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# Comparative Sociolinguistic Insights in the Evolution of Negation

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# Comparative Sociolinguistic Insights in the Evolution of Negation

## Abstract

There are three ways of expressing negation on indefinites in English: *any*-negation (*I didn't have any money*), *no*-negation (*I had no money*) and negative concord (*I didn't have no money*). These variants have been competing diachronically in a change in progress, where the newest variant *any*-negation is increasing at the expense of the oldest variant *no*-negation (Tottie 1991a, 1999b, Varela Pérez 2014). This raises the questions: What is the current state of this variability? Is the variation socially evaluated? What does this reveal about linguistic change? Our comparative quantitative sociolinguistic analysis of vernacular speech corpora from Northern England and Ontario, Canada reveals that *no*-negation is stoutly retained in Britain but is less frequent in Canada. Linguistic constraints on the variation hold cross-dialectally: functional verbs retain *no*-negation, while lexical verbs favour *any*. However, the social embedding of the variation is community-specific. Where the change to *any*-negation is more advanced, i.e., Canada, there are no significant social effects: the variation between *any*-negation and *no*-negation appears stable. In England, where *no*-negation is conserved to a greater extent, there are effects of speaker sex and education, with men and less-educated speakers favouring *no*-negation. Furthermore, both of the UK communities (North East England and York) display age-grading trends which suggest that the prestige associated with *any*-negation historically has persisted over time. While the communities share a common variable grammar, the social value in choosing a variant is localised and reflects the status of the change.

# Comparative Sociolinguistic Insights in the Evolution of Negation

Claire Childs, Christopher Harvey, Karen P. Corrigan and Sali A. Tagliamonte\*

## 1 Introduction

English has three strategies for expressing sentential negation with a negative polarity item, which in this paper are termed *any*-negation, *no*-negation, and negative concord, respectively. *Any*-negation features a negative marker *not* on the verb (or the corresponding enclitic *n't*, as in (1)) that scopes over an indefinite negative polarity item with the form *any(-)*, such as *any*, *anything*, *anyone*, or *anybody*. *No*-negation, illustrated in (2), lacks the particle *not* and instead shows negation on the indefinite item itself, as in *no*, *none*, *nothing*, *no one*, or *nobody*. Negative concord features both *not/n't* on the verb and a negative indefinite, as in (3), but is interpreted as denoting a single instance of negation.

- (1) I wasn't paying *any* rent here. (York, M/58)<sup>1</sup>
- (2) There's *nothing* you can do about it. (Toronto, M/24)
- (3) I haven't got you *nothing* yet. (Tyneside, F/AS/149)

To investigate the distribution of *any/no*-negation, we conducted a quantitative and comparative sociolinguistic analysis of data from two substantial corpora of English from Canada and the United Kingdom. The Canadian recordings (Tagliamonte 2003–2006) come from Toronto, a major urban area with over five million inhabitants, and Belleville, Ontario, a town of less than 100,000 residents situated two hours east of Toronto. Each location has a distinct demographic profile: Toronto comprises a diverse multicultural urban centre while Belleville is more homogeneous with a strong history of Loyalist settlement.<sup>2</sup>

The British data consists of recordings from four Northern English communities, three of which are herein combined as the “North East of England” as they share similar dialectal features (Beal et al. 2012). The three North East areas are the urban Tyneside region as captured in recordings from the Diachronic Electronic Corpus of Tyneside English (DECTE, Corrigan et al. 2010–2012) and two nearby small towns, Wheatley Hill and Durham, in County Durham (Tagliamonte 1998, 2003). The fourth community is York, a major city in North Yorkshire (Tagliamonte 1996–1998, 1998, 2003) where the native variety is dialectally distinct from that spoken in the North East.

These corpora provide ample tokens of the variable under study, and rich intra-speaker variation, as in (4) and (5).

