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The grammaticalisation of *never* in British English dialects: Quantifying syntactic and functional change[1]

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Never originated as a temporal adverb expressing universal quantification over time ('Type 1', e.g. *he's never been to Paris*). As Lucas & Willis (2012) report, it has developed non-quantificational meanings equivalent to *didn't*, starting with the 'Type 2' use which depicts an event that could have occurred in a specific 'window of opportunity' (e.g. *she waited but he never arrived*). Subsequently, a non-standard 'Type 3' use developed, where *never* can be used with other predicates (e.g. *I never won that competition yesterday*). To what extent does variation in the use of *never* in present-day English reflect the proposed historical development of the form? This study addresses this question by integrating syntactic theory into a quantitative variationist approach, analysing *never* vs. *didn't* in Type 2 and Type 3 contexts using speech corpora from three Northern British communities. The results show how syntactic–semantic constraints on *never* in Type 2 contexts persist in its newer, Type 3 uses, e.g. it is used at higher rates in achievement predicates. While Type 2 contexts are associated with the expression of counter-expectation, *never* has become pragmatically strengthened in its Type 3 use, where it is often used to contradict a previously-expressed proposition.

KEYWORDS: comparative syntax, grammaticalisation, language variation and change, negation, persistence, variationist sociolinguistic methods

1. INTRODUCTION

The word *never* has several uses in English. In its most prototypical function, it is a negative temporal adverb that expresses 'universal quantification over time' (Lucas & Willis 2012: 463) and means 'not on any occasion' (Cheshire 1985: 8; Smith 2001: 127). This use of *never*, henceforth 'Type 1', is equivalent to *not ever*, as shown in (1).[2]

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[2] The information in parentheses after example sentences such as (1a) shows the speaker's geographical location and their pseudonym/speaker code from the corpora used in the present investigation (see Section 4 for full details of the corpora).

(1) *Type 1:* Never *with universal quantification over time*
   (a) I've **never** slept-walked (Tyneside; SM/135)
   (b) I've **not ever/I haven't ever** slept-walked

However, *never* can also function as a non-quantificational negator equivalent to *didn't* (Cheshire 1982: 67–68; Edwards 1993: 227; Lucas & Willis 2012; Hughes, Trudgill & Watt 2013: 29). Lucas & Willis (2012) distinguish two non-quantificational uses, henceforth 'Type 2' and 'Type 3'. Type 2 *never*, illustrated in (2), is found in Standard English and is associated with a specific 'window of opportunity' in which an event could have occurred but did not (Lucas & Willis 2012). Type 3 *never*, sometimes called 'punctual *never*' (Palacios Martínez 2011: 21), is similarly non-quantificational but is always non-standard (Lucas & Willis 2012: 460). It refers to a single point in time and means 'not on one specific occasion' (Smith 2001: 127), as in (3).

(2) *Type 2: Non-quantificational* never *with a 'window of opportunity'*
   (a) He **never** came into school (i.e. that day) (Glasgow; 3F2)
   (b) He **didn't** come into school

(3) *Type 3: Non-quantificational* never *as a generic negator*
   (a) Actually, I **never** had that coat when I was eleven (Tyneside; RM/512)
   (b) Actually, I **didn't** have that coat when I was eleven

Lucas & Willis (2012) find evidence that Type 1 was the original function of *never* and this eventually developed Type 2 and, subsequently, Type 3 uses. They document the different types of *never* and examine the history of the form using a predominantly qualitative approach, considering examples taken from corpora including the *Helsinki Corpus* (1500–1710), the *Corpus of Early English Correspondence Sampler* (1418–1680) and the *Oxford English Dictionary* (OED) for their historical analyses, and the BNC, *Linguistic Innovators Corpus* (LIC) and their own acceptability judgements for insights into modern English. Their data suggests that *never* has undergone grammaticalisation over time – a type of linguistic change 'whereby particular items become more grammatical through time' (Hopper & Traugott 2003: 2) through 'gradual and directed change leading to new pairings of linguistic form and function or content' (Vincent & Börjars 2010: 279).

The current state of sociolinguistic knowledge on the use and distribution of non-quantificational *never* is relatively limited. It regularly appears in publications which provide an overview of notable syntactic features of certain varieties of English, but few reports acknowledge the distinction between standard non-quantificational uses (Type 2) and non-standard ones (Type 3). The fact that non-quantificational *never* is frequently noted to be a characteristic of *non-standard* Englishes worldwide suggests that such reports might be based on observations of the Type 3 function only (see Coupland 1988: 35; Anderwald 2002: 203; Kortmann & Szmrecsanyi 2004; Britain 2010; Melchers & Shaw 2011:

52–53; Hughes et al. 2013: 29; Szmrecsanyi 2013). Furthermore, few studies have examined *never*'s linguistic distribution from a sociolinguistic perspective. Cheshire (1985, 1997, 1998) and Cheshire, Edwards & Whittle (1989) are exceptions which consider the semantic and discourse–pragmatic characteristics of *never* with qualitative discussion of elicited judgements of *never*'s acceptability in different linguistic contexts. Quantitative studies of *never* are similarly scarce – most have examined the alternation between Type 1 *never* and *not ever*, but as speakers use the *never* variant near-categorically, there is little variation to be observed in that regard (Tottie 1991; Cheshire 1998: 34–35; Palacios Martínez 2011).[3] To my knowledge at the time of writing, the only prior quantitative variationist study of *never* and *didn't* as non-quantificational negators is Cheshire (1982), which identified some linguistic constraints on the variation using spoken data collected in Reading, UK, but focused only on Type 3 uses.

This paper addresses these gaps in our knowledge of *never*'s linguistic and sociolinguistic profile, through consideration of a fundamental question that emerges out of this current picture of the variation: to what extent does variation in the use of *never* in present-day English reflect the proposed historical development of the form? As a form grammaticalises, we can expect to see PERSISTENCE, whereby 'some traces of its original lexical meanings tend to adhere to it, and details of its lexical history may be reflected in constraints on its grammatical distribution' (Hopper 1991: 22). To examine this with respect to *never*, the analysis incorporates insights from syntactic theory into a quantitative variationist methodology in order to gain a fuller understanding of the structure, meaning and development of the form. Doing so also allows us to gain insight into how variation arises from the grammar (see Fasold 2013: 185) and aligns with the mantra that '[w]e cannot fully explain language only as an internal object, any more than we can fully explain language only as an external object' (Wilson & Henry 1998: 14). As shown in this paper, without close consideration of the syntactic and semantic constraints on a particular form, it is impossible to properly define a morpho-syntactic variable and its contexts of use according to the Principle of Accountability, which states that: 'any variable form . . . should be reported with the proportion of cases in which the form did occur IN THE RELEVANT ENVIRONMENT [emphasis mine – CC], compared to the total number of cases in which it might have occurred' (Labov 1972a: 94). *Never* presents a particularly complex case in that there is a single form with multiple functions that have arisen at different points diachronically, each with a slightly different meaning and syntactic/semantic distribution, some of which are standard and some of which are non-standard. This complexity may in part explain why quantitative investigation of *never* has largely been avoided, but as demonstrated

[3] Although Palacios Martnez (2011) does comment on the frequency of Type 3 *never* compared to other uses, this is calculated as a percentage of all instances of *never*.

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in this paper, variationist analysis is possible with careful consideration of its syntax, semantics and historical development.

The analysis proceeds in this vein, embarking on new territory in comparing both Type 2 and Type 3 uses of *never* and its equivalent *didn't* in a quantitative, cross-dialectal analysis of the variation using spontaneous speech corpora from three Northern British locales – Glasgow (Scotland), Tyneside (North East England) and Salford (Greater Manchester). As noted earlier, Type 3 *never* has been documented in a wide range of vernacular Englishes around the world.[4] The three varieties under study here also have this use of *never*, as reported in accounts of Northern Englishes (Beal 2004: 125), Scottish English (Miller & Brown 1982; Miller 1993: 115; Smith 2001: 127–128) and Tyneside English (Beal 1993: 198; Beal & Corrigan 2005: 145; Beal, Burbano-Elizondo & Llamas 2012: 58; Buchstaller & Corrigan 2015: 80). Glasgow, Tyneside and Salford therefore provide an ideal testing ground for systematic, comparative investigation of the variation. Just as typological approaches to linguistic phenomena aim to identify core properties of languages, comparative sociolinguistic studies aim to test whether the constraints on a phenomenon operate in the same way across different dialects, in order to assess their structural similarity and their respective positioning in terms of the advancement of linguistic change (Tagliamonte 2013: 186).

This study demonstrates how linguistic constraints on non-quantificational *never* as a standard variant in Type 2 contexts – particularly relating to the lexical aspect of the verbs and the types of events they depict – maintain an influence on its usage in its newer, non-standard use in Type 3 contexts. The results show that as *never* expanded its linguistic distribution and changed in meaning between Type 2 and Type 3 contexts, it expanded its repertoire of discourse–pragmatic functions. While Type 2 environments almost always involve the expression of counter-expectation (regardless of variant), in Type 3 contexts the highest rates of *never* are reserved for when a speaker wishes to contradict a previously-stated proposition.

The following section explains the linguistic properties that distinguish the different types of *never* (Section 2), prior to a consideration of the diachronic development and synchronic distribution of *never* (Section 3). The sections that follow give details of the corpora and sample used for the investigation (Section 4), the variable context and data extraction (Section 5), and the hypotheses and coding (Section 6). Results of the quantitative analysis are presented in Section 7, followed by conclusions in Section 8.

[4] These include Englishes spoken in the UK (Cheshire 1982; Edwards 1993: 227; Stenström 1997: 140; Britain 2002: 25; Beal 2004: 125; Palacios Martínez 2011), Ireland (Hickey 2005: 177; 2012: 101), the USA (Labov 1972b, Cheshire 1985), Canada (Clarke 2010: 98), India (Schneider 2000) and Australia (Pawley 2008).

