of pre-auxiliary adverb placement has proceeded in varieties of North American English. Like the SCVE, the Toronto sample upon which Waters (2013) relied included speakers born as early as the 1910s and the 1920s and yet the apparent time trajectory in that data is clearly one of consistent, long term stability (for details, see Waters 2011:83). In Victoria, rates

¹All told, the dataset includes 121 distinct adverbs. With but three exceptions, *like*, *just*, and *only*, no adverbs were excluded from analysis. These three were set aside because not only can their syntactic function be difficult to disambiguate, they also have position-specific properties that impact both their meaning and the interpretation of the clause (Waters 2013:184, fn.10).

continue to decline through to speakers born in 1950. Indeed—and this is a point to which we return shortly—the 1920s through the late 1940s appear to be a period of rapid change in Victoria. Thus, whereas the evidence suggests that pre-auxiliary placement was stable in Toronto across the twentieth century, the onset of stability seems to have entrenched several decades later in Victoria, evident only from the middle of the century. Such a result is not surprising. Previous work on the phonetics, morphosyntax, and discourse-pragmatics of English in Victoria has consistently reported that this variety generally lags behind change in General Canadian English, though it does ultimately catch up (D’Arcy 2015, Roeder, Onosson and D’Arcy 2018, Denis and D’Arcy 2019). The longitudinal view of variable adverb placement provides yet another confirmation of this general pattern, thereby explaining why an effect of time/age is evident here but not in Waters (2013), while the parallelism among speakers born in 1950 and later aligns Toronto and Victoria as “Canadian English,” consistent with a settler colonial setting (Denis and D’Arcy 2018, 2019).

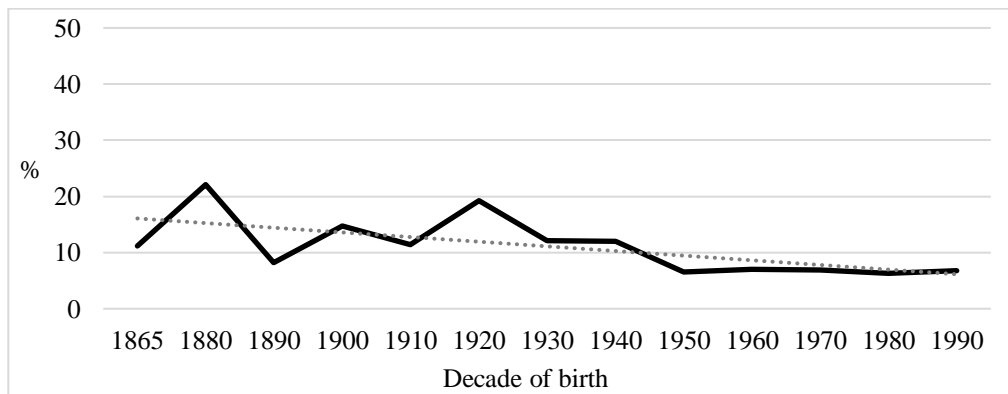


Figure 1: Distribution of pre-auxiliary adverbs by speaker decade of birth

At the same time, the trajectory in Figure 1 suggests that a period of accelerated declination obtained from the early 1930s through to the point of stabilization among speakers born in the 1950s. We do not believe this timing is coincidental. As noted by Tagliamonte, D’Arcy and Rodríguez Louro (2016), a number of changes in English accelerated in the second half of the twentieth century, a pattern that has been observed in Victoria as well (Roeder et al. 2018). This tendency could be due in part to the impact of the Second World War and the subsequent political, economic, and cultural changes that created a “break between generations” with respect to increased geographic and social mobility (Tagliamonte et al. 2016:838).

As discussed in Section 1, Granath (2002) also reported a decrease in pre-auxiliary position, but her data were from American English and the timing differs: it coincides, in real time, with the stability observed in Figure 1 (also observed in Waters 2013). We suggest that this does not reflect a national, regional difference but one of register. Specifically, her analysis is based on written English that represents a range of styles, from prose fiction to learned writing to press reportage. As a change from below, we would expect that change would impact casual speech before it would impact writing, and thus the later evidence of change reported by Granath (2002) is consistent with known pathways of change more generally (e.g. Labov 2001).

