

**‘YOU Ø NA HEAR O’ THAT KIND O’ THINGS’:
NEGATIVE *DO* IN BUCKIE SCOTS¹**

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In this article, I conduct a quantitative analysis of *do* absence in negative declaratives in the present tense in a dialect from the north-east of Scotland, Buckie. Analysis of nearly 800 contexts of use reveals that this variation is entirely conditioned by linguistic internal constraints. The most significant of these is person and number of the subject — 3rd person singular subjects and plural NPs have no *do* absence, while *do* is variable in the remaining pronouns. I argue that a syntactic explanation best accounts for this patterning of use. Where there is no overt *-s* inflection in the present tense (influenced by the “northern subject rule”), *do* is not obligatory in Buckie Scots. Frequency effects, lexical restrictions and processing constraints are called upon to account for the range of frequencies of *do* absence seen in the variable contexts. Lastly, there is no significant change in use of *do* across three generations of speakers, highlighting the community members’ relative immunity to prescriptive norms.

1. Introduction

One of the many changes that has taken place in the English language over the past few centuries is the formation of negatives. In Middle English and Early Modern English, the negative particle appeared in post-verbal position, as in (1).

- (1) a. It perteyneth **not** to hym of the sheep. (c1380: Wyclif Bible, John, Chapter 10, verse 13)

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- b. But looked **not** on the poison of their hearts. (c1594: Shakespeare, Richard III, Act III, Scene i, line 12)

But by the end of the 14th century, negation formed with periphrastic *do* and the negative particle before the verb, as in (2), came into use (see, for example, Denison 1993: 265).

- (2) a. I have grete mervayelle ... that they **do not** attaine an accion ayenst Sir Thomas. (c1450: Fastolf, Paston Letters No 162, line 198)
 b. Every good servant **does not** all commands. (1611: Shakespeare, Cymbeline, Act V, Scene i, line 6)

By the eighteenth century, this new construction had largely, though not entirely, replaced the original one (Ellegård 1953: 162) and, of course, is the construction used in Modern English.

However, language change does not proceed uniformly across all varieties at the same time or in the same way (see, for example, Milroy 1992), particularly in those areas which are relatively uninfluenced by standard norms. A case in point is the variable use of periphrastic *do* in negative declarative sentences in the present tense in a variety from the north-east of Scotland, Buckie Scots. In this dialect, *do* can be present, as in (3), or not, as in (4), resulting in the classic “form-function polyvalence” (Sankoff 1988: 141).

- (3) a. I **dinna** mine fa taen it. (391.34:a)²
 ‘I don’t remember who took it.’
 b. You **dinna** ken fit tae dee wi’ quines. (881.39:t). ‘You don’t know what to do with girls.’
 c. They **dinna** ken they’re gan to wear a kilt. (31.3:i). ‘They don’t know they’re going to wear a kilt.’
 (4) a. I **na** mine fa come in. (972.36:a). ‘I don’t remember who came in.’
 b. You **na** ken a-thin about me!’ (65.27:u). ‘You don’t know everything about me.’
 c. They **na** seem to bide in the Beacons lang. (208.13:3). ‘They don’t seem to stay in the Beacons for a long time.’

To the best of my knowledge, variable use of *do* in this linguistic context in

2) The numbers in brackets refer to the line in the interview transcripts where the example was taken from. The letter identifies the informant.

present-day English is unique to dialects from north-east Scotland.³ This alone makes it a particularly intriguing object for study, but more interesting is to establish the mechanisms which underlie such variability. Is it merely random, with *do* present or absent with no particular pattern? Or is it constrained in any way? If so, are these constraints extra-linguistic, internal to the language system, or both? Can the historical record shed any light on this variability, given that the development of periphrastic *do* spanned many centuries but has now gone to completion in most dialects of English?

This paper seeks to answer these questions through a quantitative analysis of the presence versus absence of periphrastic *do* in negative declaratives in the Buckie dialect. The historical background of negation, with particular reference to Scots, is detailed in Section 2. Section 3 describes the data and method, Section 4 presents the results, and the findings are discussed in Section 5.