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2. DIFFERENTIATING TYPES OF *NEVER*

Drawing upon Lucas & Willis (2012), this section delineates the linguistic properties which distinguish the Type 1, Type 2 and Type 3 uses of *never*, and how these differ from some more marginal functions. Although the dependent variable in the present study is non-quantificational *never* vs. *didn't* in Type 2 and Type 3 contexts, the linguistic characteristics of each type of *never* are outlined here because all are said to originally stem from Type 1 through grammaticalisation (Lucas & Willis 2012: 473). Understanding how Type 1, Type 2 and Type 3 uses of *never* relate to one another historically and in terms of their semantic and syntactic properties is essential to address the central research question which asks to what extent the newer, non-quantificational uses exhibit behaviours that reflect their historical development. This is also essential for reliable data sorting and coding of the variable (see Section 5).

2.1 *Type 1: Universal quantification over time*

The prototypical use of *never* is Type 1, which expresses universal quantification over time, as follows:

> Given a (temporal) context *C*, a domain *D* (= the set of all units of time *t* contained within *C*) and a proposition *p*; *never*(*p*) is true iff for all units of time *t* within *D*, *p* is false at *t*. Or, equivalently, *never*(*p*) is true iff there is not within *D* such that *p* is true at *t*. (Lucas & Willis 2012: 463)

Lucas & Willis (2012: 463) argue that this type of *never* addresses a 'question under discussion' in the sense of Roberts (1996), namely either: (i) When is/was/will *p* (be) true? or (ii) How often is/was/will *p* (be) true? Question (i) is relevant when *never* quantifies over a non-iterable predicate, i.e. where there was '*some instant* (or longer stretch of time) at which *p* is true' (Lucas & Willis 2012: 463), as in (4). Question (ii) is relevant for iterable predicates, i.e. where *never* '[denies] the assumption that the relevant proposition is true on multiple separate occasions within *D*' (Lucas & Willis 2012: 465), as in (5).

(4) *Non-iterable predicate*

(a) I've never learnt another language (Salford; Sally)

(b) The one graveyard that I will never forget is the German graveyard (Tyneside; MM/456)

(5) *Iterable predicate*

(a) we never really won anything (over numerous netball tournaments) (Tyneside; AS/149)

(b) It was like dead good our school, the fire alarm never went off or anything (Glasgow; 3F2)

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Appealing to Partee's (1973) proposal that sentences with tense contain a temporal variable, Lucas & Willis (2012: 464) state that *never* 'saturates this variable' with non-iterable predicates, but not with iterable predicates. This explains why non-iterable predicates with Type 1 *never*, like those in (4), prohibit the use of temporal adverbials (e.g. *this year*, *yesterday*), whereas they are licensed with iterable predicates (Lucas & Willis 2012: 464).

2.2 *Type 2: Non-quantificational with 'window of opportunity'*

Unlike Type 1 *never*, Type 2 *never* does not quantify over time and is 'equivalent to ordinary sentential negation' (Lucas & Willis 2012: 466). Type 2 *never* is identifiable by its reference to a 'temporally restricted 'window of opportunity', given or inferable in context, in which the relevant event could theoretically have taken place at any time but didn't' (Lucas & Willis 2012: 467). At the time of speaking, this window must be closed – hence, Type 2 *never* only occurs with the preterite (Lucas & Willis 2012: 467). Type 2 *never* is also limited to achievement predicates that refer to the completion of a specific task (Lucas & Willis 2012: 467–469), as explained further in Section 5.3. Some tokens of Type 2 *never* from my data are given in (6).

(6) (a) But Nadine **never** got my message, she said (Glasgow; 3F4)
(b) **never** brought a biscuit, did she? (Salford; Moira)
(c) Her Dad **never** came to parents' night (Glasgow; NKYF2)

Although Type 2 *never* may seem similar to Type 1, if they were the same we would expect Type 2 *never* to be concerned with the 'how often?' question with iterable predicates, which is not the case (Lucas & Willis 2012: 466). For example, someone was not expected to receive a specific, single text message several times (6a), bring a biscuit to the interview several times (6b) (because, in this context, the fieldworker set up the interview but intentionally left the participants alone to talk), or to go to a single parents' evening several times (6c). The events are expected to occur only once within a 'window of opportunity'.

2.3 *Type 3: Non-quantificational generic negator*

Non-quantificational *never* in Type 3 contexts marks sentential negation, just like Type 2 *never* (Lucas & Willis 2012: 469). However, the linguistic context differentiates the two, which also creates a distinction between a standard use – Type 2 – and a non-standard use – Type 3 (Lucas & Willis 2012: 469). While Type 2 *never* is limited to achievement predicates with a 'window of opportunity', Type 3 can occur with a wide range of predicate types (Lucas & Willis 2012: 469), as the examples in (7) illustrate.

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(7) (a) I **never** worked here at the time (Tyneside; SM/84)
(b) Actually I **never** had that coat when I was eleven (Tyneside; RM/512)
(c) I **never** watched that last night (Glasgow; 00-G2-m04)

Type 3 *never* is strongly associated with the preterite and is considered equivalent to *didn't* (Labov 1972b; Cheshire 1982: 67–68; Edwards 1993: 227; Smith 2001: 128; Hughes et al. 2013: 29). Lucas & Willis (2012: 469–470) agree, but hypothesise that this could be because with other tenses *never* can be ambiguous between Type 1 (where it has a habitual interpretation) or Type 3 (where it has a non-quantificational interpretation), as shown in (8), with examples in the present tense.

(8) know what I'm saying you feel like you're the one . that's why I can **never** say that I'm Moroccan . I can **never** say it
(*Linguistic Innovators Corpus*, 6127int036; Lucas & Willis 2012: 470)

Type 3 *never* can also occur in clause-final position with an elided VP, as in (9), which could represent its reanalysis from a phrasal adverb to a head (Lucas & Willis 2012: 470–471).[5]

(9) 3F5: Alice did it.
3F2: No she **never**. (Glasgow)

Type 3 *never* has been described as emphatic or at least potentially emphatic (Beal 1993: 198; Hickey 2004: 524; Beal & Corrigan 2005: 145; Lucas & Willis 2012: 460; Buchstaller & Corrigan 2015: 80). What individual authors mean by 'emphatic' is not always clear, but emphasis can generally be defined as 'the exceptional force, intensity or otherwise unusual form of expression . . . which serves to indicate or attract attention to special meaning, importance, or prominence' (Lauerbach 2011: 135). Emphatic negation in particular involves denial of a proposition and 'that non-*p* is the most striking thing among the salient alternatives' (Eckardt 2006: 163). It has indeed been noted that Type 3 *never* can be used to explicitly deny propositions (e.g. *He never!* – Cheshire 1982: 68; *No I never!* – Coupland 1988: 35) or assumptions (Lucas & Willis 2012: 460). With respect to Scottish English, however, Miller (1993: 115) describes *never* as 'regularly not emphatic, unlike the standard English example *You will never catch the train tonight* (= It is utterly impossible that you will catch the train tonight.)'. While this could indicate that Type 3 *never* is no more emphatic than *didn't* in Scottish English (see also Miller 2008: 303), it might instead simply reflect the observation that Type 1 *never* quantifies over time whereas Type 3 *never* does not. The pragmatic force of *never* across dialects therefore warrants further investigation, which this study pursues through comparison of a Scottish

[5] Lucas & Willis (2012: 471) appeal to Potsdam's (1997: 538) argument that *not* is a head and behaves similarly with elided VPs.

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variety of English (Glasgow) with two Northern English varieties (Tyneside and Salford).

2.4 *Other uses of* never

Two more marginal uses of *never* are Type 4 (categorical denial) and Type 5 (idiomatic uses), as Lucas & Willis (2012) outline. Type 4 *never* is not quantificational over time, but appears to quantify 'over possible perspectives on a state of affairs', often expressing surprise (Lucas & Willis 2012: 471). As (10) shows, speakers use it to categorically deny a proposition (Lucas & Willis 2012: 461). Type 4 *never* can be used with various tenses and predicate types, and is found in many varieties of English including Standard English (Lucas & Willis 2012: 471).

(10) (a) IC: my dad chased him and I was scared
JK: Oh **never**? (Tyneside)
(b) That's **never** a penalty!
(Lucas & Willis 2012: 471)[6]

Type 5 uses of *never* comprise idiomatic fixed expressions in which *never* is non-quantificational, including *never know* (11a), *never fear* and *never mind* (11b) (Lucas & Willis 2012: 472).

(11) (a) I **never** even actually knew that was true (Glasgow; 00-G2-m01)
(b) cannae even read English, **never** mind hieroglyphics
(Tyneside; BB/929)

Having described the different types of *never*, the next section outlines their origin and diachronic development, as relevant to the research question of how the present-day variation might show persistence of the syntactic–semantic properties and distributional behaviour of *never*'s earlier uses as it has grammaticalised.

3. THE ORIGINS AND HISTORICAL DEVELOPMENT OF *NEVER*

As already noted, *never* first appeared in English with its Type 1 meaning before developing other functions – a trajectory that is consistent with cross-linguistic trends whereby negative temporal adverbs often grammaticalise to become non-quantificational negators (see Lucas & Willis 2012: 473, *inter alia*). Type 1 appears as early as Old English, as shown in (12). Although Cheshire (1998) suggests that Type 3 *never* was also found in Old English, Lucas & Willis (2012) show that this is not the case, as the examples she cites are actually Type 5 uses (e.g. *never knew*) similar to (13):

[6] This example was credited to a webpage but the webpage is no longer active. Nevertheless, there are many other instances online (e.g. https://www.thesun.co.uk/archives/football/1105828/england-boss-roy-hodgson-i-may-be-a-dinosaur-but-thats-never-a-penalty/).

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(12) swa þæt hí **næfre** ne mihton ne noldon syððan
so that they never not might nor not-wanted since
fram his willan gebugan
from his will bend
'so that they never were able or wanted after that to revolt from his will'
(Ælfric's *Catholic Homilies* I, 1 12.7; Traugott 1992: 194)

(13) Ne ic **næfre** git nyste þæt ænig oþer byrig us
Nor I never yet NEG.knew that any other town us
wære gehende
were.SBJV near
'I never knew before that any other town was near to us.'
(Ælfric's *Lives of Saints* 23, 542, De septem dormientibus; Ingham 2013: 144)

Type 4 was the next to appear, most likely as a development of Type 1 *never* given that it is not restricted to certain types of predicate and it 'does seem to retain an element of quantification – over perspectives on a situation – and it is not clear how this could have arisen out of a use of *never* as a straightforward negator' (Lucas & Willis 2012: 479). Type 4 *never* first appeared in Early Modern English, as in (14), but was not used more widely until the 19th century (Lucas & Willis 2012: 479). Type 2 *never*, as in (15), was also first used in Early Modern English.