In summary, the longitudinal perspective corroborates a change in progress (i.e., adverbs increasingly disfavour pre-auxiliary position) but one that ultimately stabilized in vernacular use. The parallelism across Toronto and Victoria with respect to ongoing stability thus suggests that the pre-auxiliary position has found its foothold within the vernacular. We now turn to an examination of the linguistic and the social constraints on variation, to elucidate the contexts and conditions that are particularly favourable to use of the pre-auxiliary position in speech.

3.2 Constraints on Variation

Because gender is a known correlate of language change, we begin there. Other things being equal, we expect that women will lead the change—in this case, away from pre-auxiliary adverbs. That is

not what we find, however. Overall, it is men who have the lower rate of pre-auxiliary adverbs (women: 11.1%, $n = 1344$ vs. men: 7.8%, $n = 1057$). Moreover, when gender is considered over time, as in Figure 2, it is clear that not only have men lead the change away from pre-auxiliary adverbs in terms of frequency, they also lead the change in terms of temporal onset. In other words, the diachronic pathway in Figure 1 obscures an important social correlate of the shift: whereas men continuously decreased their use of pre-auxiliary adverbs from the mid-nineteenth century to the point of stabilization in the mid-twentieth century, for women the window of change was isolated to the first half of the nineteenth century, where the gender effect became entrenched.

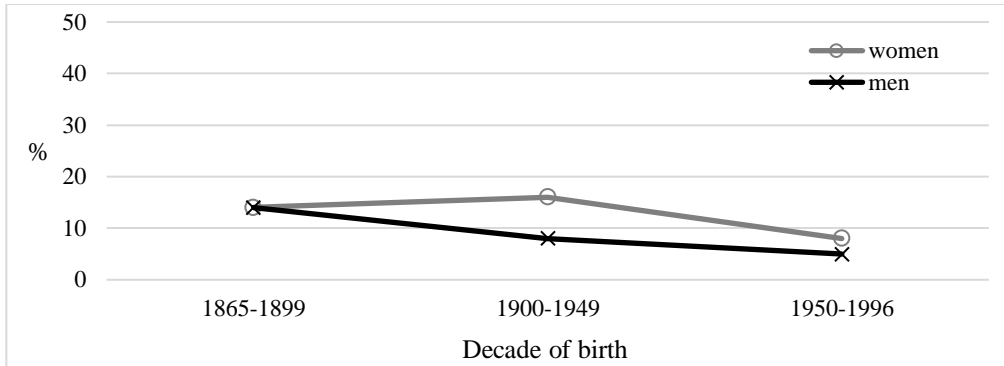


Figure 2: Frequency of pre-auxiliary adverbs over time, according to gender

These results suggest that an element of prestige, standardness, or formality may be associated with the pre-auxiliary position (see, e.g., Labov 1972, Cameron and Coates 1988, Holmes 1997). It is possible that in Victoria, at least, pre-auxiliary adverbs carry some social capital. If this is the case, however, it is not capital that is overt or reinforced by standard language ideology. For example, classic reference grammars such Quirk et al. (1985) and Biber et al. (1999) include no claim of a prototypical, formal, or standard practice; they simply note the possibility of variation. Thus, if notions of prestige are associated with the pre-auxiliary position, this social work is going on beneath the level of consciousness.

One way to explore this further is through consideration of the effect of education. Labov (2001) has argued that education provides perhaps the best binary measure of a form's social evaluation. Specifically, higher levels of education correlate with linguistic features held to have prestige, as forms overtly associated with ideals of standard language. We would therefore predict that the pre-auxiliary position will be more frequent among speakers with some degree of post-secondary education. While there is a difference, it can only be described as marginal and it operates in the opposite direction from what we expected: 7.9% ($n = 284$) among speakers with post-secondary education versus 8.1% ($n = 1561$) among those with none. This result is difficult to interpret; even a cross-tabulation with gender reveals no interactions. There is also little in previous studies to help guide our interpretation: studies report mixed results for register, genre, and style, leaving us little information from which to proceed.

