

Quotations across the generations: A multivariate analysis of speech and thought introducers across 5 decades of Tyneside speech¹

ISABELLE BUCHSTALLER

Abstract

This paper reports on changes in the system of speech and thought introducers that are brought about by the adoption of innovations. Quantitative variationist analysis of a newly created corpus that spans 5 decades of conversational recordings in North-Eastern England investigates three questions: (1) What effect do extralinguistic and intralinguistic variables have on the relative distribution of the variants diachronically? (2) What are the determinants of change? (3) To what extent do different strategies of variable definition, in particular choices about the inclusion of internal states, determine the outcome of the investigation? Innovative methodology allows me to pinpoint the loci of the change that has been sparked by the intrusion of innovations, both in terms of repository of forms but also regarding the constraints that condition the whole system.

Keywords: sociolinguistics, quotation, like, speech and thought, diachrony

1. Introduction

The English quotative system (1a–g) has been the site of vast and rapid changes on a global scale. Innovative variants, such as *like* and *go*, which have been attested since the early 1980s (Butters 1980, 1982), have made major inroads into the variable and have resulted in a large-scale reorganization of the system. At the same time, local developments continue to interact with global trends, resulting in localized outcomes in terms of constraints, probabilistic interplay, and even forms (such as 1f–g).

- (1) a. I never **say** “howay man”
b. I **shouted** back “well if you stop kicking the door . . .”
c. I just went up to him and Ø “excuse me mister . . .”

- d. She was **like** “eeh! It’s a rodent!”
- e. She **goes** “I might not wear them”
- f. **This is my mum** “what are you doing?” (London, Cheshire and Fox 2007)
- g. I’m **all**, “Dude, you’re not helping your cause!” (California, Buchstaller et al., 2010)

What 15 years or so of quantitative research on quotation in English-speaking communities around the world has taught us is that the competition amongst quotative variants is probabilistically motivated, multifactorial and conditioned by a range of extralinguistic and intralinguistic factors. Some of these constraints have even been suggested to be near-universal (Tagliamonte and D’Arcy 2004; Buchstaller and D’Arcy 2009).

Surprisingly, however, empirical research into the variable tends to be either on the basis of apparent time data (Buchstaller 2004; Tagliamonte and D’Arcy 2007; Tagliamonte and Hudson 1999 and many more) or across a relatively circumscribed time frame (Baker, Cockeram, Danks, Durham, Haddican and Tyler 2006; Barbieri 2009; Buchstaller 2006a; Buchstaller, Rickford, Wasow and Zwicky 2010; Cukor-Avila 2002, Ferrara and Bell 1995; Singler 2001), partly due to the dearth of comparable diachronic data-sets. We lack a firm baseline for the distribution of the quotative system pre-*be like*, as well as data with enough time depth to track the development of the system. To date, the only study that quantitatively tracks quotation across a longitudinal time frame is D’Arcy (2009), who draws on speakers born between 1860 and 1987 in the Origins of New Zealand English (ONZE) corpus.

In this paper, I investigate the quotative system prior to the arrival of the newcomer, pinpoint the constraints that govern it when it first arrives in the system and trace its diachronic development 15 years on. I report on long-term changes in the system of quotation that are brought about by the adoption of newcomer variants in a newly developed corpus, the Diachronic Electronic Corpus of Tyneside English (DECTE), which consists of three data-sets of sociolinguistic interviews collected in the 1960s, the 1990s and late 2000s. These data, which cover speakers born almost one hundred years apart, are the basis for a quantitative variationist analysis that aims to answer the following questions:

- (1) What effect do extralinguistic and intralinguistic variables have on the relative distribution of the variants diachronically?
- (2) What are the determinants of change? Does real time data spanning 5 decades corroborate trends reported from apparent and real time data?
- (3) To what extent do different strategies of variable definition and tabulating, in particular choices about the inclusion of internal states, influence the outcome of the investigation?

This paper attempts to establish a benchmark for the system from which the present-day one grew. Extending the window of analysis into the past allows me to track long-term changes amongst competing forms, especially those that have been brought about by the intrusion of newcomer variants (D'Arcy 2009). It furthermore provides us with the opportunity to test whether hypotheses that have been put forward on the basis of a narrower time frame hold up when investigated in a longitudinal setting.

2. Data and method

The last decade has seen a move towards the use of large spoken language corpora in linguistics, prompted by and, in turn, sparking the development of publicly available databases (i.e. the LDC, the Scots Corpus, NECTE). However, except for the ONZE corpus (Gordon et al. 2007), none of the English spoken language corpora allows analysis of language change that takes place over a greater time depth (McEnery and Wilson 2001). Corpus building activities at Newcastle University have resulted in the Diachronic Electronic Corpus of Tyneside English (DECTE). This dataset consolidates two older corpora of Tyneside speech – the 1960s *Tyneside Linguistic Survey* (TLS) project, and the 1994 *Phonological Variation and Change in Contemporary Spoken English* (PVC) project, which have been merged and digitized as NECTE – with a new monitor corpus, the Newcastle Electronic Corpus of Tyneside English 2 (NECTE2).

As Table 1 demonstrates, the addition of NECTE2 increases the time-depth over which the dialect can be traced by another 15 years.

DECTE consists of interview data (transcripts and recordings, with genres ranging from classical sociolinguistic interview to friendly banter to grammaticality judgements) from 180 Tyneside informants of a range of birth years selected on the basis of demographic sampling. This paper takes advantage of the full range of diachronic evidence now available for the investigation of quotation. It reports on a distributional analysis of over 3000 tokens extracted from a representative subset of 48 DECTE-speakers, 16 from each corpus,

Table 1. *Earliest and latest birthdates for the speakers in the three corpora in DECTE*

NECTE	NECTE2 (2007–2009)	Young 1967–1990	Old 1923–1966		
	PVC (1994/5)		Young 1954–1977	Old 1911–1953	
	TLS (1960s)			Young 1925–1958	Old 1895–1934

stratified by age, gender and class. Below, I give a brief outline of the three sub-corpora.

The Tyneside Linguistic Survey (TLS) project was collected in the late 1960s / early 1970s and consists of one-on-one interviews with speakers chosen at random from the 1961 British census. Due to the age of the original recordings, many of the files containing the interviews or the social information of the participants have been damaged or lost and the remaining data do not contain enough younger and middle class speakers. I thus sampled 6 younger and 10 older, 5 MC and 11 WC speakers, equally stratified by gender.

The Phonological Variation and Change in Contemporary Spoken English (PVC) project consists of dyadic interviews of speakers matched for age and social class conducted by the same fieldworker between 1991 and 1994 (Milroy, L., Milroy, J., and Docherty 1997). I sampled 16 speakers stratified by age, class and gender.

The Newcastle Electronic Corpus of Tyneside English 2 (NECTE2) is conceived as a follow-up to the 1960s TLS and 1990s PVC corpora.² NECTE2 consists of dyadic interviews with informants matched for age and class. To date, this monitor corpus contains data from 2007–2009. I sampled 16 speakers equally stratified by age, gender and class.

Following the principle of accountability (Labov 1972, 1982), I extracted all instances of quotation from the 48 Tyneside speakers across three sub-corpora and coded them for a range of extra- and intralinguistic constraints. The socio-linguistic literature has provided some evidence that *like* – when it first enters the linguistic system – is globally constrained by a number of ‘classic’ factors, such as content of the quote (thought encoding) and grammatical person (1st person subjects – for an overview of the factors constraining the form in a range of English varieties, consider Buchstaller and D’Arcy 2009; see also Tagliamonte and D’Arcy 2004). Its social embedding and tense and aspect marking however, tend to be fundamentally local.³ I have also considered the role that genre plays in the choice of quotative options.

Given the complexity of the data, the relative influence of a range of predictor variables on quotative choice were tested via a series of bivariate correlations. As a second step, three separate multinomial regression analyses were run in order to investigate the overall magnitude of these constraints in a combined model that takes all factors into account simultaneously. Finally, I present the results of a multinomial regression analysis which includes the time of data collection in the statistical model in order to detect significant changes within the conditioning of the variable across time.