(14) Gogs woundes Tyb, my gammer has **neuer** lost her Neele?
(William Stevenson, *Gammer Gurton's Needle*, *Helsinki Corpus*, ceplay1b, 1552–63; Lucas & Willis 2012: 479)

(15) I wish you may rit to Dr. Hud about your trunke you left with him, for it **never** cam to Mester Busbey.
(*Letters of Isaac Basire*, *CEECS*, 1661; Lucas & Willis 2012: 476)

Lucas & Willis (2012: 474–475) find that Type 1, Type 2 and Type 5 uses of *never* all appear in the Early Modern component of the *Helsinki Corpus* (1500–1710) and *Corpus of Early English Correspondence Sampler* (1418–1680), alongside one instance of Type 4 *never*, whereas Type 3 does not appear at all. Their data indicates that Type 3 *never* was not used until the mid-19th century and increased in frequency in the subsequent century, with examples such as (16) (Lucas & Willis 2012: 476).

(16) 'Davy,' said Marilla ominously, 'did you throw that conch down *on purpose*?'
'No, I **never** did,' whimpered Davy.
(1909 L. M. Montgomery *Anne of Avonlea* xvii, OED, s. v. *never*)

This diachronic development of *never* from Type 1 negator (the oldest type) to Type 3 negator (the newest) shows a reduction in its 'expressive force' over time

as it developed non-quantificational uses (Cheshire 1997: 70: 1998: 31), which is consistent with Jespersen's Cycle (Jespersen 1917). The innovation of Type 3 *never* likely arose when speakers acquired non-quantificational *never* but without the specific (Type 2) constraints on its use (Lucas & Willis 2012: 478). The present investigation will examine whether these older meanings and constraints persist in shaping its newer uses in the form of non-categorical constraints.

4. Corpora and sample

The quantitative investigation of the variation between *never* and *didn't* uses three corpora of English, representing varieties spoken in Glasgow (Scotland), Tyneside (North East England) and Salford (Greater Manchester) respectively, shown in Figure 1.

Figure 1
(Colour online) Map of localities.

The three corpora are the Glasgow *Sounds of the City* corpus (Stuart-Smith & Timmins 2011–2014), the *Diachronic Electronic Corpus of Tyneside English* (DECTE, Corrigan et al. 2010–2012) and the *Research on Salford English* corpus (RoSE, Pichler 2011–2012), which the author has used previously for the investigation of negation phenomena in British English (Childs 2017a, b for cross-dialectal comparisons; Childs 2019 on Tyneside). All three corpora contain recordings of pairs of participants, who are native speakers of their local variety of English, in casual conversation (with or without an interviewer). The samples of speakers chosen from these corpora were intended to be as comparable as possible (see D'Arcy 2011): all were interviewed in same-sex pairs, were working-class (as indicated in the metadata), and were chosen to form 'younger' vs. 'older' groups for apparent-time analysis (Bailey et al. 1991), as shown in Table 1.

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Corpus	Recording set-up	Demographic	Recording years	Age (years)	Social class
Glasgow Sounds of the City	Same-sex pairs, without an interviewer	Born, raised and living in the Maryhill area (Stuart-Smith, Timmins & Tweedie 2007: 230)	1997, 2003	13–15 40–60	Working class
Tyneside DECTE	Same-sex pairs, with an interviewer	Born, raised and living in Newcastle upon Tyne, Gateshead or North Tyneside	2007–2011	18–25 43–78	Working class
Salford[a] RoSE	Same-sex pairs, sometimes with an interviewer	Born, raised and living in the metropolitan area of Salford, Greater Manchester	2011–2012	17–27 38–63	Working class

[a]One speaker was born in the city of Manchester rather than Salford.

Table 1
Overview of sample demographic.

As the speakers in *Sounds of the City* were listed as aged 13–15 and 40–60 (specific ages were not provided), these age groups formed the basis for selecting speakers from the other two corpora. Because of the unavailability of speakers aged 13–15 in the other two corpora and the lack of 40–60 year-olds in DECTE, the age ranges had to be expanded slightly. Nevertheless, there is a clear distinction between the 'younger' and 'older' categories in each dataset, as Table 2 shows, and the sample consistently exceeds the '5 speakers per cell' recommendation (Meyerhoff, Schleef & MacKenzie 2015: 22).

Locality	Age (years)	Sex		Total
		M	F	
Glasgow	Younger 13–14	10	10	20
	Older 40–60	10	10	20
	Total			40
Tyneside	Younger 18–25 (Average 20.7)	12	9	21
	Older 43–78 (Average 58.8)	6	7	13
	Total			34
Salford	Younger 17–27 (Average 21.7)	6	6	12
	Older 38–63 (Average 50.8)	9	12	21
	Total			33

Table 2
Final sample.

5. THE VARIABLE CONTEXT AND DATA EXTRACTION

As noted earlier, the variable of investigation is non-quantificational uses of *never* – Type 2 and Type 3 – in variation with *didn't*. Although Lucas & Willis (2012: 470) note the potential for *never* to be used in place of verbs other than *didn't* in Type 3 contexts (including tenses besides the preterite), possible examples they find are ambiguous between Type 1 and Type 3 uses (see Section 2.3, example (8)). Indeed, the consensus is that non-quantificational *never* and *didn't* are equivalent negators (Cheshire 1982: 67–68; Edwards 1993: 227; Lucas &

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Willis 2012; Hughes et al. 2013: 29). This unites the Type 2 and Type 3 uses of *never* in meaning and differentiates them from all others (see Section 2).

The present analysis concerns a single variable akin to Cheshire (1982), but my approach differs in that I do not focus only on the Type 3 use but distinguish the two linguistic contexts in which the variants alternate: (i) Type 2 contexts, i.e. achievement predicates in the preterite with a 'window of opportunity' where an event could have occurred but did not (in which *never* is a standard variant); and (ii) Type 3 contexts, i.e. predicates in the preterite where there is no 'window of opportunity' but *never* nonetheless has a non-quantificational meaning (in which *never* is a non-standard variant). Separating these is essential to establish the linguistic constraints on *never* and how it has grammaticalised from Type 1 to Type 2 to Type 3 contexts. Conflating these would mask not only the differences in their linguistic licensing but also the fact that Type 2 is standard whereas Type 3 is not.

Tokens of the variable were extracted using *AntConc* (Anthony 2011) by searching for *never* and *didn't*, plus equivalents of the latter, e.g. *did not* and (for Glasgow) *didnae*.[7] The extracted tokens were scrutinised to isolate those within the definition of the variable, i.e. semantically-equivalent tokens of non-quantificational *never* and *didn't* in Type 2 or Type 3 contexts. Type 4 *never* (which appeared only once) and Type 5 tokens, including their equivalents with *didn't* or where verbs had been elided (e.g. *Did you know that? I didn't*), were excluded.

From the remaining tokens, it was necessary to establish whether they were Type 1 (to be excluded), Type 2 or Type 3. Tokens of non-quantificational *never* and its variant *didn't* with an elided verb were necessarily Type 3. For the rest, I devised a decision tree comprising a series of questions to ask with respect to each token, shown in Figure 2. The questions were chosen for their ability to distinguish the different types of *never*, based on the properties explained by Lucas & Willis (2012), discussed earlier. Coding the tokens of *didn't* involved constructing the alternative with *never* (e.g. *he didn't go* vs. *he never went*) and applying the decision tree in the same way.[8] This ensured that each token was subjected to the same coding procedure, minimising the subjectivity of the decision-making process (see also Wagner et al. 2015, who took a similar approach in coding general extenders).

The following sections focus on each of the four questions in Figure 2 to explain how they allow the different uses of *never/didn't* to be distinguished. Explaining the inclusion and exclusion of tokens in the variable and its contexts is essential to any quantitative variationist analysis (see Tagliamonte 2006: 86–88), but is even more important given that, to my knowledge, no previous study has quantified variation between *never* and *didn't* in separate Type 2 and Type 3 contexts.

[7] Any references to *didn't* in this paper therefore also include tokens of *did not* and *didnae*.

[8] Hence, the example sentences feature either *never* or *didn't*.

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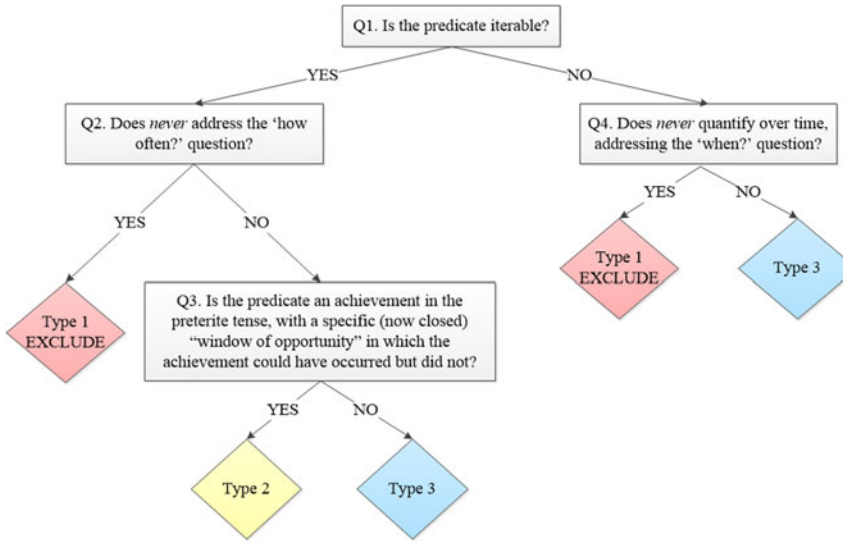

Figure 2
(Colour online) Decision tree.

The high level of detail in the remainder of this section serves to make these procedures transparent.

5.1 *Q1: Is the predicate iterable?*

Non-iterable predicates do not allow the addition of phrases that explicitly restrict the temporal domain over which *never* applies (Lucas & Willis 2012: 464) – for example, (17a). The symbol # in (17b) indicates the impossibility of a Type 1 iterable reading in this context – instead, a Type 3 reading ensues.