- (4) There weren't *any* jobs [...] There were *no* jobs to be had. (Toronto, F/43)
- (5) I don't have *any* information [...] you had *no* option. (Belleville, M/33)

In (4), the clause construction is the same, featuring existential *there were* and the comple-

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<sup>1</sup>The references in parentheses refer to the city/town, sex and age of the individual.

<sup>2</sup>Loyalists were American colonists, of different ethnic backgrounds, who supported the British cause during the American Revolution (1775–1783). They migrated to British North America during and after the revolutionary war, boosting and diversifying the population as well as heavily influencing the culture and politics of what would eventually become Canada (White 1996).

ment *jobs*. However, the speaker alternates between *any*-negation for the first sentence and *no*-negation for the second. Similar optionality is observed in (5): the verb HAVE may itself be negated (*I don't have any*) or the negation can be marked on the indefinite (*you had no option*).

The historical development of negation in English can illuminate how the three variants under study (*any*-negation, *no*-negation and negative concord) have evolved and will help explain their language-internal and social distribution. In Old English, the primary negator was preverbal *ne*. While not obligatory, it was common for negative clauses to include the equivalent of a modern indefinite pronoun, which carried with it the negative *no* (Nevalainen 1998:267), as in (6). By the Middle English period, *nowiht* grammaticalized into a compulsory post-verbal form *not*, resulting in ubiquitous negative concord (Jack 1978:130), shown in (7). In Early Modern English, negative concord declined in use, while *not* with *any*-items, shown in (8), became possible in a change led by the upwardly mobile middle classes (Nevalainen 1998:277). At that time, the use of *any*-negation “was a selective process from above in terms of the speaker-writer’s education and social status” (Nevalainen 2009:580).

- (6) He *nowiht* to gymeleste *ne* forlet. (Bede 206, 17)  
 “He didn’t leave no whit (nothing) to neglect.”
- (7) thou *n’art nat* put out of it. (Chaucer’s Boece, Book I, P5, 9–10) (14th C)  
 “You [NEG] are not put out of it.”
- (8) to enjoyne the said Baxter *not* to prosecute *anie* accion (Bacon 1590)  
 “To prohibit the said Baxter not to prosecute any action.”

Today, Modern English retains all three variants: *no*-negation (harking back to Old English), negative concord (predominant in Middle English), and the most recent innovation, *any*-negation. Previous corpus-based analyses of Standard English have found evidence of a change from *no*-negation to *any*-negation (Tottie 1991a, 1991b, Varela Pérez 2014). Our analysis will investigate the competition between these variants in order to establish whether the variation is a remnant of diachronic change from *no*-negation to *any*-negation and also whether attending to geographic, linguistic and social factors can offer insights into the current state of affairs.

## 2 The Variable Context

A number of contexts appear to be candidates for *any/no*-negation and negative concord, but there are cases where either variation is not possible or *any*-negation is not semantically equivalent to *no*-negation, as described by Labov (1972) and Tottie (1991a, 1991b).

One such context is where the indefinite occurs in the subject position of the clause. *No*-negation is categorical in this context (9a), so all tokens of this type were excluded from the analysis. *Any*-negation as in (9b) is ungrammatical and unsurprisingly did not appear in any of the corpora, so was also not considered.

- (9) a. *Nobody* would sit in that seat. (Toronto, M/36)  
 b. \**Anybody* wouldn’t sit in that seat.

The presence of an adverb also restricts the choice of variant. For example, where *actually* is in the immediate scope of a negative marker, as in (10a), the sentence is interpreted as “a hedged statement” (Paradis 2003:202). In contrast, (10b) has “the function of emphasizing the subjective judgement of the importance of the situation involved in the proposition in question” (Paradis 2003:194). Other adverbs such as *absolutely* do not permit particular variants, as shown in (11). Tokens containing adverbs were therefore excluded from the sample given the lack of semantic equivalence between variants.