When we subject the data to a fixed effects multivariate analysis, as reported in Table 2, we see that year of birth and gender are selected as main effects.² Education, however, is not. These results are entirely consistent with the distributional results, which indicated robust effects for age and gender, but not for education. Nonetheless, that gender should be significant lends support to our hypothesis that pre-auxiliary position may carry some kind of prestige in the community, even if such is not captured by education. Given that this feature is neither subject to overt metalinguistic commentary nor given any subjective weight in grammars leads us to wonder whether education is even an appropriate measure here. In future work we will also assess the role of socioeconomic status, to see whether it can provide further insight.

We now turn our attention to the role of linguistic predictors. Whereas there is no main effect of education in the dataset and that of gender is present but weak relative to speaker year of birth,

² We ran a single best-fit model with both social and linguistic predictors but report the results separately.

especially once variation stabilized after 1950 (cf. Figure 2), the results for the internal constraints reveal that some linguistic contexts heavily favour the pre-auxiliary position. In other words, consistent with Waters (2013), it seems that language internal rather than language external predictors are the primary mechanisms operating on variable adverb placement in finite modal auxiliary phrases.

corrected mean	0.066		
significance	0.015		
	FW	%	N
YEAR OF BIRTH			
1865–1899	.65	14.3	300
1900–1949	.62	13.6	697
1950–1996	.41	6.6	1404
	<i>range</i>	24	
GENDER			
woman	.54	11.1	1344
man	.45	7.8	1057
	<i>range</i>	9	
EDUCATION			
no post-secondary	[.52]	8.1	284
post-secondary	[.50]	7.9	1561
	TOTAL		2401

Table 2: Fixed effects multivariate analysis of language external predictors constraining the selection of pre-auxiliary adverbial position

Select individual adverbs have a robust tendency to occur in pre-auxiliary position, while others appear in this position much less frequently. For example, for forms such as *certainly*, *really*, and *probably*, rates of pre-auxiliary position are exceptionally high (29.2%, $n = 24$; 27.9%, $n = 111$; and 25.9%, $n = 166$, respectively). In contrast, for other forms the frequency of pre-auxiliary placement typically falls below 10% (e.g. *still*: 9.9%, $n = 121$; *also*: 4.2%, $n = 24$; *ever*: 2.2%, $n = 182$). Notably, *certainly*, *really*, and *probably* are predicational adverbs, a category that is known to favour the pre-auxiliary position, while functional adverbs, of which *still*, *also*, and *ever* are examples, disfavour this position (Waters 2013). This tendency is strongly reflected here (predicational: 19.1%, $n = 659$; functional: 6.0%, $n = 1703$).

The occurrence of a pre-auxiliary manner adverb in these materials, shown in (9), should also be noted. Contra Ernst (2002) and Waters (2013), this position, while exceptional, is nonetheless attested (2.6%, $n = 39$).

(9) [...] ask them if they *formally* would accept an honorary degree. (w/b.1922)

However, this single token—produced by a woman, a former faculty member with a doctoral degree—strikes as hypercorrective and as aiming to model a formal style. It thereby adds tentative support to our suggestion that the pre-auxiliary position is a prestige realization in the community. At the same time, this token occurs in the archival materials, not the more recent synchronic sociolinguistic interviews. This may be coincidental rather than substantive, but it does support the more recent empirical findings reported by Waters (2013) that manner adverbs categorically appear in post-auxiliary position.