3. Preliminary investigation

Buchstaller and D’Arcy (2009: 318) have argued that “global resources are negotiated in situ as they are integrated into pre-existing local norms and prac-

tices". Consequently, any investigation of an innovation will have to be conducted within the perimeter of the broader system into which it is being adopted (see also D'Arcy 2010). This paper explores the restructuring within the system of quotation as a whole during a time when variants – newer ones as well as more traditional ones – are jockeying for positions and functional niches. Considering the entire ecology of speech and thought reporting gives me the opportunity to investigate the complex probabilistic interplay amongst competing options and thus allows me to pinpoint the loci of longitudinal change within the grammar of the variable.

Before we investigate the probabilistic interaction between competing variants let us first unpack what we – as sociolinguists – mean by quotation. I will now embark on a brief excursion which seeks to deconstruct the way in which quotation has been conceptualised in sociolinguistic enquiry.

The first issue this paper aims to address is the question of how to handle the reporting of mental activity. The literature reports that the system has been shifting towards "higher rates of internal monologue" (D'Arcy 2009, see also Buchstaller and D'Arcy 2009; Tagliamonte and D'Arcy 2007). This effect that has been attributed partly to encroaching *like* – which enquotes both speech and thought in varying proportion across different communities – but also to increasing frequencies of *think*. However, previous variationist studies have been rather silent regarding the question of how to define internal monologue. Indeed, with few exceptions (Vincent and Dubois 1996; Buchstaller 2004; Romaine and Lange 1991; Jones and Schieffelin 2009), the variationist sociolinguistic enterprise has not been informed by recent debates in the fields of cognitive and anthropological linguistics about the pragmatic properties of quotes, especially regarding the enquoting of epistemic stance, evidentiality and attitudes (see also Besnier 1993; Clark and Gerrig 1990; Pascual 2002, 2006).

Quotative constructions have been identified as expressions of evidentiality (cf. Clift 2006; Hassler 2002; Feuillet 1997), which can be defined as "a linguistic category whose primary meaning is source of information (. . .). This covers the way in which the information was acquired" (Aikhenvald 2004: 3), for example, visual, non-visual, hearsay or sensory sources. At the same time, reported sequences tend to mark stance, which is the linguistic expression of attitude and point of view, emotions, and assessments (Biber et al. 1999: 966).

Consider now examples (2a.–b.) below. *I think* and *I suppose* are stance markers, framing the speaker's attitude or opinion towards Tynesiders or class issues. At the same time, *I think* and *I suppose* are markers of evidentiality: they assign a stance to an author (in this case self) by 'demonstrating' (Clark 1990) the source of the reported assessment (the speaker's own mental processes). Whereas the modal meaning of these constructions evaluates the content of the message and thereby hedges on the basis of subjectivity (Holmes

1984; Schiffrin 1987), the evidential meaning marks the access of the reporting speaker to the reported material (see also Myers 1999; Spronck to appear).

- (2) a. Interviewer: mm yes eh do you find that eh Tynesiders are very different from people from other parts of the country you know in your experience
 TLS/G16: oh yes **I think** eh ‘it’s a bit of a fallacy that they’re all friendly’.
- b. TLS/G20: you know I didn’t use to put on like any sort of affected affectations there you know
 Interviewer: aye
 TLS/G20: when you’re talking
I suppose ‘there is such a thing as a class system’ you know.

Schneider (2002) has termed such evidential constructions, where speakers frame assessments or opinions in the form of reported speech or thought, “parenthetical quotatives”. Note that in both cases it is not obvious whether the speaker has been thinking about the friendliness of Tynesiders or class differences at an earlier time (t-1), and reports these thoughts in t0 or whether the thought process might have only occurred concomitant with the utterance depicted in (2a) and (2b; see Buchstaller 2004). Jones and Schieffelin (2007) suggest that ambiguity between reporting speech/thought and stance marking “dramatizes (. . .) attitudes” (see also Clark and Gerrig 1990). Similarly, Buchstaller (2003: 7) claims that speakers “creatively exploit” these ambiguities between reporting and marking attitudes to portray a subjective viewpoint that might have held at a previous time, at the time of reporting, or both.⁴

The pragmatic indeterminacy between quotative introducer and stance marker might provide a pertinent reason for quantitative sociolinguistic research not to include such tokens when setting up the variable (even though explicit statements about the treatment of such constructions are regrettably lacking).⁵ This is because mainstream variationist practice entails setting up a variable as “alternate ways of saying the same thing” (Labov 1978: 2) and excluding tokens that are potentially ambiguous between ‘doing the thing’ that is investigated and ‘doing other things’ (see Singler 2001; Blake 1997). This practice, which is called “clos[ing] the set that defines the variable” (Labov 1996: 78), aims at a functionally or formally – depending on the definition of the variable – homogenous data pool that is not diluted by potentially ambiguous tokens. A variationist sociolinguistic approach would thus result in a more restrictive conceptualisation of quotation, excluding tokens like (2).

I now move on to evaluate the results gleaned from two analyses that rely on different degrees of inclusiveness a propos the reporting of inner states. Such a comparative investigation reveals the effect that more or less encompassing

Table 2. *Frequency of reporting of inner states vs. speech across the three corpora using a maximally inclusive approach to quotation*

	1960s TLS		1990s PVC		2000s NECTE2	
	N	%	N	%	N	%
Speech	579	60	760	65	668	63
Inner states	388	40	403	35	392	37

Table 3. *Frequency of reporting of speech versus thought in the three corpora using a mainstream sociolinguistic approach to quotation*

	1960s TLS		1990s PVC		2000s NECTE2	
	N	%	N	%	N	%
Speech	578	90	760	79	666	82
Thought	63	10	204	21	151	18

definitions of quotation can have on the empirical results reported. It also sheds some light on the above claim that introspection is increasing across time. Table 2 plots the frequencies of reported mental versus outwardly occurring activity resulting from a maximally inclusive operationalisation (which includes tokens such as in 2). Table 3 depicts the results of a definition that corresponds to the practise (albeit unwritten) that – I believe – underlies the majority of recent quantitative sociolinguistic research and which excludes such tokens.

If we first consider Table 3, which is based on the narrower, variationist definition, it is evident that rates of reported thought have increased ever since the 1960s, from 10% in the TLS to 21% in the PVC and 18% in the NECTE2 corpus. Compared to the 1960s, speakers have indeed moved towards increasing use of thought representation through constructed dialogue. Once we concentrate on these contexts only and take modalising constructions out of the equation, it does indeed look as if the quotative system boasts increasing rates of thought introduction (in the 1990s more so than in the 2000s). However, this is only part of the story. As Table 2 reveals, the frequency with which speakers report on their inner states, including stance markers and parenthetical constructions – while fluctuating across time – is by no means on the rise.

A comparison between Tables 2 and 3 demonstrates that any claims regarding the frequency and directionality of introspection needs to state carefully the scope of the empirical investigation. It also suggests that the means speakers employ for reporting mental states have changed over time: the 1960s TLS speakers, in particular, seem to make great use of parenthetical strategies for the expression of their thoughts, stances and opinions. When these discourse

strategies are excluded from the investigation, as in Table 3, it becomes clear that TLS speakers frame much less thought and attitudes via quotative frames narrowly defined. For speakers in the two later corpora, on the other hand, excluding stance marking tokens does not alter the balance between speech and thought reporting as drastically.

Neither of these two approaches, the maximally inclusive or the variationist sociolinguistic, alone is able to capture the full reality of how speakers across these three corpora choose to report inner states and attitudes. Indeed, an analysis that pairs variationist methods with an investigation into the ways in which speakers report stance, point of view and attitudes (Jones and Schieffelin 2007; see also Buchstaller 2004) can provide us with a more encompassing picture of the longitudinal development of linguistic practise. Such a comparative investigation ultimately challenges the idea that increased use of reported thought in restricted-context studies reflects some kind of profound difference in what people do in reporting thought. Finally, it provides a vivid example of the extent to which different strategies of variable definition determine the outcome of the investigation (Kendall 2008; Rickford, Bell, Blake, Jackson and Martin 1999).