- (10) a. I didn’t actually need *anything*. (York, F/52)  
 b. I actually needed *nothing*.  
 c. \*I needed actually *nothing*.
- (11) a. There’s absolutely *no* flights out of Victoria. (Toronto, M/49)  
 b. \*There’s *not* absolutely *any* flights out of Victoria.

In cross-clausal or negative raising contexts, the movement of the negative marker appears to change the meaning or force of the sentence, as demonstrated by the subtle differences in (12). Furthermore, particular negative raising constructions such as *I don't think* are formulaic and have become grammaticalized (see Scheibman 2000, Pichler 2013), which leads to use of the *any*-negation variant. Cross-clausal negation was therefore excluded from our sample for these reasons.

- (12) a. *I don't think* I would change anything. (Tyneside, M/JS/221)  
 b. I think I wouldn't change *anything*.  
 c. I think I would change *nothing*.

Tokens that were unclear in the audio/transcripts, unfinished or ambiguous were also excluded as in these cases we could not be certain as to their classification. Observing all of these procedures thus produced 1821 tokens where *any*-negation, *no*-negation, and negative concord were all possible.

### 3 Coding

We coded for both grammatical and social factors. The grammatical factor in question is verb/construction type, coded as in (13). This was found to be the major factor governing variation in previous research (Tottie 1991a, 1991b, Varela Pérez 2014).

- (13) a. Existentials (*there* + BE) There was no canteen. (Belleville, M/bK)  
 b. BE It wasn't any particular amount. (Tyneside, M/JS/169)  
 c. HAVE I had no energy. (Tyneside, M/P/416)  
 d. HAVE GOT I haven't got any. (Wheatley Hill, F/13)  
 e. Lexical verbs He's not heard anything. (York, F/6)  
 f. In PP We'll end up with no Santa's grotto. (Tyneside, M/GQ/21)

Social factors were sex, age (birth year ranging from 1906 to 1993), and education (with or without post-secondary education).

### 4 Distributional Analysis

#### 4.1 Locality

Figure 1 shows the overall distribution of negative constructions for each of the four varieties of English.

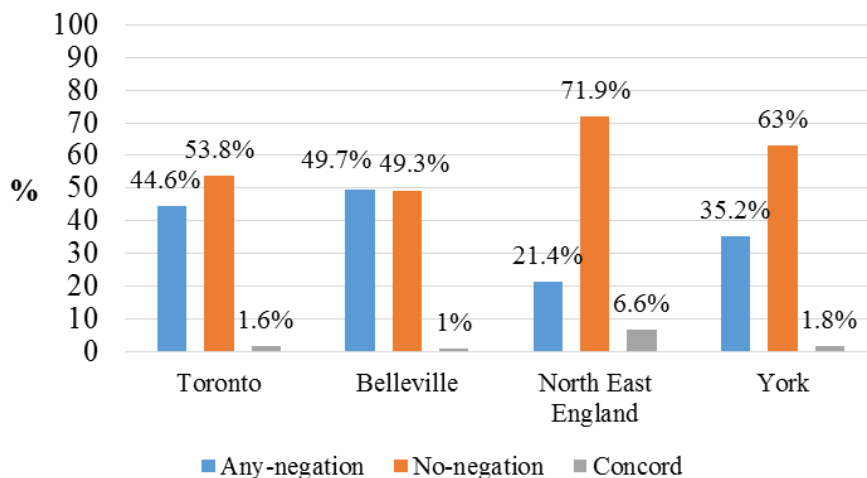


Figure 1: Distribution of *any*-negation, *no*-negation and negative concord in each community.

Negative concord is virtually absent in Toronto, Belleville and York, and occurs rarely (only 6.6% of the time) in the North East of England. Given its low frequency, negative concord is henceforth excluded from our quantitative analysis. In contrast, variation between *no*- and *any*-negation is present in all varieties, but their distribution is markedly different for each country. In Canada, the two constructions have near-equal frequency, with a slight preference for *no*-negation in Toronto. In the UK, *no*-negation dominates at 63% in York and 72% in the North East. Given that *any*-negation is the newcomer historically, these figures show that *any*-negation has made greater inroads into Canada, while in northern UK varieties the older *no*-negation variant endures.