The modal auxiliary itself is also known to correlate with adverb placement. Indeed, one context in particular is highly favorable to pre-auxiliary adverbs: modal + HAVE, as in (8a). In the Victoria materials, this is the only context in which the pre-auxiliary position is the majority one: 60.4% ($n = 106$). This can be directly contrasted with perfective HAVE sequences, where the frequency is a mere 5.4% ($n = 913$).

Given the strong differences that are evident in the distributional statistics, it is no surprise that when subjected to multivariate analysis, adverb type and modal auxiliary are selected as main effects (we did not include lexical adverb, as it is not independent of adverb type). The results are reported

in Table 3. Both of the linguistic predictors operate in the expected direction; both are very strong. Moreover, as seen for Toronto in Waters (2013:191), *can* and HAVE disfavour pre-auxiliary adverbs, while the remaining modal contexts either favour them or are effectively neutral. We acknowledge that slight perturbations between frequency and factor weight are evident in Table 3 in the effect of modal auxiliary. These reflect the way individual forms pattern across adverb types (e.g. no effect of predicational vs. functional adverbs is evident for *could*, whereas predicational adverbs are four times more frequent before *will* than functional ones are, resulting in a rate of occurrence in that one context that far surpasses that of *could*, driving its probability up).

corrected mean	0.066		
significance	0.015		
	FW	%	N
ADVERB TYPE			
predicational	.72	19.1	659
functional	.41	6.1	1703
<i>range</i>	<i>31</i>		
MODAL AUXILIARY			
modal + HAVE	.93	60.4	106
will	.53	8.9	190
could	.53	11.2	251
would	.50	7.8	689
HAVE	.44	5.4	913
can	.38	5.5	181
<i>range</i>	<i>55</i>		
TOTAL			2401

Table 3: Fixed effects multivariate analysis of language internal predictors constraining the selection of pre-auxiliary adverbial position

Nonetheless, the findings in Table 3 lead us to conclude that while the pre-auxiliary position has declined diachronically overall (cf. Figure 1), its ongoing stability among speakers born since the mid-twentieth century is indicative that it has become entrenched in specific contexts: with predicational adverbs (*certainly, really, actually, obviously, totally, probably, perhaps*) and with modal + HAVE constructions. Indeed, its robust frequency in this latter context is striking, particularly in light of both the longitudinal trajectory evidenced by the variable as a whole and its contrast with perfective HAVE alone. This led us to explore these two contexts in more depth.

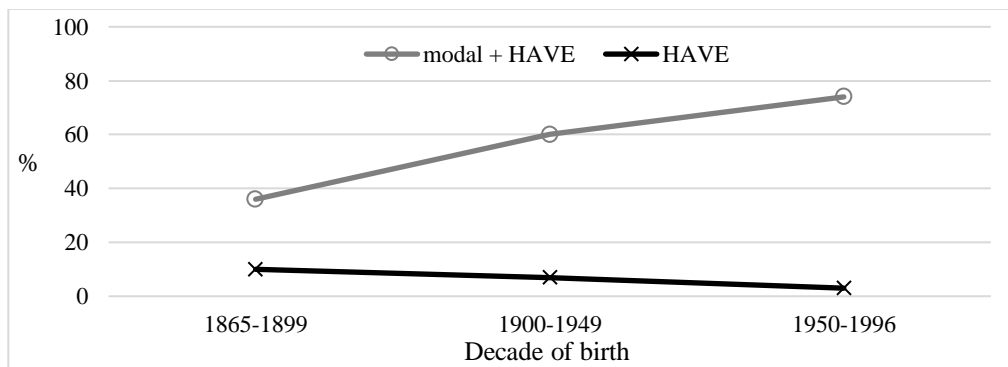


Figure 3: Frequency of pre-auxiliary adverbs in HAVE contexts over time

As Figure 3 reveals, the modal + HAVE context is set apart from perfective HAVE (and indeed, from the full set of modal contexts as well) in a critical respect: here alone pre-auxiliary adverbs increase over time, reaching a full 73.8% ($n = 42$) among the youngest cohort. The change captured in this trajectory is significant (χ^2 (df 2, $N = 106$) = 8.48, $p < 0.014$). Meanwhile, perfective HAVE

consistently exhibits the lowest rate of pre-auxiliary adverbs over time. By the time of the youngest group, this position is effectively obsolescent, just 3.1% ($n = 516$), and this longitudinal trend is also significant (χ^2 (df 2, $N = 913$) = 13.26, $p < 0.001$).