(17) (a) I **never** left the trade (Tyneside; GB/127)
(b) #I never left the trade last year

Iterable predicates, on the other hand, allow explicit restriction on the temporal domain that *never* operates over (Lucas & Willis 2012: 465), as in (18).

(18) (a) They **never** recognised shell-shock *in the war years* (Tyneside; GB/127)
(b) I think he came in and left at break time, cause he **never** came into reg[9] (that day) (Glasgow; 3F2)

[9] 'Reg' is short for 'registration period'.

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5.2 *Q2: Does* never *address the 'how often?' question?*

Answering YES to Q1 entails that the predicate is iterable and allows temporal restriction on the domain of *never*, as is the case for the sentences in (18). Q2 asks whether those sentences address the 'how often?' question, i.e. *how often was p true*?. Example (18a) addresses this question, specifically *how often did they recognise shell-shock in the war years*? Following the decision tree in Figure 2, example (18a) must be an example of Type 1 *never* because there were multiple separate opportunities for shell-shock to be recognised. Example (18b), on the other hand, does not address the 'how often?' question: we do not expect the referent to come into a specific registration period at school multiple times. Example (18b) therefore must be tested further with Q3.

5.3 *Q3: Is the predicate an achievement in the preterite, with a specific (now closed) 'window of opportunity' in which the achievement could have occurred but did not?*

Type 2 contexts obligatorily feature an achievement predicate in the preterite that depicts a closed 'window of opportunity' in which an event could have occurred but did not (Lucas & Willis 2012: 466). If a token satisfies these conditions, i.e. YES is the answer to Q3, it is a Type 2 token. If not, i.e. NO is the answer to Q3, it is a Type 3 token.

To answer Q3, the tokens were coded for the lexical aspect of their predicate – that is, 'the inherent temporal structure of a situation' (Croft 2012: 31) – according to Vendler's (1957) classic four-way distinction between stative, activity, accomplishment and achievement predicates. Although at this point we are primarily concerned with whether the predicate is an achievement or not, all four categories are defined here, as comparing them gives a clearer understanding of the properties of achievements. Lexical aspect is also a factor in the quantitative analysis (see Section 7 below).[10]

5.3.1 *Stative, activity and accomplishment vs. achievement*

Stative predicates denote a constant state over time (Vendler 1957: 147; Croft 2012: 34) and cannot be used to answer *what happened*? (Miller 2002: 144). They do not take a progressive form in Standard English, e.g. **I'm having a car* (Comrie 1976: 35), though there are exceptions, such as stative mental verbs (Römer 2005:

[10] The sentences provided henceforth as examples of stative, activity or accomplishment predicates are necessarily Type 3, because these allowed explicit restriction on the temporal domain (Q1 YES), do not address the 'how often?' question (Q2 NO) and are not achievements (Q3 NO). The examples of achievements are either Type 2 or Type 3 as there are further restrictions on Type 2 uses that the remainder of the section addresses.

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116–117).[11] Stative predicates include those with the verbs *need*, *like*, *live* and *understand*, as well as those in (19).

(19) (a) every piece of er luggage that (.) **didn't** fit in the passenger compartment (Salford; Sam)
(b) Actually I **never** had that coat when I was eleven (Tyneside; RM/512)

Activities, on the other hand, are dynamic events that proceed in the same way over an unbounded period of time (Vendler 1957: 146; Croft 2012: 34). They can occur in the progressive, and in the preterite they can be used with adverbials such as *for hours* (Miller 2002: 144–145). Verbs that denote activities include *walk*, *talk*, *swim*, *sing* and those in (20).

(20) (a) They **didn't** trek me round (Tyneside; MP/158)
(b) I **didn't** even cry or nowt (Tyneside; SM/84)

Accomplishments are also dynamic events, but are bounded and occupy a defined period of time (Vendler 1957: 149; Miller 2002: 146). They 'lead to a 'natural' endpoint such as arriving at the other side of the street or the end of the book' (Croft 2012: 34–35). These predicates can occur in the progressive and consist of 'an activity phase and then a closing phase' (Miller 2002: 145), such as watching a programme (21a) or building something (21b).

(21) (a) I **never** watched that last night (Glasgow; 00-G2-m04)
(b) No you **didn't** build it! (Tyneside; SG/121)

Achievement predicates are similar to accomplishments in the sense that they too are dynamic events that occur within a bounded time period, but for achievements this period is an 'instant' (Vendler 1957: 149; Miller 2002: 145–146; Croft 2012: 34). Achievements therefore have 'no time elapsing between the beginning and the end of the event; the beginning and the end occur at the same time' (MacDonald 2008: 78). Examples of verbs which typically form achievement predicates are *ask*, *take*, *go*, *hit* and those in (22).

(22) (a) I'll tell her you **never** got it [a text], basically (Glasgow; 00-G1-m03)
(b) I **didn't** flinch (Tyneside; BB/530)

Table 3 below summarises the characteristics of these four predicate types.

Achievement tokens are now examined further because only the achievements which could have taken place in a specific 'window of opportunity' can be Type 2.

[11] Some stative progressive constructions which cannot occur in Standard British English can occur in other varieties of English (Kortmann & Szmrecsanyi 2004).

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Lexical aspect (predicate type)	Is it an event?	Does it persist over time?	Does it have an inherent temporal boundary?
Stative	NO	YES	NO
Activity	YES	YES	NO
Accomplishment	YES	YES	YES
Achievement	YES	NO	YES

Table 3
Summary of lexical aspect categories (table adapted from Miller 2002: 146).

5.3.2 *Achievements that could have taken place in a (now closed) specific 'window of opportunity'*

Lucas & Willis (2012: 468) state that achievements do not permit Type 2 *never* 'if the predicate refers to some chance event', which they exemplify with (23). The instances of *never* in (23a) and (23b) are Type 1 because they allow temporal restriction (YES to Q1) and address the 'how often?' question (YES to Q2), i.e. she did not on any occasion forget to get the hen-food. As their example with *yesterday* in (23c) shows, a Type 2 reading is impossible.

(23) (a) She **never** forgot to get the hen-food (*British National Corpus*, ABX 2961)
(b) She never forgot to get the hen-food last year.
(c) #She never forgot to get the hen-food yesterday.

It is not clear, however, what is meant by 'chance event'. Achievements with verbs such as *hear* (24) are likely candidates for chance events because a subject does not intend to hear something – just as with *forget* in (23). *Hear* is therefore not expected to licence Type 2 *never*, but as (24) shows, this interpretation is available. I therefore suggest that Lucas & Willis' (2012) condition that Type 2 achievements must be 'non-chance' events is not necessary and the reason why *to forget to* prohibited Type 2 *never* is because it is a negative-implicative predicate.[12]

(24) We **never** heard it [a taxi] pulling in so we're all sitting there
(Glasgow; NKYF3)

Another restriction on Type 2 tokens is that the achievement must relate to 'the completion of a specific task, not merely to some process coming to an end and resulting in one of several possible outcomes', as shown with Lucas & Willis' (2012: 468) example *won as much as half of the popular vote* in (25). Examples

[12] *Forgot to* negates its complement, making it false. When it is marked as negative, e.g. *never forgot to* or *didn't forget to*, the complement is true. This behaviour distinguishes *forget to* and other negative-implicative predicates (e.g. *fail to*) from 'positive-implicative predicates', where affirmative verbs have true complements (e.g. *he started to play*) and negative marking on the verb results in a false complement (e.g. *he didn't start to play*) (see Schulz 2003: 33).

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of this kind in my data similarly do not allow a Type 2 reading but are interpreted as Type 3, as (26) shows when reconstructed with *never* (i.e. *it never went down very well*).

(25) (a) (While they existed,) the party **never** won as much as half of the popular vote.
(b) . . . over the 1950s the Tories never won as much as half of the popular vote.
(*British National Corpus*, FB5 790)
(c) #In yesterday's election the Tories never won as much as half of the popular vote.

(26) me and our Vanessa won everything and it **didn't** gan (*go*) down very well with the locals (Tyneside; GB/127)

The final stipulation to characterise a token as 'Type 2' is that there must have been a specific 'window of opportunity' where an achievement could have occurred but did not, which was closed at the time of speaking (Lucas & Willis 2012: 467). For example, the tokens in (27) are Type 3 rather than Type 2 because although they depict achievements in the preterite, they do not refer to a specific closed 'window of opportunity'.

(27) (a) my mum **didn't** finish til 4 (Salford; Rebecca)
Achievement did occur – Rebecca's mum did finish, just not until 4pm
(b) I **never** said that (Tyneside; SM/84)
Achievement did not occur, but there was no specific 'window of opportunity' - SM/84 explicitly denies a claim

We have now reached the end of the trail of questions that follows from a YES response to Q1 in Figure 2. A NO response to Q1 necessitates asking Q4, as follows.

5.4 *Q4: Does* never *quantify over time, addressing the 'when?' question?*

Q4 is relevant to those tokens that do not permit explicit restriction of the temporal domain over which *never* applies (NO to Q1). I now ask whether these quantify over time and address the question 'when was *p* true?' (Lucas & Willis 2012: 463), as shown in (28) for YES and (29) for NO.

(28) *YES* – never *quantifies over time, addressing the 'when?' question = Type 1*
(a) yous **never** finished yours did you? (Tyneside; JS/221)
(b) And he **never** told Lucy, to this day (Tyneside; MD/52)

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(29) *NO* – never *does not quantify over time (e.g. it refers to a specific point in time) and does not address the 'when?' question = Type 3*

(a) the saying 'Mackem' (.) actually **didn't** come from football (Tyneside; SG/121)

(b) I was telling Mary about it today but she **didnae** think it was funny (Glasgow; 3F2)

These questions from the decision tree in Figure 2 have allowed the majority of tokens to be categorised into Type 2 and Type 3 groups, with Type 1 excluded. The following section describes the handling of ambiguous tokens.

5.5 *Ambiguous tokens*

Some tokens are ambiguous as to whether they refer to a single point in time (Type 3) or multiple occasions (Type 1). In relation to Q1, although there is a strong association between stative predicates and non-iterability (Lucas & Willis 2012: 464), some statives can have an iterable reading, e.g. where living with someone (30) may have been true on multiple separate occasions over a period of time.