2. Historical precursors

2.1. *A brief history of negation*

In Old English, the earliest negative particle is *ne*, in pre-verbal position, as in (5):

(5) ic **ne** secge (Jespersen 1917:9), lit. ‘I not say’

But later, this was frequently strengthened by the addition of *noht* (from *nawiht/nowiht* meaning ‘nothing’) in postverbal position (Jespersen 1917:9). *Noht* became *not* resulting in the typical ME form in (6):

(6) I **ne** seye **not** (Jespersen 1917:9), lit. ‘I not say not’

As a further development, “*ne* was pronounced with so little stress that it was apt to disappear altogether” (Jespersen 1917:9). This process, known as

3) There are attestations of *do* absence in other linguistic contexts. For example, there is “a small amount of evidence” that negative imperatives without *do*, and the negative particle in preverbal position, as in “*Not go!*” are used in the south-west of England (Wakelin 1977: 125). This type of construction is frequently reported for child language, and is also used idiomatically in Scots as in: “Eat her up, man, an’ no haiver” (SND s.v. *no adv*).

the “negative cycle” (*ibid.*: 9), resulted in constructions such as (7):

- (7) Of what nature the wrongs are thou hast done him, I know **not**. (1601: Shakespeare, *Twelfth Night*, Act III, Scene iv, line 228).

By the fifteenth century, *ne* had disappeared and post-verbal *not* only was used (see, for example, Jespersen 1917).

Scots followed the same development as in more southern regions, that is, from pre-verbal to post-verbal negation, although these changes were introduced later — the use of pre-verbal *ne* in Old English “continues in Older Scots, especially in Early Scots” to 1450 (Macafee 1992: 33) as in (8). The alternative form *na*, as in (9), also existed (*ibid.*: 33):

- (8) To suffir exile he said that he **ne** couth. (*Dictionary of the Older Scottish Tongue* (DOST; Craigie *et al.* 1937–) s.v. *ne*)
- (9) a. That thai **na** will ... flei. (DOST s.v. *na* adv. 2)
 b. That we **na** gang forth. (DOST s.v. *na* adv. 2)

A second negative, chiefly *nocht*, also appeared after the verb, as in (10):

- (10) The messall **na** sall **nocht** enter in the toune. (DOST *na* adv. 2)

In line with the changes in negation south of the border, *na/ne* disappeared, leaving only *nocht* in postverbal position, also with the reduced forms *not* and *no* (Macafee 1992: 33) as in (11):

- (11) Quha labouris **nocht** he sall **not** eit (DOST, s.v. *nocht*)

Thus, there appears to have been a three-stage evolution in the history of negation in English before the introduction of periphrastic *do*: 1) use of the pre-verbal negative particle *ne* in OE, and later 2) the appearance of *noht* post-verbally. These two negative particles co-existed for some time, until the gradual disappearance of pre-verbal *ne* which resulted in 3) the use of the postverbal particle only. Scots followed these same changes, although they took place later and different phonological forms were employed.

2.2. *Development of periphrastic do*

The first appearance of *do* in negative declaratives is attested in 1280 (Visser 1969: 1530), and once periphrastic *do* appeared, its frequency increased over time. Ellegård (1953), in a seminal quantitative study of this feature, traces

its frequency of use in different contexts from the fourteen to seventeen hundreds. He notes that *do* in negative declaratives increases greatly from 1650 onwards and states that “the modern state of things was practically achieved around 1700” (1953: 157).

However, around the time of the changeover (from postverbal to preverbal negation) a sort of intermediate pattern became common (Denison 1993: 451) where the negative particle appears before the main verb, but without *do*, as in (12):

- (12) a. I **not** doubt he came alive to land. (1610: Shakespeare, The Tempest, Act I, Scene ii, line 121)
 b. We **not** now fight for how long, how broad. (1611: Jonson, Cataline, Act I, Scene ii, line 147)

While Ellegård (1953: 198) and Jespersen (1917: 13) maintain that this construction is rare, Visser (1969: 1532) concludes that it has “escaped the attention of grammarians” and claims that its usage increased in the 16th and 17th centuries, i.e. during Shakespeare’s time, but after 1700, it declined.