#### 4.2 Verb/Construction Type

Table 1 shows the distribution of *no*-negation according to verb/construction type in each community. The greyed out numbers for HAVE GOT in Toronto and HAVE GOT/BE in Belleville indicate that there are less than 10 tokens for these cells.

	Toronto		Belleville		North East England		York	
	%	N	%	N	%	N	%	N
Existentials	<b>93</b>	327	<b>84</b>	107	<b>98</b>	160	<b>95</b>	285
BE	<b>78</b>	50	100	8	<b>94</b>	36	<b>88</b>	57
HAVE GOT	88	8	50	2	<b>87</b>	79	<b>66</b>	32
HAVE	<b>66</b>	272	<b>59</b>	61	<b>77</b>	79	<b>64</b>	188
PPs	<b>40</b>	63	<b>46</b>	13	<b>64</b>	14	<b>63</b>	27
Lexical	<b>13</b>	390	<b>7</b>	108	<b>36</b>	111	<b>19</b>	223

Table 1: Distribution of *no*-negation per verb/construction type in each community.

Despite the varying frequency observed in Figure 1, the patterning of *no*-negation by verb/construction types is remarkably similar in each community. Existentials (*there*+BE) consistently have the highest frequency of *no*-negation, with near-categorical rates in the UK. The constructions with BE, HAVE and HAVE GOT also have high rates of *no*-negation, ranging from (excluding the two tokens of HAVE GOT in Belleville) 59% in Belleville for HAVE up to 94% in the North East of England for BE. In sharp contrast, the lexical verbs have a strong tendency to occur with *any*-negation. This is also consistent across all four communities: 7% in Belleville up to 36% in the North East of England. PPs are positioned between lexical verbs and the other verbs, but display different tendencies on each side of the Atlantic: in Canada, PPs tend to occur with *any*-negation, while in the UK they tend to occur with *no*. These trends are generally consistent with those observed for this variable in Standard British English (Tottie 1991a, 1991b, Varela Pérez 2014) and varieties spoken in Glasgow, Scotland and Salford, Greater Manchester (Childs in prep.). The consistency in these trends emphasizes the robustness of the verb type constraint.

The over-arching pattern is a marked division between functional verbs (BE, HAVE, HAVE GOT) versus those that are lexical. According to Bybee and Hopper (2001), functional constructions, especially existentials, are of such high frequency that they are thought to be processed and produced as a whole. Tottie (1991a, 1991b) argues that BE and HAVE are also high frequency, which makes them resistant to change. Indeed, in our data, these verb types (along with HAVE GOT) retain the historically oldest *no*-negation variant. The individual lexical verbs are, on the other hand, much lower in frequency. As such, they are more likely to undergo change, which accounts for their preponderance with the newer *any*-variant. In sum, the frequency and grammatical patterning of variable negative constructions appear to be a product of change in progress.

#### 4.3 Sex

Figure 2 reveals that in all four localities, male speakers use more *no*-negation than females do. Once again, the extent to which this external factor plays a role in conditioning variation differs across the communities.