Is it simply a coincidence that the auxiliary types with the consistently highest and lowest rates of pre-auxiliary adverbs both involve perfective HAVE? Waters (2013) observed that speakers use adverbs immediately before HAVE at lower rates than before modals, whether that meant avoiding pre-auxiliary position with perfective HAVE or avoiding post-auxiliary position with modal + HAVE. She proposed that reduction of HAVE was a possible explanation. Illustrated in (10), the post-auxiliary position with perfective HAVE creates the subject-auxiliary adjacency that facilitates HAVE-reduction, while in (11), it is the pre-auxiliary position with modal + HAVE that facilitates reduction.

- (10) I've *never* forgotten it. (m/b.1876)
 (11) They *probably* would've hired me. (w/b.1982)

Waters (2013:194f) thus suggested that this reflects a post-syntactic process: the default adverbial position is after the auxiliary, and the adverb moves to the pre-auxiliary position when doing so facilitates reduction of HAVE (i.e., adjacency is maintained, enabling HAVE to cliticize to the modal). If Waters' hypothesis concerning HAVE-reduction can indeed account for high rates of pre-auxiliary adverbs in modal + HAVE contexts and low rates of pre-auxiliary adverbs with perfective HAVE, we might expect to see an increase in HAVE-reduction in exactly these contexts over time in our data.

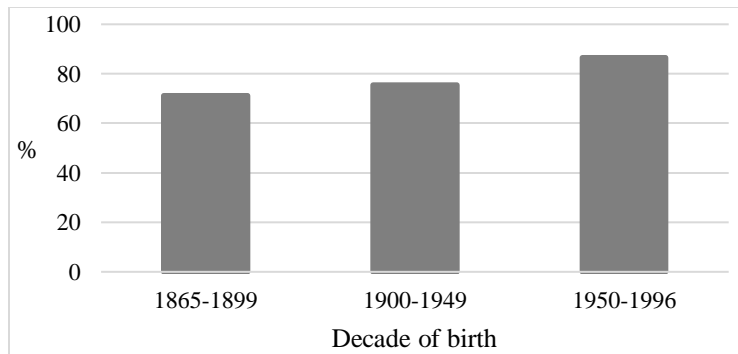


Figure 4: Rates of reduction of HAVE over time

Figure 4 reveals that this is precisely the case: HAVE reduction increases regularly and significantly across the DCVE and the SCVE (χ^2 (df 2, $N = 1019$) = 25.6, $p < 0.00001$). Whether or not this is wholly epiphenomenal is a question for further research, but this finding suggests that shifting rates of pre-auxiliary adverbs—increasing with modal + HAVE and decreasing with perfective HAVE—may be linked to a growing tendency to contract HAVE in vernacular speech more generally.

4 Discussion and Conclusion

At the outset of this work we asked two broad questions: Is there evidence for change over time with respect to adverb placement in the vernacular, and if so, which contexts lead this change and which hold on to older patterns? We also sought to delve into the effects of both linguistic and social predictors in constraining adverb placement relative to modal verbs. What we have detailed is a richly nuanced system in which certain functions entrench, providing strong evidence of systemic specialization. In particular, we have corroborated that pre-auxiliary adverbs have declined in the vernacular since the mid-nineteenth century, an observation facilitated by the generally conservative historical nature of English in Victoria. Unlike what has been reported elsewhere, this shift exhibits evidence of social conditioning in our dataset: it was led by men, both in frequency and in timing, and this social parameter continues to exert an effect, even as variation has stabilized across speakers born in the second half of the twentieth century and reflects current practice in the community. Contemporary variation is robustly constrained by context. Despite the exceptional nature of pre-