(30) (a) we **never** lived with my Dad (Tyneside; PS/243)

(b) #we never lived with my Dad last year

Similarly, some iterable predicates may or may not address the question 'how often was *p* true?'. For example, in (31) below, Abbey may be referring to a single Christmas (Type 3) or several (Type 1).

(31) Sarah: See, if we had our own place, to save arguments, I'd have Christmas dinner at my house.

Abbey: Yeah. We **didn't** even do that though when we had the flat. (Salford)

Such ambiguities were often resolved by considering the discourse context and asking whether it was more likely that the sentence addresses *how often was* p *true*? (Q2) or *when was* p *true?* (Q4). Where this could not be satisfactorily resolved, the token was excluded from the sample.

5.6 *Summary of coding procedure*

Table 4 includes five tokens of *never/didn't* that illustrate all possible outcomes of Q1–4, to show the processes involved in deciding whether tokens should be excluded (Type 1) or belong to the Type 2 or Type 3 contexts. The final number of tokens for quantitative analysis is 97 for Type 2 (Glasgow = 36, Tyneside = 34, Salford = 27) and 235 for Type 3 (Glasgow = 57, Tyneside = 117, Salford = 61). Although the dataset is of a relatively modest size, this is not atypical of grammatical variables, and is not surprising when we consider the low frequency of negative clauses compared to affirmatives (Tottie 1991) and the fact that this study deals with a specific subset of these.

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	I **didn't** do any dating at school (Tyneside; IC)	it **didn't** turn up (Salford; Kathleen)	I **never** watched that last night (Glasgow; 00-G2-m04)	I **never** left the trade (Tyneside; GB/127)	they **didnae** have any shoes on (Glasgow; NKYF4)
Q1. Is the predicate iterable?	YES (Go to Q2)	YES (Go to Q2)	YES (Go to Q2)	NO (Go to Q4)	NO (Go to Q4)
Q2. Does *never* address the 'how often?' question?	YES **(= Type 1)**	NO (Go to Q3)	NO (Go to Q3)	—	—
Q3. Is the predicate an achievement in the preterite, with a specific (now closed) 'window of opportunity' in which the achievement could have occurred once but did not occur?	—	YES **(= Type 2)**	NO **(= Type 3)**	—	—
Q4. Does *never* quantify over time, addressing the 'when?' question?	—	—	—	YES **(= Type 1)**	NO **(= Type 3)**

Table 4
Demonstration of coding procedure with example tokens.

6. Hypotheses and coding independent variables

As described in this section, the tokens were coded for linguistic factors which were hypothesised to affect the choice of *never* vs. *didn't* in Type 2 or Type 3 contexts, to examine how older uses of *never* shape its newer uses as it grammaticalises.

6.1 *Lexical aspect*

The tokens were coded for the lexical aspect of the predicate as detailed in Section 5.3: stative, activity, accomplishment, achievement. Type 2 tokens are

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necessarily achievements, whereas Type 3 tokens can have any predicate type.[13] Given the temporal development of Type 2 into Type 3 *never*, it is hypothesised that in Type 3 contexts, *never* (as opposed to *didn't*) will be used at higher frequencies with achievements than with other predicate types, demonstrating persistence of the aspectual constraints.

6.2 *Discourse function*

As noted in Section 2.3, non-quantificational *never*, especially in Type 3 contexts, is often said to have an 'emphatic' function – either variably or in general (Beal 1993: 198; Hickey 2004: 524; Beal & Corrigan 2005: 145; Lucas & Willis 2012: 460; Buchstaller & Corrigan 2015: 80). This emphatic quality of *never* has been characterised as overstatement (Cheshire 1997: 75), negating an assumption evoked by prior discourse (Lucas & Willis 2012: 460), or negating an explicit assertion (Coupland 1988: 35). The latter two, here labelled 'counter-expectations' and 'contradictions' respectively, can be characterised as expressions of 'disclaim', whereby 'some prior utterance of some alternative position is invoked so as to be directly rejected, replaced or held to be unsustainable' (Martin & White 2005: 118).

The claims that *never* is emphatic are based on qualitative observations of speech and/or intuitions and therefore empirical evidence in support of these is lacking. Furthermore, no previous work has established whether this emphatic quality applies equally to Type 2 and Type 3 *never*. Testing these claims quantitatively will provide insight into whether *never* has developed an emphatic quality, as is common for negative adverbs cross-linguistically (Willis, Lucas & Breitbarth 2013a: 14). The hypothesis is that when a speaker explicitly contradicts a previous speaker's proposition ('contradictions') or expresses a negative proposition that was expected to be true ('counter-expectations'), *never* will be used more frequently than in contexts where there was no prior expectation as to the truth/falsity of the proposition or the expectation was met ('no-counter-expectations'). This follows from contradictions and counter-expectations being more pragmatically-marked than no-counter-expectation contexts, since the speaker indicates a contrast between what they say and what was previously said or assumed.

Table 5 summarises the three coded functions and their definitions, which are explained further in the remainder of this section. By containing the word *never* as the sole negator, the tokens express a negative proposition (p), but how this relates to preceding discourse and/or speaker expectations differs depending on the context. A small number of ambiguous utterances were excluded from analyses of this factor (N = 3).

[13] Two tokens were ambiguous in this regard and are henceforth excluded from analyses concerning lexical aspect.

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Function	Speaker's proposition	Context
Contradiction	*p* is false	Explicit contradiction of another speaker's previous overt assertion that *p* was true
Counter-expectation	*p* is false	Expectation of speaker/hearer/subject/society was that *p* would be true
No counter-expectation	*p* is false	Expectation of speaker/hearer/subject/society was that *p* was false or there were no prior expectations about the truth/falsity of *p*

Table 5
Coding schema for discourse function.

Contradictions are similar to what Wallage (2012: 5) terms 'denials of an antecedent proposition', where 'the negative proposition denies an earlier proposition that was explicitly stated in the discourse', but they must additionally result in 'exclusion', i.e. one proposition must be true and the other false (see Frawley 1992: 28), as shown in (32).

(32) (a) 00-G1-m02: (laughs) you just done it
00-G1-m01: No I **never** (Glasgow)
(b) PM/85: went into shock
SM/84: and passed out
PM/85: started panicking and all that. I **didn't** pass out, just started panicking (Tyneside)

Counter-expectations feature a proposition that was expected to be true but was false. The prior expectation can be held by a speaker, hearer, or third-party referenced as the subject, or is reasonably assumed to be held by society in general. These expectations can arise due to prior discourse, speaker knowledge, or general world knowledge (see Ocampo 1995: 438). The examples illustrate how the falsity of the proposition can be unexpected for the speaker (33a), hearer (33b), or society more generally (33c).

(33) (a) my cousins were supposed to be meeting us at 4, and they **didn't** turn up til 7 (Salford; Rebecca)
(b) Fieldworker: We were talking about the TV as you said before, so can you still remember any TV programmes you used to watch?
MS/321: Well, not when I was a child, because we **didn't** get it until I was married. (Tyneside)
(c) Well my Mam dropped a pan behind us (*me*) and I **didn't** flinch (Tyneside; BB/530)

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The final category of utterance, 'no counter-expectation', are those where the false proposition was expected to be false or there was no prior expectation about its truth/falsity. For example, in (34a) below, the interviewee confirms the fieldworker's expectation, on the basis of prior discourse, that he and his brother (his co-interviewee) did not get on well when they were younger. In (34b), Moira's assertion *that's why I never went for a tall man* is an unanticipated statement that does not relate to any prior expectation.

(34) (a) Fieldworker: um, right so y- you said you didn't get on well particularly when you were younger er
JS/169: No, we **didn't**. (Tyneside)
(b) Janet: So you don't like getting in the lift on your own?
Moira: No, don't do lifts, or heights.
Janet: Oh
Moira: That's why I **never** went for a tall man (laughs) (Salford)

6.3 *Locality, speaker age and speaker sex*

The tokens were coded for the speakers' locality – Tyneside, Glasgow or Salford. Speaker age comprised two groups of younger and older speakers (see Section 4) for apparent-time analysis (Bailey et al. 1991). The speakers had described themselves as either male or female and thus sex was coded as such to examine whether there was any differentiation in the frequency of *never* between the two groups that might reflect change in progress (Labov 2001).

7. RESULTS OF QUANTITATIVE ANALYSIS

This section presents the results of the quantitative analysis of the alternation between non-quantificational *never* and *didn't* in Glasgow, Tyneside and Salford, in Type 2 and Type 3 variable contexts. This begins with the overall distribution per locality (Section 7.1) followed by consideration of the factors that were hypothesised to affect the choice of variant (Sections 7.2–7.4). Finally, a mixed-effects logistic regression is undertaken to ascertain the relative impact of these factors (Section 7.5).

7.1 *Overall distribution*

The overall frequency of *never* and *didn't* in Type 2 and Type 3 contexts for each locality is given in Figure 3. In the analysis of regional variation in frequency, we must always bear in mind the fact that these corpora were collected by different researchers; nevertheless, non-quantificational *never* is present in all three varieties here, which reflects the fact that it is a supra-local feature of English (Britain 2010; Szmrecsanyi 2013: 70). *Never*'s status as non-standard in Type 3 contexts results in the variant being used to a lesser extent than when it is a standard variant in Type 2 contexts. However, there are still differences in the

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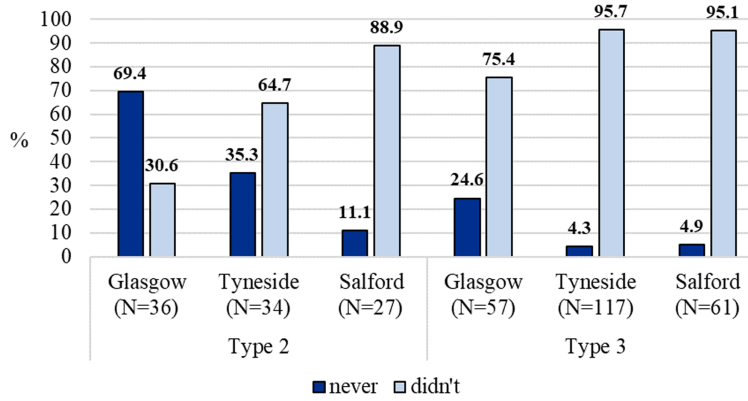

Figure 3
(Colour online) Overall distribution of variants in Type 2 and Type 3 contexts.

frequency of *never* across locales, which are significant for both Type 2 (χ^2 = 22.428, df = 2, $p < .001$) and Type 3 (χ^2 = 20.509, df = 2, $p < .001$). In Type 2 contexts, *never* usage increases from the southernmost community (Salford) to the northernmost (Glasgow) – only in Glasgow is it the majority variant. Glasgow speakers also use *never* as a Type 3 non-standard negator more often (at a rate of 24.6%) than speakers from Tyneside and Salford (who use it < 5% of the time).