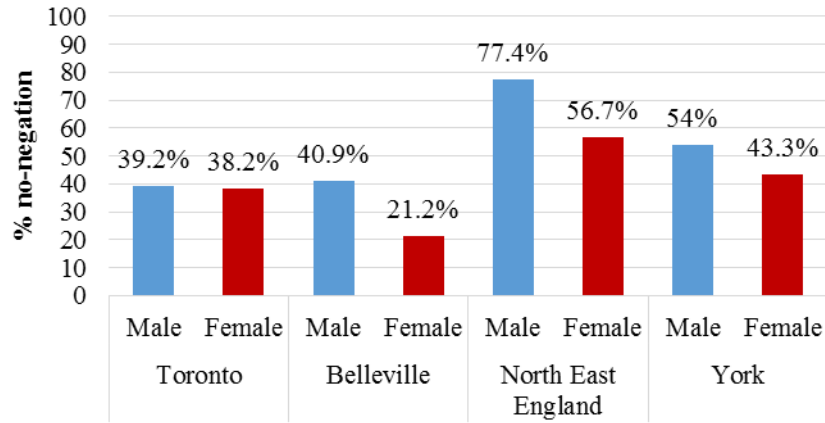


Figure 2: Distribution of *no*-negation in each community according to speaker sex.

Belleville, North East England and York have much higher frequencies of *no*-negation amongst men compared to women. The women use more *any*-negation, the variant that is newest historically, having been introduced by more-educated, higher-status speakers (Nevalainen 2009:580). Therefore, the greater use of *any*-negation by women compared to men in these communities is consistent with Labov’s (2001:274) Principle 3 of linguistic change, which states that in linguistic change from above, women adopt prestige forms at a higher rate than men. It therefore appears that women have maintained their lead in the use of the newer variant into modern-day usage. Notice however that in Toronto there is no such distinction. This suggests that this variable may not be undergoing change in Toronto, unlike the other three localities.

**4.4 Birth Year**

Based on data from Standard British English, Tottie (1991a, 1991b) suggests that *any*-negation is increasing at the expense of *no*-negation. To explore whether there is evidence for this change in British and Canadian communities, we categorized the data according to speakers’ birth year as a proxy for real time.

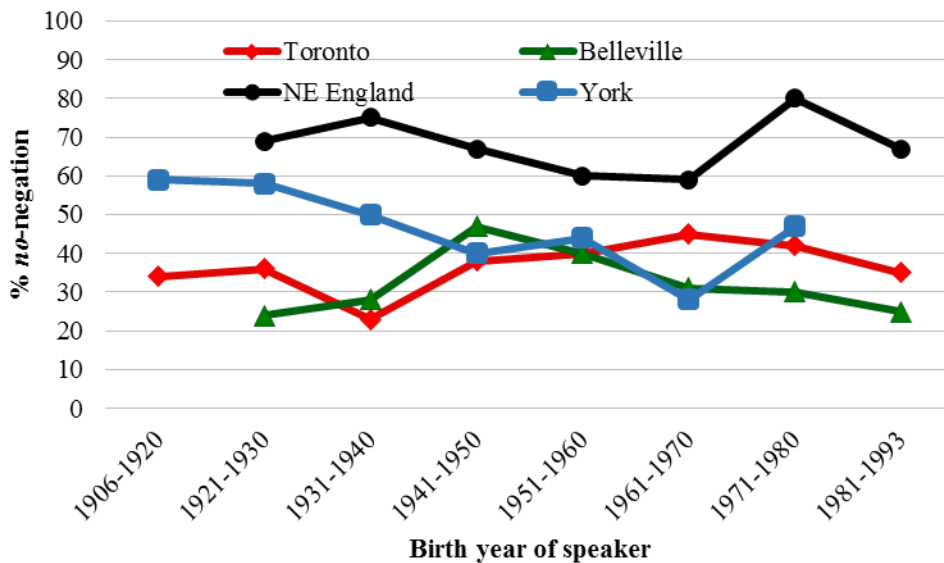


Figure 3: Distribution of *no*-negation in each community according to speaker birth year.



Figure 3 shows that the frequency of *no*-negation fluctuates according to speakers' birth year. The Toronto data displays fairly stable frequencies of the variant over time. The pattern for Belleville is also relatively stable, but there is an upswing in the frequency of *no*-negation between the speakers born in 1931–1940 and those born between 1941 and 1950. The British data meanwhile shows more marked changes in the frequency of *no*-negation over time. In York, there is a fairly steady decline in the use of *no*-negation, until we reach the youngest speakers in that dataset, who use the variant at the highest frequency. The data from the North East of England shows a decline in the frequency of *no*-negation amongst the middle birth year cohorts, but an increase after 1970 which then wanes from 1981. The nature of these trends is explored further in Section 5, where birth year is considered alongside other predictors in a mixed effects regression analysis, to see which effects have a significant impact on variant choice.