The above discussion has been couched in terms of historical development. Yet, collection time is not the only factor that distinguishes these data sets. Importantly, all three corpora were collected within a sociolinguistic framework and used protocols that can be grouped under the header ‘sociolinguistic interview’. However, it is important to bear in mind that research that relies on pre-collected historical data is bound by the field methods that were *en vogue* at the time of collection. It follows that longitudinal diachronic investigations will have to contend with changes in methodology *en route* (see also Gregersen and Barner-Rasmussen, this issue). The 1960s TLS corpus was collected via ethnographically inspired one-on-one interviews prevalent at the time, while the two later corpora consist of conversational dyads. Also, the 1990s PVC interviewers stayed entirely in the background whereas the 2000s NECTE2 interviewers had a more participatory role in the discussion between informants they tended to be familiar with, functioning more like a co-participant, albeit a relatively quiet one (since they were instructed to say as little as possible). Collection methodology is thus an orthogonal factor in the research design. Any effects across the three data sets might be conditioned to an unknown degree by the interview techniques used. While it is important to acknowledge the limitations imposed by precollected datasets, I would like to argue – in line with D’Arcy (2009) – that the advantages of using older corpora for conducting analyses across a larger time span far outweigh the disadvantages. Thus, while the above reservations regarding the definition and tabulation of the variable continue to hold, further research is needed to disentangle the effects of interview style and longitudinal development.

The discussion about the role and import of different types of speech events on the distribution of quotation brings us to the second preliminary consideration: the question of how to deal with direct repetition. Repetition can have a number of functions, such as emphasis, alignment, clarification and receipt of information (see the papers in Johnstone 1994). Indeed, as (3a.–b.) exemplify, the corpora contained numerous instances of repetitions which served such functions.

- (3) a. PVC15_I4: yeah I'm on my third maths folder just keep –
 PVC15_B3: “third maths folder?”
 b. N07_4_MP: and we talk really fast
 N07_4_BB: And yeah that's another thing “we talk really really fast”. Aye
 c. PVC9_N8: And they would stay in your byre, for a couple of days. Yeah
 PVC9_P9: “Stay in your?”
 PVC9_N8: Your byre.
 PVC9_P9: “Byre”, oh yeah. That's right.

The existence of direct repetition is not a problem per se. However, if the aim of the analysis is to operate with data that are maximally comparable, we might want to investigate its distribution across the datasets – in terms of overall frequency as well as in terms of its functional allocation. This is important since a heavily biased distribution across sub-corpora might impinge upon their comparability.

As it turns out, the occurrence of repetition is skewed across the datasets and conditioned by a type of talk that can be defined as belonging to a certain genre – question and answer sessions – and topic – metalinguistic talk: all three corpora contain discussions about the local dialect. But the 1960s TLS interview schedule in particular included questions of the form “do you use/recognise X”, which aimed at collecting information about informants' use and knowledge of local lexical and (morpho)-syntactic forms. Importantly, many of these questions triggered a repetition plus answer sequence, as exemplified in (4):

- (4) a. Interviewer: Never the wonder?
 TLS/G27: “Never the wonder”, yes.
 b. Interviewer: Bait (. . .)
 You're familiar with it though?
 TLS/G27: Oh yes “bait”, lunch.

Table 4 shows the complex relationship between repetition, topic and genre. In the 1960s TLS corpus, where many – but not all – metalinguistic discussions were conducted via question and answer sequences, ‘talk about dialect’ tends to trigger vast amounts of repetition (53% of all metalinguistic discussions

Table 4. *Distribution of direct repeats across genres in the three data sets*

	1960s TLS				1990s PVC				2000s NECTE2			
	Metaling.		Other		Metaling.		Other		Metaling.		Other	
	N	%	N	%	N	%	N	%	N	%	N	%
Repeat	209	53	63	26	3	100	172	18	11	17	220	29
No repeat	185	47	184	75	0	0	788	82	54	83	532	71

contained repetition sequences compared to only 26% of all talk about other topics).

In the 2000s NECTE2 corpus, where talk about the use and attitudes towards the local dialect occurred in the format of open discussions, metalinguistic topics do not trigger more repetitions than other topics (17% versus 29%). I will ignore the PVC here due to the low token number of quotations in metalinguistic discussions ($N = 3$).⁶

The proliferation of repetition sequences at the intersection of genre and topic in the TLS corpus required me to make a more general decision about the treatment of direct repetition in the analysis. The function and structural properties of repetition – as well as the question whether or not to include such tokens into the variable – have not been problematised in the variationist literature. Lacking precedence, I decided, based on their skewedness across genre and topic in the three corpora, to exclude all tokens of direct repetition from the analysis. The results reported below are thus based on a narrow definition of quotation that might be described as maximally restrictive. It does not include quotative variants that are ambiguous with stance / evidential markers and it also does not include verbatim repetition.

4. Results

The adoption of a more delimited definition of the variable has significantly reduced the number of quotatives; from 967 to 369 in the TLS, from 1163 to 788 in the PVC and from 1060 to 586 in the NECTE2 corpus, a reduction to between 68% and 38%.⁷ Table 5 displays the overall frequency of quotation narrowly defined across the three corpora. Tables 6–8 present the distribution of quotative variants ($\geq 2\%$) in the three datasets.⁸

Table 6 only plots four variants, *say*, *think*, unframed quotes and ‘other’. The two later corpora have a richer inventory; consequently Tables 7 and 8 consider the incoming variants *like* and *go* as well as traditional forms.

Table 5. *Frequency of intensification by corpus*

Corpus	Speakers	Tokens	N Words	Index (Quotation / 1000 words)
1960s TLS	16	369	52203	7.07
1990s PVC	16	788	95039	8.29
2000s NECTE2	16	586	78305	7.51
TOTAL	48	1743	225547	

Table 6. *Quotative distribution in the 1960s TLS*

	N	%
say	198	53.7
think	31	8.4
unframed	81	22.0
other	59	16.0
Total	369	100.0

Table 7. *Quotative Distribution in the 1990s PVC*

	N	%
say	381	48.4
think	82	10.4
unframed	119	15.1
like	45	5.7
go	107	13.6
other	54	6.9
Total	788	100.0

Table 8. *Quotative Distribution in the 2000s NECTE2*

	N	%
say	220	37.5
think	58	9.9
unframed	107	18.3
like	124	21.2
go	26	4.4
other	51	8.7
Total	586	100.0

The following sections take the 1960s TLS corpus as a starting point in order to establish which constraints govern the variable prior to the incursion of the innovations. Moving forward across time, I then investigate the restructuring within the variable as *like* and *go* edge their way into the system. My discussion will be based on the adjusted residuals (favouring effects in **bold**).⁹

Table 9. *Social constraints in the 1960s TLS*

		Say		Think		Unframed		Other		SUM
		N	%	N	%	N	%	N	%	
Age	Younger	74	53	10	7	33	24	22	16	139
	Older	124	54	21	9	48	21	37	16	230
Class	MC	48	47	12	12	25	24	18	18	103
	WC	150	56	19	7	56	21	41	15	266
Gender	Female	148	59	27	11	43	17	33	13	251
	Male	50	42	4	3	38	32	26	22	118

Age: $\chi^2(3)$: 0.723, $p > 0.05$, n.s.

Class: $\chi^2(3)$: 4.338, $p > 0.05$, n.s.

Gender: $\chi^2(3)$: 19.763, $p < 0.001$

4.1 Extralinguistic constraints: Age, gender and class

The quotative system in the 1960s data is not age-differentiated. In terms of socio-economic class, more than half of the WC speakers' repertoire is covered by *say*, whereas the MC speakers, while also using *say* as the majority variant, produce slightly higher frequencies of different quotative options. Gender turned out to be significant for quotative choice, revealing a familiar gender-pattern whereby women prefer more conventional forms – in this case *say* and *think* – whereas men produce higher frequencies of non-conventional forms such as *unframed* and 'other' variants (see Buchstaller 2004).