Supra-local features are sometimes assumed to pattern socially rather than geographically (Coupland 1988: 35), but here we see regional differences. The suggestion that non-quantificational *never* 'appears to be spreading in Broad Scots' (Miller & Brown 1982: 15), in which it is said to be 'the normal negative with past tense verbs' (Miller 1993: 115), suggests an association between the use of this feature and Scottish varieties of English. This is consistent with its prevalence in Glasgow compared to the two English locales in Figure 3.

7.2 *Lexical aspect*

By definition, Type 2 *never* occurs with achievement predicates. Type 2 *never* is considered the historical predecessor of *never* used in Type 3 contexts, where it can occur with a much wider range of predicates (Lucas & Willis 2012). Therefore, it was hypothesised in Section 6.1 that in Type 3 contexts, *never* would be used more frequently than *didn't* with achievement predicates than other predicate types. The results in Figure 4 confirm this hypothesis. A chi-squared test is inappropriate for this distribution due to some low cell counts, but Fisher's Exact Test can reliably be used instead (Warner 2008: 334) and this yields a significant result ($p < .05$).

The fact that Type 3 *never* is used at the highest relative frequency in achievements demonstrates persistence (Hopper 1991: 22), in that the form's distribution reflects its earlier roots in Type 2 achievement predicates. Accomplishments

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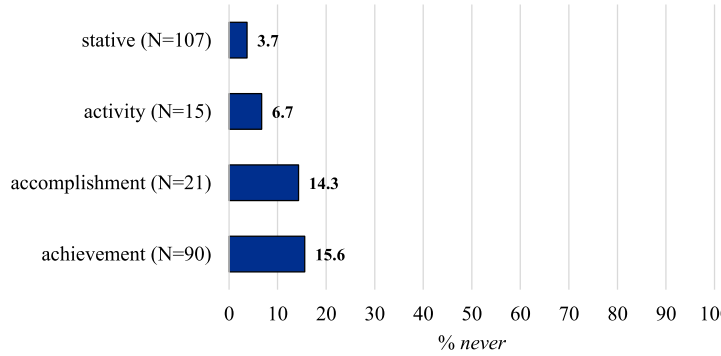

Figure 4
(Colour online) Distribution of Type 3 *never* (vs. *didn't*) according to lexical aspect.

promote the use of *never* over *didn't* only slightly less than achievements, which is no surprise given that these two predicate types have similar semantic properties: both depict dynamic events that take place in a bounded time period (Vendler 1957: 149). In contrast, *never* is least likely to occur in the two temporally-unbounded predicate types: activities and statives. The semantics of Type 3 *never* as a 'punctual' negator that refers to a specific point in time (Smith 2001: 127) therefore results in its greater compatibility with predicates that similarly refer to single instants (achievements) or events with an inherent boundary (accomplishments), rather than unbounded events or states. This can explain Cheshire's (1997) suggestion that speakers find *never* less acceptable when it refers to shorter periods of time. Although her conclusion did not appear to be well supported by the intuition data collected from her participants (e.g. it was difficult to disentangle the potential influence of other factors when considering the test sentences),[14] it nevertheless seems to hold true in the sense that, as my data show, the non-standard use of *never* is more common in predicates with a restricted temporal boundary.

Figure 5 tests the robustness of these trends across the three communities (excluding predicate types that occurred less than 10 times in each locale).[15] As before, *never* is most likely to be chosen over *didn't* in achievements as opposed to any other predicate type. The distribution is significant in Glasgow (Fisher's Exact

[14] For example, *John never went to school today* was judged less acceptable than the likes of *Bother! I never let the cat out* and *John never stole that car*, but the timeframe, presence of an adverb, and the non-target words in the sentence all might have affected participants' judgements – e.g. Cheshire (1997: 72) notes that 'the majority of participants did not like the word *bother*'. Furthermore, there were only nine test sentences and the participants were all university-educated and based in the south of England (who may be especially biased by the norms of Standard English).

[15] The exclusions were: Glasgow – accomplishments (N = 4, 75% *never*) and activities (N = 1, *didn't*); Tyneside – ambiguous (N = 2); Salford – accomplishments (N = 2, both *didn't*) and activities (N = 1, *didn't*).

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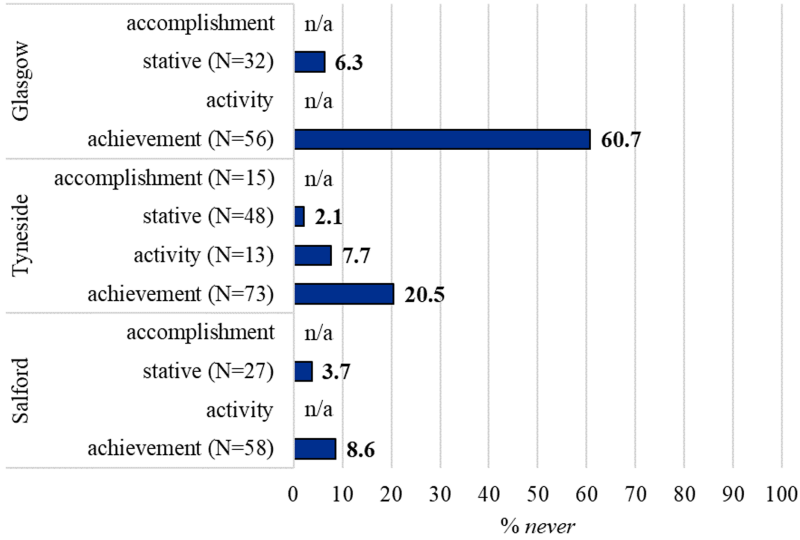

Figure 5
(Colour online) Distribution of Type 3 *never* (vs. *didn t*) according to lexical aspect, per locality.

Test, $p < .001$) and Newcastle ($p < .01$), but not Salford. These frequencies of *never* in Type 3 achievement predicates are strikingly similar to the rates of *never* usage in Type 2 (necessarily achievement) predicates from Figure 3 earlier: 69.4% (Type 2) and 60.7% (Type 3) for Glasgow, 35.3% (Type 2) and 20.5% (Type 3) for Tyneside, 11.1% (Type 2) and 8.6% (Type 3) for Salford. As such, the non-standardness of Type 3 *never* appears to be somewhat neutralised in achievement predicates, since the rate of use does not change significantly between Type 2 and Type 3 achievement contexts.[16] This neutralisation of structure and meaning in discourse is 'the fundamental discursive mechanism of (nonphonological) variation and change' (Sankoff 1988: 153).

An area of cross-dialectal variation that emerges from Figure 5 is that accomplishments do not occur with *never* at all in Tyneside, even though in the dataset overall they promoted the use of the variant almost as much as achievements, though this could be due to low token numbers for this category. The rate at which *never* occurs in statives and achievements (the two categories that can be compared across all three varieties) is proportional to each locality's overall frequency of the variant in Type 3 contexts, i.e. most frequent in Glasgow, followed by Tyneside, then Salford. Thus, the more often speakers use a variant overall, the more likely they are to use it in its less favoured environments.

[16] Indeed, the results of Fisher's Exact Test showed no significant difference in this regard for any of the communities.

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7.3 *Discourse function*

The hypothesis outlined in Section 6.2 was that contradictions (the explicit contradiction of a speaker's previous overt assertion that a proposition, *p*, was true) and counter-expectations (negation where the expectation of a speaker/hearer/subject/society was that *p* would be true) would exhibit higher relative frequencies of *never* than in no-counter-expectation expressions, i.e. where there was no previous expectation of the truth/falsity of the proposition or the expectation was met. Figure 6 shows the frequency of *never* for these discourse functions in Type 2 and Type 3 contexts, with 'Total N' representing the total number of tokens for the variable in each category.

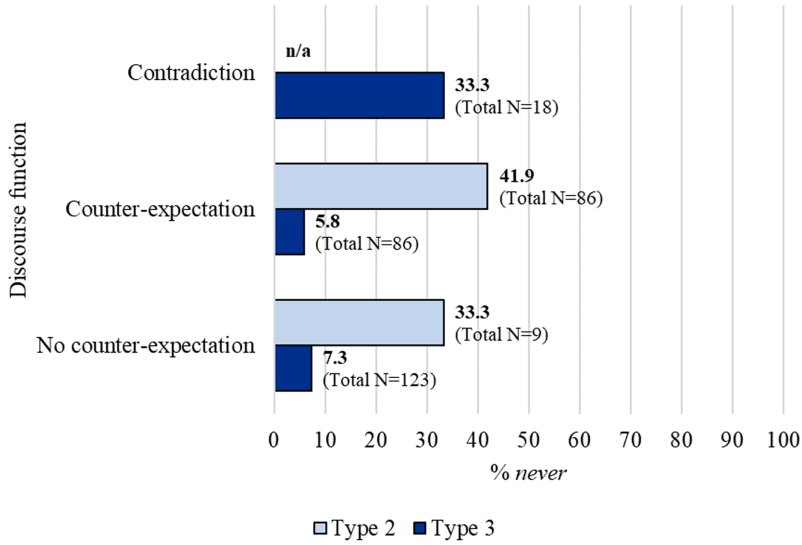

Figure 6
(Colour online) Distribution of *never* (vs. *didn't*) in Type 2 and Type 3 contexts according to discourse function.