auxiliary adverbs overall, predicational adverbs are strongly favored in this context. Individual modals tend to be either neutral or slightly disfavoring of pre-auxiliary position, with the clear exception of modal + HAVE constructions, in which the most frequent position in which the adverb appears is before the auxiliary. Indeed, we have provided tentative evidence that adverb placement is not independent of other processes affecting auxiliary phrases—the tendency to contract HAVE specifically. This last result, which supports Waters' (2013) hypothesis that HAVE reduction triggers movement of the adverb in front of the auxiliary phrase, provides rich potential for further work. We considered reduction only within the variable context as defined here for the examination of adverb position relative to the central modal auxiliaries and HAVE. Future studies could consider reduction more generally, particularly as HAVE-reduction is likely to be correlated with individual auxiliaries, depending on phonological factors and frequency effects.

References

- Anthony, Laurence. 2014. AntConc 3.4.3m [software]. Tokyo: Waseda University. Available at: http://www.antlab.sci.waseda.ac.jp/antconc_index.html.
- Biber, Douglas, Stig Johansson, Geoffrey Leech, Susan Conrad and Edward Finegan. 1999. *Longman Grammar of Spoken and Written English*. London: Longman.
- Cameron, Deborah and Jennifer Coates. 1988. Some problems in the sociolinguistic explanation of sex differences. In D. Cameron and J. Coates (eds.), *Women in their Speech Communities: New Perspectives on Language and Sex*, 3–12. London and New York: Longman.
- D'Arcy, Alexandra. 2015. At the crossroads of change: Possession, periphrasis, and prescriptivism in Victoria English. In P. Collins (ed.), *Grammatical Change in English World-Wide*, 43–64. Amsterdam and Philadelphia: John Benjamins.
- D'Arcy, Alexandra. 2017. *Discourse-Pragmatic Variation in Context: Eight Hundred Years of LIKE*. Amsterdam: John Benjamins.
- Denis, Derek and Alexandra D'Arcy. 2018. Settler colonial Englishes are distinct from postcolonial Englishes. *American Speech* 93:3–31.
- Denis, Derek and Alexandra D'Arcy. 2019. Deriving homogeneity in a settler colonial variety of English. *American Speech* 94:223–258.
- Ernst, Thomas. 2002. *The Syntax of Adjuncts*. Cambridge: Cambridge University Press.
- Granath, Solveig. 2002. The position of the adverb certainly will make a difference. *English Today* 18:25–30.
- Holmes, Janet. 1997. Setting new standards: Sound changes and gender in New Zealand English. *English World-Wide* 18:107–142.
- Jacobson, Sven. 1975. *Factors Influencing the Placement of English Adverbs*. Stockholm: Almqvist & Wiksell International.
- Labov, William. 1972. *Sociolinguistic Patterns*. Philadelphia: University of Philadelphia Press.
- Labov, William. 2001. *Principles of Linguistic Change*, Vol. 2, *Social Factors*. Malden and Oxford: Blackwell Publishers.
- Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech and Jan Svartvik. 1985. *A Comprehensive Grammar of the English Language*. London: Longman.
- Roeder, Rebecca, Sky Onosson and Alexandra D'Arcy. 2018. Joining the Western Region: Sociophonetic Shift in Victoria. *Journal of English Linguistics* 46:87–112.
- Swan, Michael. 2001. *Practical English Usage*. Oxford: Oxford University Press.
- Tagliamonte, Sali A., Alexandra D'Arcy and Celeste Rodríguez Louro. 2016. Outliers, impact, and rationalization in linguistic change. *Language* 92:824–849.
- Waters, Cathleen. 2011. *Social and Linguistic Correlates of Adverb Variability in English: A Cross-variety Perspective*. PhD Dissertation. Toronto: University of Toronto.
- Waters, Cathleen. 2013. Transatlantic variation in English adverb placement. *Language Variation and Change* 25:179–200.

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