#### 4.5 Education

The final social effect considered in our analysis is education, specifically whether a speaker has completed post-secondary education or not.

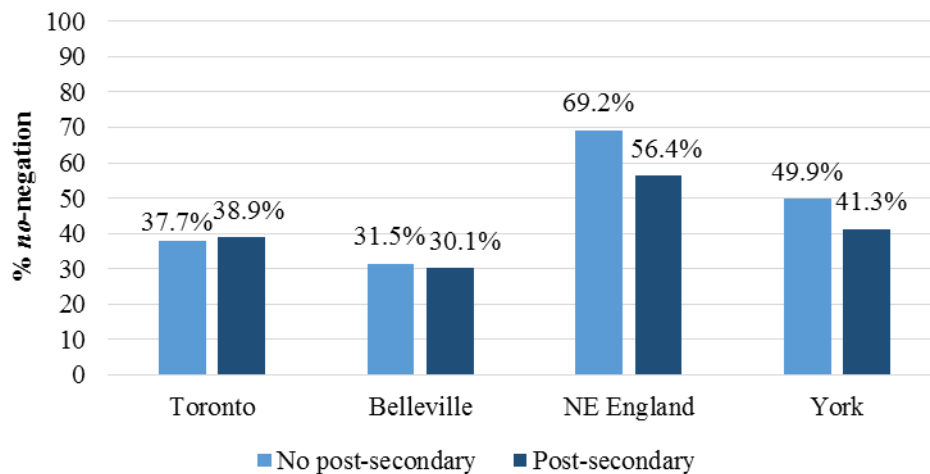


Figure 4: Percentage of *no*-negation in each community according to speaker education.

Figure 4 shows that education has no effect in either of the Canadian communities, but it correlates with the use of *no*-negation in the two British ones. The direction of the effect is the same in both the North East of England and in York: speakers without post-secondary education use *no*-negation to a greater extent than those with post-secondary education.

The distributional results in this section have thus revealed that both internal and external factors have a role to play in speakers' choice between *any*- and *no*-negation in both British and Canadian English. The following section presents results of a mixed effects logistic regression analysis which examines all of these factors, to establish which effects are significant when all are considered simultaneously and to investigate whether they operate consistently in all varieties on each side of the Atlantic.

### 5 Statistical Modelling

A mixed effects logistic regression analysis was undertaken using Rbrul (Johnson 2009). For the purposes of this analysis, the data was collapsed into two regionally distinct varieties: Ontario, Canada (Toronto and Belleville) and Northern England (North East England and York). This configuration of the data allows us to compare the trends in Canadian and British English, whilst improving the robustness and reliability of the statistical analysis. The four predictors examined in Section 3 were included in the model for each variety: 'verb/construction type', 'sex', 'education' and 'birth year' as fixed effects, plus 'speaker' as random. As the results from Section 4.2 revealed

that BE, HAVE and HAVE GOT behave alike in their tendency to occur with *no*-negation, these verb types were combined as ‘functional’, as opposed to ‘PPs’ and ‘lexical verbs’. ‘Existentials’ were excluded given their near-categorical tendency to take *no*-negation. ‘Sex’ was coded as ‘male’ versus ‘female’ and ‘education’ as ‘secondary’ versus ‘post-secondary’. ‘Birth year’ was collapsed from the original eight categories to four larger categories (‘1906–1930’, ‘1931–1950’, ‘1951–1970’, ‘1971–1993’), to overcome the fact that some datasets representing the communities under investigation did not have speakers born in 1906–1920 or 1981–1993 (see Figure 3).