Considering Type 2 first, Figure 6 shows that *never* is used at higher relative frequencies in pragmatically-marked contexts where the speaker poses a contrast between what was expected and what actually happened, as it is used more frequently to express counter-expectation (41.9%) than no counter expectation (33.3%). Given this, we might predict a similarly high rate of *never* in Type 2 contradictions, since they too pose a contrast (between a previously-stated proposition and an explicit rejection of that proposition). However, there are no instances of Type 2 contradictions at all, for either variant; furthermore, the distribution for Type 2 *never* is not statistically significant. This finding, along with the low number of Type 2 no-counter-expectation tokens (N = 9) compared to the Type 3 equivalent (N = 123), indicate that Type 2 CONTEXTS as a whole

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are associated with counter-expectation, rather than the use of the *never* variant specifically. Indeed, counter-expectation constitutes 90.5% of all Type 2 tokens. Type 3 contexts, on the other hand, are not associated with one particular function. The *never* variant is, however, most likely to feature in contradictions (33.3%) and only marginally in counter-expectations (5.8%) or where there is no counter-expectation (7.3%), in a statistically significant distribution (Fisher's Exact Test, $p < .01$). Table 6 shows that these effects are consistent across the communities, at least as far as can be seen with datasets of this size: (i) counter-expectation is a core characteristic of the Type 2 context regardless of variant; (ii) Type 3 *never* is used more frequently in contradictions than for other functions (where there is sufficient data for this to be examined – parentheses indicate where token numbers for a cell are between five and 10); and (iii) there is little differentiation between the counter-expectation and no-counter-expectation categories in terms of the frequency of Type 3 *never*.

The Glasgow data in Table 6 shows that *never* is the majority variant for Type 2 counter-expectations and Type 3 contradictions, which are the most emphatic functions. This suggests that Miller's (1993: 115) statement that *never* is not emphatic in Scottish English was not necessarily alluding to the potential pragmatic import of Type 3 *never* but was instead drawing a contrast between *never* in Type 1 contexts (a standard usage that could potentially be considered more emphatic in that it quantifies over time) versus Type 3 contexts. What these findings in Table 6 might suggest is that *never* is actually further towards becoming an unemphatic negator in Glasgow than in the other varieties. If an emphatic negative marker comes to be used by speakers in pragmatic contexts where there is *not* 'a high degree of counter-expectation on the part of the listener',

Locality	Discourse function	Type 2		Type 3	
		% *never*	Total N	% *never*	Total N
Glasgow	Contradiction	—	0	(66.7%)	6
	Counter-expectation	72.7%	33	14.3%	21
	No counter-expectation	—	1	19.2%	26
Tyneside	Contradiction	—	0	20%	10
	Counter-expectation	32.3%	31	0%	37
	No counter-expectation	—	3	4.5%	67
Salford	Contradiction	—	0	—	2
	Counter-expectation	9.1%	22	7.1%	28
	No counter-expectation	(20%)	5	3.3%	30

Table 6

Distribution of *never* (vs. *didn't*) in Type 2 and Type 3 contexts according to discourse function, per locality. The numbers in shaded cells indicate the percentages based on at least 10 tokens. Percentages in parentheses are based on fewer than 10 tokens.

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this can lead to a new, expressive, routine of speaking, causing the frequency of the marker to increase (Detges & Waltereit 2002: 183). This 'overuse' of emphatic negation gradually leads to a loss of its emphatic quality (Detges & Waltereit 2002: 185). The fact that *never* is used at the highest relative frequencies in Glasgow, particularly in contexts where there was no counter-expectation, reflects its place further along the trajectory towards becoming a simple negator, as the next step in Jespersen's Cycle (Jespersen 1917; see also Cheshire 1997, 1998).

The results in this section thus far suggest that in the diachronic process of expanding from Type 2 into Type 3 uses, *never* changed its discourse–pragmatic function. Is this simply an artefact of the properties of achievement predicates vs. other predicate types? To address this question, Table 7 compares how often *never* is used for each of these three functions in Type 2 contexts (necessarily achievements), Type 3 achievements and Type 3 non-achievements.

Discourse function	Type 2 (achievements)		Type 3 achievements		Type 3 non-achievements[a]	
	% never	Total N	*% never*	Total N	*% never*	Total N
Contradiction	0%	0	(57.1%)	7	18.2%	11
Counter-expectation	41.9%	86	8.9%	45	2.5%	40
No counter-expectation	(33.3%)	9	15.2%	33	4.5%	89

[a]There is one fewer token of the Type 3 counter-expectation and Type 3 no-counter-expectation categories than the previous analyses in Section 7.3 because these tokens were ambiguous in terms of lexical aspect.

Table 7
Distribution of *never* (vs. *didn't*) in Type 2 (achievements), Type 3 achievements and Type 3 non-achievements according to discourse function.

Table 7 reveals a parallel between Type 3 achievements vs. non-achievements in terms of *never*'s distribution, in contrast to the Type 2 contexts. For both sets of Type 3 environments, the ranking of functions (from the most to least likely to feature *never*) is the same: contradiction > no counter-expectation > counter-expectation. Type 2 and Type 3 achievements do not pattern alike, so we can conclude that the functional differences are not an epiphenomenon of predicate type, but that *never* has undergone specialisation as it has grammaticalised (see Hopper 1991: 25), namely developing a functional niche in Type 3 contexts not found in Type 2 contexts: contradiction of previous propositions. This functional innovation may have arisen through reanalysis (Brinton & Traugott 2005: 110; Traugott & Trousdale 2010a: 39), whereby *never* was first associated with the counter-expectation meaning so central to Type 2 constructions, but became reinterpreted as expressing contradiction when used non-standardly in Type 3 contexts.

This development likely arose due to similarities between counter-expectations and contradictions. Both mark disclaim (Martin & White 2005: 118) and are reminiscent of the 'emphatic' function often ascribed to non-quantificational

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never (Beal 1993: 198; Hickey 2004: 524; Beal & Corrigan 2005: 145; Lucas & Willis 2012: 460; Buchstaller & Corrigan 2015: 80).[17] The contradiction is a stronger, potentially more face-threatening act since it concerns explicit denials of explicit propositions, as opposed to the denial of an implicit assumption. The innovation of non-standard *never* therefore appears to be a pragmatically-motivated change whereby the form first appears in 'the most salient, most monitored, marked environment, from which it may spread, as it loses its novelty, to less salient, unmarked environments' (Andersen 2001: 34). This trajectory can also explain why *never* rarely expresses counter-expectation in Type 3 contexts even though counter-expectation is characteristic of Type 2 constructions.

A final consideration in this section is whether there is any interaction between the discourse function of *never* and VP-ellipsis, as shown in Table 8, given reports that *never* in elliptical constructions may be used for contradiction (Cheshire 1982: 68; Coupland 1988: 35) or emphasis (Cheshire 1982: 68; Beal 1997: 372). Standard English requires *did not/didn't* in these cases, so the *never* tokens considered here are all non-standard, Type 3 uses (Lucas & Willis 2012: 471).

Discourse function	Elliptical		Non-elliptical		Overall % of construction type that are elliptical
	% never	Total N	*% never*	Total N	
Contradiction	(50%)	4	28.6%	14	22.2%
Counter-expectation	2.9%	14	4.2%	72	16.3%
No counter-expectation	2.3%	29	7.4%	94	23.6%

Table 8
Distribution of Type 3 *never* (vs. *didn't*) according to ellipsis and discourse function.
Percentage in parentheses is based on fewer than 10 tokens.

Never is more frequently chosen over *didn't* in elliptical contradictions than non-elliptical contradictions (50% vs. 28.6%), as Cheshire (1982: 68) also found in Reading English. Table 8 shows little difference in the frequency of *never* between elliptical and non-elliptical constructions for the other two functions. While one must remain cautious given the low number of tokens for elliptical contradictions, these results are consistent with Cheshire's (1982: 68) observation that *never* 'occurs alone [i.e. in elliptical constructions] mainly in arguments, to contradict what has been said before', i.e. contradictions. Speakers are therefore more likely to use the most marked variant, non-standard *never*, in the most marked linguistic context (i.e. clause-final position), for the most marked function

[17] Although Type 4 *never* (outlined in Section 2.4) also expresses categorical denial, Lucas & Willis (2012: 462) argue that it is distinct from Type 3, as the former is the result of a 'separate grammaticalization of the basic quantifier *never*, arising originally in conditional or future contexts through conventionalization of the inference from "at no time in the future" to "under no possible circumstances"'. It also has a much wider linguistic distribution (as it occurs with a range of tenses) and can be used in standard varieties, unlike Type 3 which is restricted to the preterite and is always non-standard (Lucas & Willis 2012).

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– contradiction. The fact that this type of construction was the least accepted of all sentences containing *never* in Cheshire's (1997) survey reflects that it is a particularly marked usage. This tallies with the characterisation of the non-standard use of *never* as the result of a pragmatically-motivated change in which we will expect the form to gradually expand into less marked contexts (Andersen 2001: 34) and eventually become an unemphatic negator (Jespersen 1917; Cheshire 1997, 1998).

7.4 *Speaker sex and age*

Social trends are considered in case these provide further insight into the nature of linguistic changes in the use of *never*. Comparing the distribution of *never* between the sexes proved not to be significant, for either Type 2 or Type 3 uses, in any community.[18] Similarly, the differences in the frequency of *never* (both types) according to age within each community were not significant. Therefore, the results for sex and age do not satisfactorily support the conclusion that non-quantificational *never* is 'spreading' in Scottish varieties (Miller & Brown 1982: 15) and potentially other dialects of English (Beal 1997: 32). However, changes in the use of *never* are certainly observable in diachronic data (Lucas & Willis 2012) and the synchronic data presented in this paper, so it appears that either the change does not have any particular social correlates or else a larger dataset with a wider timeframe could potentially uncover social trends.

7.5 *Regression analysis*

The distributional analysis has shown that the variation between non-quantificational *never* and *didn't* is affected by locality, lexical aspect and discourse function. The analysis proceeds with a mixed-effects logistic regression using the *lme4* package (Bates et al. 2015) in *R* (R Core Team 2014) to ascertain the relative impact of these factors. The Type 2 tokens cannot feature in such a model because they are not sufficiently frequent (N = 97), so the analysis will concern the Type 3 tokens (N = 225).