The quotative system of the TLS speakers thus seems relatively stable. Indeed – bearing in mind the reservations voiced above – the 1960s data might be able to provide us with a historical baseline for later developments within the variable (see Barnfield and Buchstaller 2010).

By the 1990s, *like* and *go* have encroached into the system. They are mainly embraced by the younger speakers, whereas speakers in the older age bracket continue to produce high frequencies of *say* (62%). The difference between innovative younger and conservative older speakers is statistically significant.

Class is not a significant factor in the overall choice of quotatives. Note, however, that – contrary to the reported stereotypes (Butters 1980; Buchstaller 2006b) – *go* is favoured by the MC speakers. Gender continues to be significant and interacts with age: As reported in Buchstaller (2004), while male speakers of all ages favour *unframed* quotations (with 21% overall), *go* proliferates mainly amongst the (young) female speakers, who also produce higher *say*-ratios. Perhaps surprisingly, the other newcomer, *like*, is not stratified by gender; young males and females embrace the form with equal frequencies (see also Buchstaller 2004, Tagliamonte and Hudson 1999).¹⁰

Table 10. *Social constraints in the 1990s P/C*

	Say		Think		Unframed		Other		Like		Go		SUM
	N	%	N	%	N	%	N	%	N	%	N	%	
Age	Younger	232	42	66	12	78	14	33	6	37	7	103	549
	Older	149	62	16	7	41	17	21	9	8	3	4	239
Class	MC	166	48	37	11	45	13	21	6	18	5	56	343
	WC	215	48	45	10	74	17	33	7	27	6	51	445
Gender	Female	223	49	50	11	49	11	31	7	28	6	74	455
	Male	158	47	32	10	70	21	23	7	17	5	33	333

Age: $\chi^2(5)$: 60.424, $p < 0.001$
Class: $\chi^2(5)$: 5.743, $p > 0.05$, n.s.
Gender: $\chi^2(5)$: 19.920, $p = 0.001$

Table 11. Social constraints in the 2000s NECTE2

	Say		Think		Unframed		other		Like		Go		SUM	
	N	%	N	%	N	%	N	%	N	%	N	%		
Age	Younger	51	17	26	9	47	16	29	10	116	40	24	8	293
	Older	169	60	32	11	60	21	22	8	8	3	2	1	293
Class	MC	69	27	23	9	47	18	27	11	79	31	12	5	257
	WC	151	46	35	11	60	18	24	7	45	14	14	4	329
Gender	Female	82	29	31	11	57	20	25	9	80	28	13	5	288
	Male	138	47	27	9	50	17	26	9	44	15	13	4	298

Age: $\chi^2(5)$: 179.132, $p < 0.001$
Class: $\chi^2(5)$: 35.975, $p < 0.001$
Gender: $\chi^2(5)$: 25.296, $p < 0.001$

Table 11 demonstrates that in the newest corpus, the 2000s NECTE2, where *like* has increased to 21% overall, the form is almost exclusively used by younger speakers.

Indeed, the two age cohorts have been steadily drifting apart in terms of the composition of their quotative system (note the increase in χ^2 value ($df = 5$) from 60.424 in the 1990s to 179.132 in 2007). Thus, in the 2000s NECTE2 corpus, the 40+ age band primarily resort to *say* (60%), which speakers in the younger age group band have relegated to only 17%. Younger speakers favour *like* (40% compared to only 3% amongst the older speakers). Note that *go* is also almost entirely restricted to the younger age band but at much lower frequencies than in the 1990s PVC (see also Buchstaller 2006a).

The quotative system in 2000s NECTE2 is also conditioned by gender and class: men and WC speakers stick to *say*, whereas young women and MC speakers (but also young WC women) are the main social categories that have adopted *like* (see also Buchstaller and D'Arcy 2009; Baker et al. 2006). *Go* on the other hand, with decreasing frequencies, has lost its gender effect, even amongst the younger speakers.

Note finally that except for the 1960s TLS data, *think* is never conditioned by gender or class. Tables 9–11 show that the only corpus where younger speakers produce higher rates of *think* is the 1990s PVC, which might be interpreted as a change in progress. There is, however, no such effect in the 1960s TLS or the 2000s NECTE2 data, where the older speakers are producing marginally higher *think*-ratios (see also the discussion above). Section 4.3 below provides a more detailed analysis of the distribution of quotative variants with speech and thought reporting.

4.2 *Type of verbal interaction*

The literature points to narratives as the preferred locus for quotative innovations (Blyth, Recktenwald and Wang 1990; Tannen 1986). But we still know relatively little about the effect of story-telling on quotative choice more generally. This section investigates the distribution of quotative choices in narrative sequences. Following Labov and Waletzky (1967) and Labov (1997), I define narratives as sequences of at least two events that are reported as occurring in temporal juncture and that include a reportable event. Other genres, such as chit chat about daily events, reminiscing about the past, statements of opinion, or argumentation were grouped into the category 'other'. As Table 12 reveals, the only quotative that occurs with noteworthy frequencies in narratives in the 1960s TLS corpus is *say*. Sequences that consist of strings of consecutive *say*-framed quotes, such as (5), are typical of the way in which narratives are told by speakers of all age groups in the 1960s data.

Table 12. Correlation between most frequent verbs and type of verbal interaction

	Say		Think		Unfr.		Other		Like		Go	
	N	%	N	%	N	%	N	%	N	%	N	%
1960s												
TLS	41	21	3	10	2	2	3	5	–	–	–	–
	157	79	26	90	81	98	56	95	–	–	–	–
1990s												
PVC	185	49	22	27	52	44	13	24	14	31	58	54
	196	51	60	73	67	56	41	76	31	69	49	46
2000s												
NECTE2	82	37	10	17	37	35	16	31	51	41	13	50
	138	63	48	83	70	65	35	69	73	59	13	50

TLS: $\chi^2(3)$: 21.659, $p < 0.001$ *11
PVC: $\chi^2(5)$: 29.297, $p < 0.001$
NECTE2: $\chi^2(5)$: 13.234, $p < 0.05$

- (5) My son bought a big motor bike you-know, and er he **says**, “Mam, you’ve always said you’d love to go on the back of a motor bike.” I **says**, “I was on motor bikes before you were born pet.” But I **says**, “I’ve never had – the chance of going on in the past years I’ve been married.” He **says**, “Well I’ve bought myself a nice new motor bike”. He says, “When you come” he **says** er, “After I’ve broke it in”, he **says**, “I’ll take you for a ride.” I **says**, “It’ll have to be a fast one mind”. (TLS/G24).

The 1990s PVC corpus differs in two key respects from the 1960s TLS data: (i) narratives are more frequent and (ii) two newcomer quotatives have come into the picture. Table 12 shows that whereas *go* is preferred in story-telling sequences, *like* tends to be favoured in other genres. At the same time, *say* is used equally frequently in narratives and other genres, whereas *think* and ‘other’ quotations continue to be disfavoured in story-telling sequences.

By the 2000s NECTE2 corpus, a new balance has established itself. Whereas the traditional quotatives (including *say*) are dispreferred in narrative sequences, *go* and *like* are indeterminate. Importantly, as pointed out above, the occurrence of *go* and *like* in NECTE2 is almost entirely restricted to the younger speakers, who also disprefer *say*. This age-gap has repercussions on the resources that speakers of different age groups draw upon for the construction of narrative sequences: older speakers continue to produce strings of consecutive *say*-tokens in narratives (63% of all narrative contexts). Younger speaker disprefer *say* (only 8% of all narrative contexts) and instead use *like* (53%) and to a lesser extent *go* (14%) for quotation in narratives.