Table 2 shows the results of the mixed effects logistic regression of the factors affecting the choice of *no*-negation over *any*-negation in the two varieties of English.

	Ontario, Canada			Northern England		
Input	.35			.53		
Total N	975			846		
Fixed Effects:	<b>FW</b>	<b>%</b>	<b>N</b>	<b>FW</b>	<b>%</b>	<b>N</b>
<b>Verb/construction</b>						
Functional	<b>.81</b>	67.6	401	<b>.74</b>	75.6	471
PPs	<b>.55</b>	40.8	76	<b>.60</b>	63.4	41
Lexical verbs	<b>.16</b>	11.8	498	<b>.19</b>	24.6	334
<i>Range</i>	65			55		
<b>Sex</b>						
Male	[.53]	39.6	389	<b>.61</b>	63.9	368
Female	[.47]	35.3	586	<b>.39</b>	47.9	478
<i>Range</i>				22		
<b>Education</b>						
No post-secondary	[.52]	35.8	296	<b>.58</b>	57.6	646
Post-secondary	[.48]	37.6	679	<b>.42</b>	46.0	200
<i>Range</i>				16		
<b>Birth year</b>						
1906–1930	[.46]	33.0	176	[.56]	59.8	204
1931–1950	[.51]	34.3	143	[.45]	53.1	196
1951–1970	[.53]	41.9	313	[.42]	46.7	242
1971–1993	[.51]	35.9	343	[.56]	61.3	204
<i>Range</i>						
<b>Speaker</b>	Random st. deviation .731			Random st. deviation .738		

Table 2: Mixed effects logistic regression of factors affecting the choice of *no*-negation (over *any*-negation) in Ontario, Canada versus Northern England.

The results in Table 2 reveal that ‘verb/construction type’ is the most important factor impacting upon the choice of *any*- and *no*-negation, as not only is its effect statistically significant in both Canadian and British English, but its range value far exceeds any of the others. Furthermore, the constraint ranking is parallel across the two varieties. Function verbs (i.e., BE, HAVE, HAVE GOT) strongly favour *no*-negation, lexical verbs disfavour it and PPs are in-between, exhibiting a slight favouring effect. In Northern England, two social factors, ‘sex’ and ‘education’, are significant, with male speakers and those without post-secondary education favouring *no*-negation. In Canada, these social influences are not apparent. Moreover, the small deviances by speaker for the factor ‘birth year’ are not significant for either variety.

The statistical models in Table 2 combine the data from two communities in Canada and two in England on the grounds of common linguistic systems, which is perfectly justifiable. However, social embedding may vary from one community to another. Let us thus probe what more may be said about *no*-negation usage in the two sub-communities of Northern England (York versus the

North East) by plotting its use by speakers' age at the time of recording in each locality, as in Figure 5.

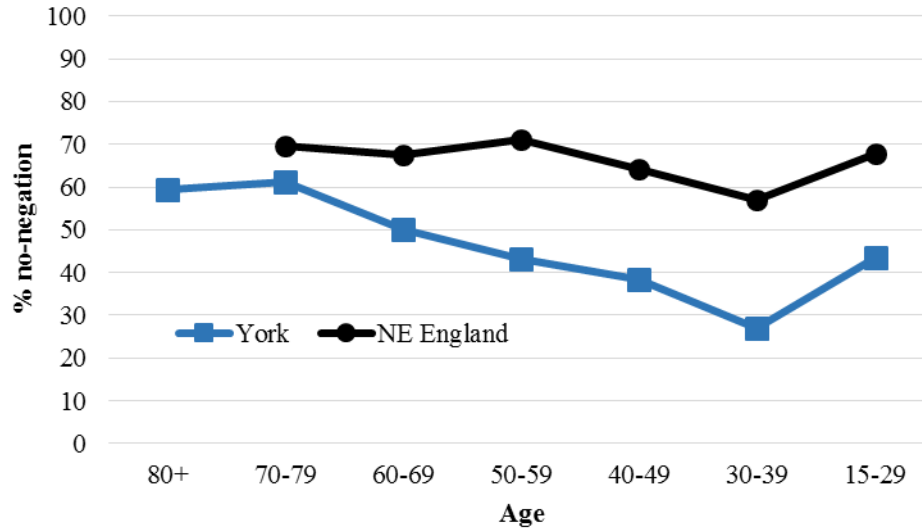


Figure 5: Distribution of *no*-negation across speakers in York and North East England, according to age at the time of recording.