Some re-categorisation of the data was required because certain groups had little variation and thus could not be included in the model (Guy 1993: 239). Firstly, in relation to locality, Tyneside and Salford had low frequencies (< 5%) of Type 3 *never* (as seen in Section 7.1 above). Groups with such little variation can be excluded from the model (see Guy 1988: 132), but this would prevent the consideration of locality as a factor conditioning the variation, which could be a crucial predictor. For these reasons, the tokens from Tyneside and Salford were combined into a single group, allowing for comparison between Northern English and Glaswegian English – a decision preferable to not considering locality at all. Secondly, the distributional analysis in Section 7 revealed that the

[18] Fisher's Exact Test was used.

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relative frequency of *never* in Type 3 contexts was almost the same for counter-expectation and no-counter-expectation functions (5.8% and 7.3% respectively). As both of these functions are less pragmatically marked than contradictions (recall Section 6.2 above), the model includes a binary distinction between 'non-contradictions' (combining the counter-expectation and no-counter-expectation categories) and 'contradictions'. Thirdly, in relation to lexical aspect, the stative category had a low relative frequency of *never* in Type 3 contexts (3.8%). Excluding statives from the model would reduce the total number of tokens by almost half (N = 106), which is far from desirable. Instead, a binary variable comprising 'non-achievements' (including stative, activity and accomplishment predicates) and 'achievements' is employed, which will allow me to test the hypothesis that *never* in Type 3 contexts is favoured in achievements due to persistence of the aspectual constraints on Type 2 uses.

Ideally, one would not need to collapse groups to form binary variables, but these decisions maintain meaningful distinctions for hypothesis-testing while retaining the largest possible number of tokens overall, as well as per group and per level – only 10 were lost from the original total of 235. Even though more complex models may have the potential to explain more of the variation, a simple, more reliable model is preferable here given the relatively small dataset.

Table 9 shows the results of the mixed-effects logistic regression to investigate the significance of locality, function and lexical aspect in the variation between Type 3 *never* and *didn't*. 'Speaker' is included as a random effect to account for inter-speaker variation. The fixed factors all contribute significantly to the variation, corroborating the earlier distributional analyses.

Locality has the largest estimate value and the results show that although non-quantificational *never* is a feature of many English dialects, its frequency differs significantly between the varieties in Table 9. Speakers in Glasgow are significantly more likely to use *never* than those in Tyneside and Salford in Northern England. The significantly high frequency of Type 3 *never* in Glasgow is in line with previous reports that this feature is characteristic of Scottish varieties of English (Miller & Brown 1982: 15; Miller 1993: 115; 2008: 303).

Function has the next largest estimate value, with *never* favoured for contradictions more than non-contradictions. *Never* is therefore favoured in specific pragmatically-marked contexts, namely contradictions, which express contrast between two explicit, opposing propositions.

The results for the final fixed factor, lexical aspect, show that *never* is favoured in achievement predicates over non-achievement predicates. This finding is consistent with Lucas & Willis' (2012) account of the historical trajectory of *never*, in which its use as a standard variant in Type 2 'window of opportunity' environments (categorically achievement predicates) was followed by its subsequent expansion into Type 3 contexts (of various predicate types), where it is non-standard. *Never*'s restriction to achievement predicates in Type 2 environments therefore persists as a probabilistic constraint on its Type 3 distribution.

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	Type 3 *never*						
Total N			225				
AIC			108.5				
Log likelihood			−49.2				
Deviance			98.5				
	Estimate	Std. error	*z*-value	*p*-value	Sig.	%	N
(Intercept)	−6.6406	2.4742	−2.684	.00728	**		
Locality							
Reference level: Tyneside & Salford						4.7	172
Glasgow	3.2327	1.4460	2.236	.02537	*	22.6	53
Function							
Reference level: Non-contradiction						6.8	207
Contradiction	3.1562	1.4249	2.215	.02676	*	33.3	18
Lexical aspect							
Reference level: Non-achievement						5	140
Achievement	2.2083	0.9577	2.306	.02112	*	15.3	85
Speaker							
Random st. dev.			2.425				

* = $p < .05$; ** = $p < .01$

Table 9
Mixed-effects logistic regression of the combined effect of factors in the use of Type 3 *never* (vs. *didn't*).

8. CONCLUSION

Although *never* originated as a universal quantifier over time (Type 1) in Old English, the form subsequently developed new functions including – in the Early Modern and Late Modern English periods – non-quantificational uses equivalent to *didn't* which are still used in present-day English (Lucas & Willis 2012). This paper focused on the variation between non-quantificational *never* and *didn't* in two separate contexts as described in Lucas & Willis (2012): (i) Type 2 'window of opportunity' contexts, comprising achievement predicates in the preterite where there is a specific temporal window in which an event could have occurred but did not (e.g. *she never got my message*); and (ii) Type 3 contexts, comprising various predicate types in the preterite where there is no 'window of opportunity' but *never* still has non-quantificational meaning (e.g. *I never had that coat*). *Never* in Type 2 contexts is found in Standard English, but the form subsequently developed a Type 3 use where it is non-standard (Lucas & Willis 2012).

The paper presented a quantitative analysis of the variation between *never* and *didn't* in Type 2 and Type 3 contexts across three varieties of English

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spoken in Glasgow, Tyneside and Salford, UK. This was a novel approach in that previous work on *never* has been predominantly qualitative (Cheshire 1985, 1997, 1998; Cheshire et al. 1989; Lucas & Willis 2012) or quantitative but without comparing the Type 2 and Type 3 uses (Cheshire 1982), and these studies have not investigated its use across different dialects of English. Analysing the variation as a single variable (*never* vs. *didn't*) with two variable contexts captures the idea that the speaker has a choice between these two variants to express non-quantificational negation in the preterite, but that their choice is subject to different linguistic constraints in Type 2 and Type 3 contexts (Lucas & Willis 2012), as well as the fact that *never* is standard in the former but non-standard in the latter.

This approach allowed me to test hypotheses that the distribution of *never* as a non-quantificational negator in 'window of opportunity' achievement predicates (Type 2) would impact upon *never*'s distribution in the predicates in which it is non-standard (Type 3), as a form of persistence as it grammaticalises (Hopper 1991). The results showed that non-standard uses of *never* (Type 3) are constrained by lexical aspect, being used most often in achievement predicates – the precise environment in which Type 2 *never* inherently occurs. Type 3 *never* was also more likely to be used with bounded dynamic events (achievements and accomplishments) rather than unbounded events (activities) or statives, reflecting its status as a punctual negator. Furthermore, the frequency of *never* in Type 3 achievements in each locale was remarkably similar to the localities' respective overall rates of *never* in Type 2 (achievement) contexts, suggesting that the non-standardness of *never* becomes less salient in predicates of this type where both standard and non-standard uses of *never* can occur.

The investigation also tested qualitative reports that non-quantificational *never* can be emphatic (Beal 1993: 198; Hickey 2004: 524; Beal & Corrigan 2005: 145; Buchstaller & Corrigan 2015: 80) or contradict propositions, either explicit (Cheshire 1982: 68; Coupland 1988: 35) or implicit (Lucas & Willis 2012: 460). Analysing the distribution of variants according to whether they expressed 'contradiction', 'counter-expectation' or 'no-counter-expectation' revealed key differences in *never*'s discourse–pragmatic function in Type 2 vs. Type 3 contexts. Type 2 predicates tended to express counter-expectation regardless of the variant, but *never* was especially likely to be used in such contexts. In Type 3 constructions, *never* was most frequently used over *didn't* in contradictions (a non-existent function among the Type 2 tokens of either variant) and rarely for other functions. If contradictions had an elided VP, *never* was even more likely to appear, in keeping with Cheshire's (1982: 68) observations that these constructions were most common in interactions where one speaker contradicts another. More linguistically-marked contexts (ellipsis of the VP) and more pragmatically-marked contexts (contradiction of previous speaker's proposition) therefore yield the highest rates of non-standard *never*. Overall, the function of *never* appears to have been reanalysed from denoting mainly counter-expectation in Type 2 contexts to develop a stronger expression of denial – a contradiction – when it came to be used non-standardly in a wider range of contexts (Type 3), as an example of pragmatically-motivated specialisation (see Andersen 2001: 34).

If Type 3 *never* gains traction in contexts where there is no such counter-expectation or contradiction, it may eventually become an unemphatic negative marker as predicted by Jespersen's Cycle (Jespersen 1917; see also Cheshire 1997, 1998; Detges & Waltereit 2002).

Given reports that non-quantificational *never* is a feature of Englishes around the world (Kortmann & Szmrecsanyi 2004; Britain 2010; Hughes et al. 2013: 29), one might not anticipate substantial differences in its frequency across British communities. However, locality was a significant factor in the use of non-quantificational *never*. In the mixed-effects logistic regression of Type 3 *never* vs. *didn't*, Glasgow speakers favoured the use of *never* more than those in Northern England (Tyneside and Salford). Not only does this result support associations between Scotland and higher frequencies of non-quantificational *never* (Miller & Brown 1982: 15; Miller 1993: 115; 2008: 303), but it demonstrates that even the most ubiquitous linguistic features can exhibit localised patterns.

Overall, this research has emphasised how 'later constraints on structure or meaning can only be understood in the light of earlier meanings' (Hopper & Traugott 2003: 96). The grammaticalisation of *never* poses many challenges for quantitative variationist analysis, given that it involves a single form that: (i) has developed new meanings and contexts of use over time, as it has grammaticalised; (ii) varies with another form, *didn't*, only in a subset of these contexts; (iii) is standard in some of these contexts and non-standard in others; and (iv) has maintained all of these uses diachronically such that all of them are used today. This study has demonstrated that integrating syntactic theory and variationist methodology offers a fruitful approach for the analysis of morpho-syntactic variation and change, particularly with respect to understudied and/or complex linguistic phenomena. Careful consideration of the linguistic properties of the various uses of *never* and a systematic coding procedure has therefore enabled us to see how the linguistic distribution of *never* in English dialects in the present day reflects historical persistence of semantic and syntactic constraints, but also a pragmatically-motivated change in which non-standard (Type 3) *never* is initially associated with the most marked contexts but, we predict, will eventually become an unemphatic negative marker.

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