The adoption of innovations thus goes along with a gradual re-organisation of the system: *say* moves away from its role as primary narrative quote-introducer and other, newer forms take on this function. Excerpts (6) and (7) exemplify a typical narrative produced by an older PVC and a younger NECTE2 speaker respectively:

- (6) One of our governors is a councillor (. . .). And he phoned the head, and he **said** “There’s a model-- there’s a-- there’s a model in the engineers’ department of the Civic-Centre. Do you think Patrick would want it?” So the head ph- rang me up and he **said** “Ring so-and-so in the city-engineers and ask about this model”. So I rang up and I **said** eh, “I believe you’ve got a model of the Civic-Centre”. He **said** “Aye”. He **said** “Do you want it?” (PVC_N22)
- (7) You **went** “go and lock Mister A. in the cupboard” (. . .) so I just like locked him in the cupboard (. . .) he **was going** “If you @ if you don-t @ open this door you-re gonna have to pay for it and I **shouted** back “@ well if you stop kicking the door I can get the key in the keyhole @” and then he came out. . and he was **like** “right, everybody get out of class now apart from V” and I was **like** “oh shit” (N/07/4_MP)

4.3 *Speech versus thought representation*

Section 3 has demonstrated that decisions about the inclusion of inner states made at the outset of the investigation can have important repercussions on our conclusions *vis-à-vis* the developmental trajectory of the variable. The analysis reported in this section probes the distribution of individual quotative variants in relation to the reporting of speech and thought based on a narrow variationist definition. I further follow sociolinguistic practise by operationalising ‘content of the quote’ as a binary factor group consisting of speech versus thought.¹² Quotes are classified as ‘speech’ when they report outwardly occurring activities of various kinds (verbal, gestural, etc.) and as ‘thought’ when they refer to mental activity.

Table 13 displays the distribution of quotative variants by speech and thought contexts across the three corpora. The 1960s TLS data provide us with a perfectly balanced system: *say* is overwhelmingly used for the reporting of speech. Unframed quotes and the mixed category ‘other’ tend to mainly introduce speech but not uniquely so. *Think* is the quotative of choice for reporting thought. Indeed, the ecology of speech and thought reporting changes only minimally across the time-span investigated here (*say*: 92%–93% speech, *think* 97%–100% thought). What are the niches, then, that the newcomers start to occupy? *Go* primarily enquotes outwardly occurring speech, with comparable distribution across time as well as across age cohorts (see also Buchstaller 2004, 2006a).

Turning to the development of quotative *like*, a number of studies have reported that the variant entered the system via the context of quoted thought (Baker et al. 2006; Buchstaller and D’Arcy 2009; Tagliamonte and D’Arcy 2007; Tagliamonte and Hudson 1999). However, the 1990s PVC data, in the middle of Table 13 which constitutes the first attestation of the form in North East England, suggest that this effect is rather small.¹³ Note in this respect that Buchstaller and D’Arcy’s (2009) analysis, which is also based on the 1990s PVC corpus, shows a much stronger effect with *like* being clearly favoured in thought contexts. Why do two analyses based on the same corpus and the same definition of inner states result in different outcomes? The answer to the puzzle lies in the interaction between speaker age and speech vs. thought reporting in the 1990s PVC corpus. Younger speakers, the ones reported on in Buchstaller and D’Arcy (2009), indeed favour *like* with thought over speech reporting (57% versus 43%). However, amongst the few tokens of *like* produced by the older speakers, the reverse effect holds (25% thought versus 75% speech). Indeed, 4 out of the 8 tokens produced by the older cohort were sequences of the form ‘be + *like* this/that + gesture/facial expression’, as exemplified in (8).

- (8) and we found the watches, eeh, on Christmas morning we’re *like* this
 “GESTURE / FACIAL EXPRESSION” (PVC18_S31)

Table 13. Correlation between most frequent verbs and speech versus thought representation in the three corpora

	Say		Think		Unft.		other		Like		Go	
	N	%	N	%	N	%	N	%	N	%	N	%
1960s												
TLS	183	92	1	3	72	87	51	86	—	—	—	—
	15	7	28	97	11	13	8	14	—	—	—	—
1990s												
PVC	352	92	2	2	76	64	43	80	22	49	91	85
	29	8	80	98	43	36	11	20	23	51	16	15
2000s												
NECTE2	205	93	0	0	85	79	45	88	82	66	19	73
	15	7	58	100	22	21	6	12	42	34	7	27

TLS: $\chi^2(3)$: 145.189, $p < 0.001$

PVC: $\chi^2(5)$: 316.846, $p < 0.001$

NECTE2: $\chi^2(5)$: 220.354, $p < 0.001$

Note that in combination with a deictic element plus gestural performance, *like* is closely related to its core meaning of comparison (Buchstaller 2004). Indeed, it might not be surprising that the older 1990s PVC speakers, who are amongst the earliest users of the form in this variety, produce constructions that are less far advanced on the cline of grammaticalisation from a comparative to a quotative (see also Romaine and Lange 1991). Amongst the younger PVC speakers, however, the generation who arguably first started spearheading the form, *like* is used for both types of quotes but it is indeed preferred in thought environments.

Finally, amongst the 2000s NECTE2 speakers *like* is clearly preferred with outwardly occurring speech. Importantly, this constraint is shared amongst both age cohorts (younger speakers 65% speech versus 35% thought and older speakers 89% speech versus 13% thought). Hence, it seems that while *like* indeed first spread across the quotative system constrained by the ‘classic factor’ thought reporting (Tagliamonte and D’Arcy 2007), more recent generations of Tyneside speakers have taken the variant and run with it (see also Tagliamonte and D’Arcy 2004, 2007, who suggest the effect might be weakening). The finding that *like* is so malleable in its use with speech and thought reporting – to the point that it is even used with opposite direction of constraint amongst two generations of the same corpus (in the 1990s PVC) – supports Buchstaller’s (2003, 2004) account of its discourse pragmatics. Indeed, she has suggested that one of the defining features of *like* is its indeterminacy in terms of the epistemic stance the speakers assume towards the (non)realisation of the quote and that it is precisely its cross-cutting nature between thought and speech that has contributed to its success (see also Romaine and Lange 1991; Jones and Schieffelin 2007).

4.4 *Person in quotative frame*

Let us now consider the collocation patterns between quotative introducers and subject NP. Prior to the intrusion of the newcomers into the pool, the 1960s TLS quotative system is again fully balanced: *think* is preferred for the introduction of the reporting speakers’ own mental activity (who have access to their thoughts prior to sharing them). *Say*, while being mainly used for reporting one’s own utterances, also frames 3rd person quotes. Unframed quotes only occasionally occur with a subject NP.

Go comes into the system with 3rd person quotes. This effect stays constant but weakens across time (61% in the 1990s PVC and 46% in the 2000s NECTE2 data). Now consider the trajectory of *like*: Tagliamonte and D’Arcy (2004) have suggested that grammatical person – 1st over 3rd person contexts – is a defining feature of the form (which is supported by cross-varietal evi-

Table 14. Correlation between most frequent verbs and grammatical person in the three corpora

		Say		Think		Unfr.		Other		Like		Go	
		N	%	N	%	N	%	N	%	N	%	N	%
1960s	1 st	115	58	22	76	2	2	26	44	–	–	–	–
TLS	3 rd	58	29	1	3	2	2	19	32	–	–	–	–
	It	–	–	–	–	–	–	–	–	–	–	–	–
	None	7	4	0	0	78	94	6	10	–	–	–	–
	other	18	9	6	21	1	1	8	14	–	–	–	–
1990s	1 st	184	48	59	72	2	2	15	28	13	29	23	22
PVC	3 rd	172	45	10	12	5	4	24	44	6	13	65	61
	It	5	1	0	0	0	0	7	13	12	27	6	6
	None	10	3	3	4	112	94	7	13	10	22	10	9
	other	10	3	10	12	0	0	1	2	4	9	3	3
2000s	1 st	70	32	42	72	1	1	26	51	40	32	10	39
NECTE2	3 rd	111	51	7	12	2	2	11	22	44	36	12	46
	It	3	1	0	0	1	1	3	6	15	12	0	0
	None	18	8	5	9	101	95	5	10	15	12	2	8
	other	18	8	4	7	2	2	6	12	10	8	2	8