The trends in York and the North East of England according to speaker age are strikingly similar, with both communities displaying a classic age-grading trajectory whereby speakers use fewer non-standard variants during middle age due to the increased “importance of the legitimized language in the socioeconomic life of the speaker” (Sankoff and Laberge 1978:241), e.g., in the workplace. The oldest speakers in the North East of England pattern similarly to their age mates in York, but while there is relative stability amongst those aged 40+ in Tyneside, the distinctions between age groups in York are more marked. The fact that *no*-negation is less favoured during middle age in present-day York English and North East English suggests that the prestige once associated with *any*-negation, i.e., its first use by more educated speakers of a higher social standing (Nevalainen 2009:580), has persisted over time in these communities and is becoming the norm. The fact that the trend is more distinctive in York than the North East reflects the latter’s more conservative profile: we observe greater overall retention of *no*-negation in the North East. It is remarkable to observe, in graphic display, the socio-historical trajectories of the two communities. The retention of *no*-negation in the North East reflects local societal norms; it is a traditional region which has not been subject to much socio-demographic change in its recent history, largely on account of its disadvantaged status relative to the rest of the UK (Robinson 2002:322). In York, a city that has, by contrast, undergone substantial social reorganization over the last 50 years (Huby et al. 1999), there is a visible trend towards the incoming *any*-negation constructions. The youngest speakers’ greater use of the incoming *any*-negation, in both communities, reflects their convergence on supra-local English norms.

## 6 Discussion

Our quantitative comparative sociolinguistic investigation of *any*-negation and *no*-negation in Canada and Northern Britain has revealed important insights into the progress of the longitudinal change from *no* to *any*. Regardless of locality, the underlying linguistic trends are parallel. The choice of variant is conditioned by the same internal factor, verb/construction type, in both varieties. Furthermore, the constraint operates consistently in both varieties and within the four communities studied: functional verbs favour *no*-negation and lexical verbs disfavour the variant. This robust effect is consistent with previous research by Tottie (1991a, 1991b), who suggested that the higher overall frequency of functional verbs makes them more resistant to change and more likely

to retain the older variant, *no*-negation. Lexical verbs are individually lower in frequency which renders them more susceptible to change and thus more likely to co-occur with *any*-negation. In essence, the variable frequency of *any*-negation reflects the progress of the incoming form as it moves through the grammar.

In contrast, the way in which this change is embedded in the geographic location and social life of communities documents the human perspective. In England, the encoding of social identity in the use of the variable reveals how the change is evolving in the speech community. Where the change is still penetrating through the population, men and less educated speakers are resisting it and retain *no*-negation. The variation is subject to age-grading in both the North East and York, but the effect is greatest in the latter, where there is more widespread adoption of the incoming *any*-negation variant. Middle-aged speakers use *any*-negation more than those that are older and younger, suggesting that the prestige that was once associated with *any*-negation when the variant was first introduced not only persists but continues to push the change forward. These social effects are still visible in England, but not in Canada, because the change from *no*-negation to *any*-negation is still ongoing in the former variety, but appears to have stabilized in the latter.

The contrasting perspectives between usage in the old world and the new suggest that when social pressures drive a change forward these correspondences eventually fall away as the new form filters into all social strata. More generally, this study demonstrates the important contribution of both linguistic and social predictors as a syntactic change traverses the grammar of English within the regionally diverse global grammar of English.

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