TLS: $\chi^2(9)$: 295.551, $p < 0.001^*$

PVC: $\chi^2(20)$: 701.790, $p < 0.001$

NECTE2: $\chi^2(20)$: 425.094, $p < 0.001$

dence in Buchstaller and D'Arcy 2009, but note Macaulay 2001 and Winter 2002). Turning to Table 14, we observe that in the 1990s PVC corpus 1st person contexts constitute indeed the most favouring context for *like* when it first enters the system (with 29%). Note, however, the high frequencies of *it* contexts (with 27%). A number of authors have pointed out the propensity for *like* to occur in 3rd person neuter contexts (Buchstaller 2004; Fleischman and Yaguello 2004; Romaine and Lange 1991; Tagliamonte and Hudson 1999). Indeed, Buchstaller and D'Arcy (2009) and Singler (2001) argue that we need to differentiate between existential versus referential 3rd person neuter contexts. In the 1990s PVC corpus, *like* occurs mainly in existential contexts (with 9 versus 3 tokens), whereas in the 2000s NECTE2 data, it collocates exclusively with existential *it*.

In the 2000s NECTE2 corpus, however, when the variant amounts to over 20% of the system, *like* moves away from *it*-contexts and is now used with 1st and 3rd person to almost equal proportion (slightly favoured by 3rd person with 36%). At first glance, the erosion of the 1st person effect seems to be running contra to Tagliamonte and D'Arcy's (2004) generalisation about the trajectory of the form. However, the authors refer to the initial stages of the diffusion of *like*. Indeed, a similar person-levelling effect has been pointed out in *later*

stages of its development by Cheshire and Fox (2007) for London and Ferrara and Bell (1995) for Texas English. Note however that Baker et al. (2006) report a persistent 1st person effect in data collected in York. More and newer data from a multitude of localities is needed to test whether the levelling of person effect with increasing entrenchment remains a localised phenomenon.

If we look beyond the newcomer variants and consider the ecology of the variable as a whole we notice that the additions to the system seem not to impinge upon the patterning of unframed and *think* quotes, which – unsurprisingly, given their semantics – continue to be favoured with no subject NP and 1st person respectively. The only variant upon which the intrusion of *like* and *go* has an effect is quotative *say*: From being clearly favoured by 1st person contexts in the 1960s, *say* moved on to become indeterminate between 1st and 3rd person contexts until, by the late 2000s, it is favoured by 3rd person quotes. A cross-correlation by age (not shown here) reveals, however, that this effect is strongly age-dependent: only the older speakers move away from *say* in 1st person contexts. The younger cohort recorded in 2007 continue to use *say* with 1st and 3rd person speakers.

4.5 Tense in quotative frame

Buchstaller and D’Arcy (2009) have shown that the factor tense/temporal reference operates distinctly in every variety they investigated. This section probes the constraint across the 50 years covered by the data from Tyneside. In the 1960s data, *think* mainly occurs with present tense simple and unsurprisingly, unframed quotes are not marked for tense or aspect.

Remember that the quotative system of the 1960s speakers is heavily dominated by *say*, resulting in strings of consecutive *say*-tokens in narratives (see 5 and 7). This has led D’Arcy (2009) to ask which strategies (if any) speakers use prior to the arrival of *like* and *go* in order to break up such sequences. Table 15 showcases a source of variability in the 1960s TLS system: speakers use *say* in a variety of tenses and aspects, grouped into the category ‘other’ (such as habitual *will* and *would*, modals and pseudo-models, perfective and continuous aspect, see 9).

With the addition of two newcomers, the distribution across tense and aspect across the system starts to change. Gradually, *think* moves away from present tense marking and towards past tense. At the same time, *say* retreats from ‘other’ tenses. This finding suggests that once the system increasingly relies on a larger repertoire of forms, speakers might perceive less need to create variability via tense/aspect marking. By the 1990s PVC data, the most favoured context for *say* is the conversational historic present (CHP), exemplified in (10).

Table 15. Correlation between most frequent verbs and tense in the three corpora

	Say		Think		Unfr.		other		Like		Go	
	N	%	N	%	N	%	N	%	N	%	N	%
1960s TLS	Past	16	8	7	24	0	22	19	—	—	—	—
	Present	46	23	17	56	0	21	36	—	—	—	—
	CHP	53	27	1	3	0	3	5	—	—	—	—
	Other	81	41	4	14	0	20	34	—	—	—	—
	None	2	1	0	0	83	4	7	—	—	—	—
1990s PVC	Past	83	22	36	44	0	22	41	21	47	43	40
	Present	46	12	25	43	0	13	24	6	13	11	10
	CHP	186	49	5	7	0	3	6	5	11	43	40
	Other	59	16	5	7	0	12	22	0	0	8	8
	None	7	2	1	1	118	4	7	13	29	2	2
2000s NECTE2	Past	68	31	31	53	0	15	29	60	48	18	69
	Present	20	9	16	28	0	13	26	22	18	2	8
	CHP	84	38	1	2	0	1	2	7	6	0	0
	Other	35	16	7	12	0	21	41	19	15	6	23
	None	13	6	3	5	107	1	2	16	13	0	0

TLS: $\chi^2(12)$: 378.127, $p < 0.001$
PVC: $\chi^2(20)$: 784.678, $p < 0.001$
NECTE2: $\chi^2(20)$: 540.449, $p < 0.001$

- (9) a. Well if er we used if you touched a one they **would say** “wey you’re on”. (TLS/G5)
- b. The people from Washington **used to say** “schooel and spoonen” mm mm things like that it’s weird. (TLS/G5)
- c. . . . can link it up with something you’ve done at school and you **could say** “oh yes that’s how that happened”. (TLS/G9)
- (10) a. So **I says** “No, no thanks”. (PVC15_B3)
- b. And **they says** “How do you boil a potato?”. (PVC9_T9)

In the 2000s NECTE2 corpus, *say* continues to be favoured in CHP but it also appears with increasing frequencies with past tense marking. What are the functional niches into which *like* and *go* enter the variable? Contrary to the trajectory reported for varieties of North American English (Tagliamonte and D’Arcy 2007; Singler 2001), in North-East England, CHP contexts do not favour *like*, neither in the 1990s PVC nor in the 2000s NECTE2 data, a finding that is entirely stable across age groups (see also Buchstaller and D’Arcy 2009). *Go* on the other hand occurs with past and CHP contexts alike in the PVC data until, by the time it has shrunk to only 4% in NECTE2, it retreats to past contexts altogether.

The new ecology of the quotative system is as follows: *think* with past tense quotes, *say* with CHP and slightly less frequently with past tense, *go* and *like* in past tense contexts. Clearly, as Buchstaller and D’Arcy (2009) have argued, the intrusion of newcomer variants has had repercussions on the whole system of reporting. The functional allocation of quotative variants in the 2007 data looks quite unlike that of the 1960s, relying on diversity of forms for variability rather than tense-aspect marking. Hence, in order to be truly accountable of the changes that are brought about by the incursion of newcomer items we need to understand the development of the full system into which a variant is being adopted and adapted. As Table 15 demonstrates, new functional balances are constantly negotiated amongst both newcomers and traditional forms within the richer pool of quotative options.

5. Multinomial regression analysis

Tables 9–15 have mapped the constraints on the quotative system as a series of cross-correlations which were run separately for every factor group and corpus. Comparing and contrasting the constraints that govern the entire quotative system diachronically allowed me to trace the changes in the variable on a number of dimensions as the system reorganises itself in a more complex constellation.

Table 16. Results of three separate multinomial analyses for the TLS, PVC and NECTE2 corpora

	1960s TLS			1990s PVC			2000s NECTE2		
	χ^2	df	p	χ^2	df	p	χ^2	df	p
Age	.859	3	.835	59.970	5	.000	152.863	5	.000
Class	8.812	3	.032	10.208	5	.070	15.230	5	.009
Gender	10.490	3	.015	16.897	5	.005	15.612	5	.008
Thought vs. speech	286.227	3	.000	1328.861	5	.000	163.078	5	.000
Narrative vs. other	3.406	3	.333	18.152	5	.003	17.112	5	.004
Tense	90.004	12	.000	1640.670	20	.000	60.227	20	.000
Person	12.456	9	.189	134.503	20	.000	142.054	20	.000

TLS: $\chi^2(36)$: 521.223, $p < 0.001$, r^2 : 0.838,

PVC: $\chi^2(65)$: 1158.558, $p < 0.001$, r^2 : 0.812

NECTE2: $\chi^2(65)$: 661.735, $p < 0.001$, r^2 : 0.841

The variationist literature has argued that in order to test the magnitude of individual constraints that condition a variable, we need to consider all factor groups simultaneously (Young and Bayley 1996; Bayley 2002; Paolillo 2002). This section reports the results of an analysis which considers the entirety of constraints on the quotative system within one statistical model. The test that has been chosen for this investigation is multinomial regression, which allows the analysis of non-ordered categorical dependent variables which do not need to be binary. Multinomial regression can deal with a variety of (partly interacting) predictor variables “that can be categorical or continuous and do not need to be normally distributed” (Foster et al. 2006: 58). Its output shows the best set of predictor variables from those included. A final advantage of multinomial regression analysis is that the fit of the overall model to the data is expressed via an r^2 value, which tells us how much of the variability manifest in the data can be explained by the combined model. Table 16 displays the outcome of three independent multinomial regression analyses, one per corpus, with significant factor groups in **bold**. I will briefly discuss these results.

For the 1960s TLS corpus, the factor groups class, gender, thought vs. speech encoding and tense marking come out as significant. Note that some significant correlation results discussed earlier do not emerge as significant in the larger multinomial model. Hence, contrary to the individual cross tabulations, a combined model that takes into account all factors simultaneously does not select person marking and narratives as significant but does select class. This might be due to low tokens numbers per cell, or due to biases in the data

(as mentioned above). Furthermore, as is well known, multiple significance tests increase the risk of Type I errors.¹⁴

The outcome of a multinomial regression analysis for the 1990s PVC data corresponds well with the results reported in the individual cross-tabulations: except for class, all factors tested – the extralinguistic constraints age and gender as well as the intralinguistic variables content of the quote (in terms of thought versus speech reporting), genre (narrative versus other), tense marking and grammatical person – come out significant.¹⁵ Finally, in the 2000s NECTE2 corpus, the quotative system is significantly constrained by all factor groups included in the analysis; every single constraint was selected in a combined model.¹⁶ In all three corpora, the combined effect of the selected factor groups on the patterning of the quotative system is highly significant. The Nagelkerke r^2 indicates that between 81% and 84% of the variability in the data can be explained by the overall model.

Hence, while Tables 9–15 have provided a detailed analysis of the systematic renegotiation process within the quotative system, the results in Table 16 give us an indication of the magnitude of the individual constraints which govern the variable in every single corpus and the degree to which the overall strength of these factor groups has changed across these three datasets. For example, while age did not play a significant role in the choice of quotative variants in the 1960s, since then younger and older speakers have been making increasingly disparate quotative choices across time. Note the increase of Chi-Square value from 59 to 153 between the 1990s PVC and the 2000s NECTE2 with a stable degree of freedom of 5! Class and gender also become increasingly more significant across time whereas content of the quote, tense, and person marking remain highly significant. Also note that only in the later two corpora is quotative choice genre-sensitive.

However, the crucial question remains: are any of the differences across corpora statistically significant? And where are the loci of these significant changes? I now turn to the results of a multivariate analysis which aims to investigate the magnitude of diachronic changes in the quotative system across the time span covered by the data. Such an investigation allows us to pinpoint the components in the variable grammar that have been significantly affected by the intrusion of the innovative variants. This analysis is informed by Buchstaller and D'Arcy (2009), who examine whether differences across national varieties are meaningful in the sense of significantly different in magnitude. They argue that “if a constraint is transferred as a whole (...) there should be no significant interaction between constraint and community” (ibid: 313). If, however, a constraint differs significantly from place to place, an analysis that tests for interaction between variety and this factor group should show a significant effect. In this paper I transfer the concept of significant interaction effect onto the temporal dimension. This can be done by including corpus –

Table 17. Two-way interaction effects in a multinomial regression analysis for all three corpora

	χ^2	<i>df</i>	<i>p</i>
corpus * age	38.479	10	.000
corpus * class	31.895	10	.000
corpus * narrative vs. other	28.063	10	.002
corpus * tense	66.046	40	.006

$\chi^2(160)$: 2568, $p < 0.001$, r^2 : 0.808

which is used here as a surrogate for time – as an independent variable (alongside the factor groups age, gender, class, narrative vs. other, speech vs. thought, person and tense) into a multinomial regression analysis and testing for two-way interaction effects. The interactions between individual constraints and corpus that come out significant are the components of the variable grammar that have significantly changed across time. Table 17 shows that there are 4 two-way interaction effects involving corpus.¹⁷

These results can be interpreted as follows: the intrusion of new options into the quotative system has a huge impact on the selection processes made by speakers of different age groups (see Buchstaller 2004; Buchstaller and D'Arcy 2009; Tagliamonte and D'Arcy 2004, 2007). As we have seen above, whereas age is not significantly correlated with quotative choice in the 1960s TLS data, speakers of different age cohorts start to develop fundamentally different quotative systems. Older speakers continue to favour *say* whereas younger speakers in the 1990s PVC and the 2000s NECTE2 corpus prefer to use *like* and *go*. Another significant factor is class, which interacts in subtle and complicated ways with quotative choice, with every quotative option changing its socioeconomic niche – or losing/developing a class effect across time. The next most significant interaction ($p = .002$) is between corpus and quotative choices in narratives. As we remember from Table 12, speakers in the later corpora (especially the younger cohort) tend to employ *like* and *go* in narratives and move away from *say* as the main narrative quotative. Finally, tense significantly interacts with corpus (see also Tagliamonte and D'Arcy 2007). Table 15 has demonstrated the fundamental changes in the ecology of tense and aspect marking brought about by the entry of the newcomer forms. Compared to the 1960s, *say* has lost its temporal and aspectual diversity and *think* is moving away from present tense to past tense marking. The functional allocation of quotative variants in the 2007 data looks quite unlike the 1960s, relying on diversity of forms for variability rather than tense-aspect marking.¹⁸ Hence, in order to truly account for the changes within the variable as a whole, we need to understand the repercussions of the innovations on the full system into which these variants are being adopted.

Finally, what are the functional niches into which the newcomers enter the quotative system? The 1990s PVC data, which represents the earliest date we can trace these innovations, confirms that Tyneside speakers take part in the globalisation process that has been described in detail by Buchstaller and D’Arcy (2009): *like* arrived into the system in the niches that have been pinpointed as typical for the global distribution of the form (1st person quotes and thought introduction). However, at the same time, the diffusion and adoption of innovations never occurs in a vacuum (Buchstaller and D’Arcy 2009): new functional and social balances are created as newcomers are adopted into the linguistic system and speakers juggle an increasingly rich system of quotative options (see also D’Arcy 2010). The locally specific outcomes and practices reported here confirm Meyerhoff’s (2009) finding that the spread of linguistic resources tends to go hand in hand with “transformation under transfer”.

6. Conclusion

This paper traces the development of the quotative system in a newly created corpus that spans 5 decades of conversational recordings made in the Tyneside area in North-Eastern England. I have first considered some ramifications that different decisions vis-a-vis the operationalisation of the variable made at the outset of the analysis can have on the outcome of our investigation. Second, I have reported the results of a longitudinal analysis of the quotative system, which was conducted during a time when two major innovations make incursions into the variable. Extending the window of analysis into the past has allowed me to track long-term changes to the variable grammar that governs the quotative system (see D’Arcy 2009).

The data and methods used in this longitudinal analysis have enabled me to go beyond the initial stage of innovation adoption and to show the continuous restructuring process that takes place over several generations of speakers. A multinomial regression analysis allows me to pinpoint the major loci of longitudinal reorganisation within the grammar that governs the quotative system. The intrusion of two innovative forms has sparked significant changes within the variable, not just in terms of choice of forms but also regarding the constraints that condition the whole system. Fresh equilibrates are negotiated amongst the richer set of variants and the quotative system in the 2000s is governed by different constraints – both in terms of direction and magnitude – than its counterpart in the 1960s.

Appendix Distribution of quotative variants according to a maximally inclusive definition (including stance markers and direct repetition)

Table 2'. *Distribution of quotatives in TLS*

	N	%
say	206	21.3
think	283	29.3
unframed	376	38.9
suppose	36	3.7
other	66	6.8
Total	967	100.0

Table 3'. *Distribution of quotatives in PVC*

	N	%
say	385	33.1
think	260	22.4
unframed	291	25.0
like	46	4.0
go	107	9.2
other	74	6.4
Total	1163	100.0

Table 4'. *Distribution of quotatives in NECTE2*

	N	%
say	221	20.8
think	279	26.3
unframed	337	31.8
like	125	11.8
go	26	2.5
other	72	6.8
Total	1060	100.0

Bionote

Isabelle Buchstaller is a lecturer in sociolinguistics at Newcastle University. Her main research interest is the corpus-based investigation of morphosyntactic and syntactic variables such as quotation, intensification and

non-standard agreement. She has also been working – sometimes in collaboration with colleagues at Newcastle University and with Alex D’Arcy – on the implementation of innovative and combinatory methods for data collection and analysis. Isabelle is currently writing a book on quotation with Wiley-Blackwell, which is scheduled to appear in 2013. E-mail: i.buchstaller@newcastle.ac.uk

Notes

1. This article could not have been written without Miriam Meyerhoff and Alex D’Arcy, whose many suggestions and comments have greatly inspired my work. I am indebted to Karen Corrigan and Katie Barnfield for their collaboration in creating DECTE. Obviously all remaining errors are solely my own.
2. The idea of creating a new time slice to NECTE was initially put forward by Gerard Docherty with the aim to establish an ONZE style corpus on the basis of materials collected during the fieldwork components of modules at Newcastle University. Contributing classes are taught by the author as well as by Ekaterina Samoylova, Ghada Khattab and Karen Corrigan, whose contribution to the creation of the corpus were invaluable.
3. Another factor that seems to hold globally is the occurrence of *like* with mimetic reenactment. This paper does not investigate mimesis due to the fact that the occurrence, function and paralinguistic encoding of voice effects is unstable across the three corpora. Indeed, the nature of what constitutes a voice effect is notoriously underdefined in sociolinguistic analysis, a problem which is compounded by the independence of suprasegmental information and linguistic structure (see also Klewitz and Couper-Kuhlen 1999). More research is needed in order to develop a rigorous protocol for coding suprasegmental information in quantitative sociolinguistic analysis.
4. Jones and Schieffelin (2007), point out that “quotative *like* [also tends to] (. . .) encode *attitude* or *stance* in utterance form” (emphasis in original, see also Ferrara and Bell 1995; Vincent and Dubois 1995; Buchstaller et al. to appear). Indeed, especially when occurring with *it* amongst younger speakers, instances of *like* have been reported to be “indeterminate in usage” (Romaine and Lange 1991: 254) between a stance marker and an actual report of previously occurring speech or thought, as exemplified with various degrees of indeterminacy below.

IT’S LIKE (sic.) you want to come home and it’s no left turn, no right turn, go this way, come back that way, and then the cops look at you **LIKE** “where do you think you are going?”, **IT’S LIKE**, I live here (Romaine and Lange 1991: 254)

5. Tokens such as (2a.+b.) are also potentially ambiguous between direct and indirect reporting. The link between modality and de dicto/de re reporting has been pointed out by Coulmas (1986). Similarly, Romaine and Lange (1991) have argued that pragmatically *be like* blurs the boundaries between direct and indirect speech (see also Vandelanotte to appear). Importantly, a number of researchers have shown that the boundaries between indirect and direct reporting are not clear-cut, which led them to argue that different modes of reporting might be better conceptualized along a cline of evidential value, reporter involvement or discourse function (Spronck to appear; Frajzyngier 2001; Güldemann to appear; see also Banfield 1982).

6. As described above, the PVC interviewer tended to stay in the background and speakers were merely asked to converse about topics of their own choosing, which sometimes included metalinguistic discussions.
7. For the distribution of variants based on the maximally inclusive definition employed at the outset, please refer to the Appendix.
8. Following Occam's Razor, the cut-off point 2% has been chosen as an arbitrary border-line that results in (i) a maximal fit of the model with the data as well as (ii) maximal consistency of forms across all three data-sets.
9. The cut-off value for adjusted residual values has been set, in line with statistical convention, at "greater than 2 or less than -2" (Acton and Miller 2009: 150). Due to the relatively large difference between observed and expected values, residual-based analysis was not conducted for the factors 'speech vs. thought', 'person' and 'tense'. Instead, the discussion will be guided by the frequency-based distribution revealed by the correlation analysis.
10. This is contrary to Buchstaller and D'Arcy (2009), where *like* is favoured by the young males. There are two main possible reasons for this discrepancy, namely the difference in sampling strategy or the definition of the variable as discussed above.
11. This result needs to be viewed with caution since this factor is not selected as significant in the multinomial model discussed below. Here and in the following discussion significant correlation tests that do not emerge as significant in the overall model are marked with an asterisk *.
12. Collapsing the epistemic stance that speakers takes towards the realization of the original speech act into binary values is obviously simplistic. For a scalar conceptualization of quote realization see Buchstaller (2004) and Vincent and Dubois (1996).
13. Note that the adjusted residuals indicate that the effect is indeed reportable.
14. Testing for stepwise 2-way interactions reveals that there are three interaction effects:
 - Gender and age: is mainly due to the low quotative production of the older men.
 - Gender and tense: is a consequences of two facts (i) men tend to use *think* in the past tense whereas women prefer to use it in the present tense and (ii) women overwhelmingly use *say* with 'other' tense and aspects whereas men also produce relatively high frequencies of *say* with CHP.
 - Class and thought vs. speech: relies on the fact that the MC speakers, who produce more reported thought, have a significantly higher use of *say* and other quotes with thought contexts.
15. There are 5 significant interaction effects, three of which involve the factor age. In Section 4.1, I have argued that the young PVC speakers have a fundamentally different system from the older age cohort, which also manifests itself in the fact that both age groups have significantly different constraint hierarchies for tense marking, thought speech marking and quotative choice in narratives vs. other genres (see the discussion there). The significant interaction effect between gender and thought vs. speech is mainly due to the fact that for the female speakers, *go* is almost uniquely used for speech reporting and *like* patterns about equally for speech and thought whereas for male speakers, *like* predominates in thought contexts and *go*, while still mainly used to report speech, also has a propensity of 30% with thought contexts. Finally, as discussed in section 4.2, the selection of quotatives for speech and thought marking is different between narrative and non-narrative contexts.
16. The NECTE2 corpus has a range of significant interaction effects, namely between age and tense marking and age and narrative distribution (as discussed above). There are also effects pertaining to the interaction between class and tense marking, class and narrative distribution, gender and thought vs. speech reporting and gender and person marking.
17. Note that this analysis only tests for the global effect of corpus, aka time. A more differentiated analysis would parse apart the step-wise development of the system from the 1960s to the 1990s and finally to the 2000s.

18. However, we need to bear in mind that not all aspects of the variable grammar are affected by the intrusion of newcomer variants. Indeed, as new balances are being created amongst newcomers and traditional forms within the richer pool of quotative options, the addition of new forms to the quotative repertoire has not lead to a major reallocation of functional roles with respect to person marking and speech and thought reporting.

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