Although Ellegård’s research concentrates only on the English of England, Scots also followed the same grammatical change. Aitken (1979: 88) states that the internal history of Scots “in part ... proceeded on lines common to all varieties of English, including *he cumz nocht* becoming *he’s no comin*, *he cam nocht* becoming *he didna cum*”. With specific reference to periphrastic *do*, Beal (1997: 370) states “this development of *dae* as the operator in Scots is probably ... not so much due to the influence of English as such, but to a parallel development in two closely related languages”.⁴ However, Scots showed a much greater degree of conservatism than its southern counterpart in the introduction of periphrastic *do*, with post-verbal negation continuing well into the nineteenth century (Beal 1997: 371; McClure 1994; Murray 1873: 216; Tulloch 1980: 295). In Murray’s (1873: 216) words, in some verbs, the custom is retained of adding *-na* as in auxiliaries, as *aa cayrna*, *he geadna*.

This later development is confirmed in Meurman-Solin’s (1993) extensive analysis of the Helsinki Corpus of Older Scots (1450–1700), where *do*

4) Macafee (1992: 29) notes, however, that the introduction of *do* in Middle Scots in affirmative declarative contexts in Chaucerian-influenced styles of verse is an indication of the influence of English with this particular feature.

was not introduced until the latter half of the 16th century.⁵ When it was introduced, it normally appeared with the negative enclitic *-na*, as in the examples from present-day Buckie in (3), as opposed to the *not* (later *n't*) form in more southern regions.⁶

Preverbal negation without *do*, as in (12) above, is also recorded in Scots, as the examples in (13) demonstrate:

- (13) a. I **no** mind o' over hearin her saying onythin o' the sort. (1894, *Scottish National Dictionary* (SND; Grant/Murison 1941–1976) s.v. *no*)
 b. I **no** want to see the man that put ma Wullie in prison. (1906, SND s.v. *no*)
 c. I **no** want onything, I said. (1924, SND s.v. *no*)
 d. It's weel for you that **no** kens what it is to be a footba' at your ain fireside. (1835, SND s.v. *no*)

These examples come from a variety of locales within Scotland, including Lothian, Angus, and Berwick, and are attributed in the SND as “absorption of the auxiliary”. This point will be returned to later.

I now turn to the synchronic data on negative *do*.

3. Data and methods

3.1. *The community*

The dialect under study is a variety of English spoken by the inhabitants of a small fishing town on the north-east coast of Scotland — Buckie — shown in Figure 1. The nearest city is Aberdeen, 60 miles to the south-east.

Buckie was settled in the seventeenth century (Chisolm 1961) and grew due to the expansion of the fishing industry. The highly specialized skills of this

5) In addition to this later development of *do*, Scots (and northern English) also had an alternative form of *do* – *div* — as in the following examples. “We *div* look at our tauties on the saubath, *div* we nay?”; “For the plain fac’ is, Mr St Ivy, that I *div* not ken.”; “Diven ye ken that a lass may be meryt ...?”. This form is said to have arisen in analogy with *hiv*, the emphatic form of *hae*. (SND s.v. *dae*).

6) The forms *den no*, *din-not* and *dinnie* are also attested.

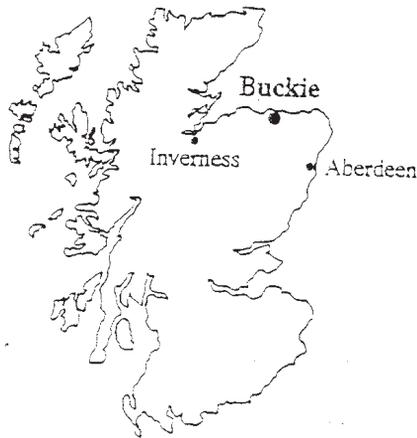


Figure 1: Map showing location of Buckie

industry have effectively maintained a close-knit community, where a tradition of endogamy still exists.

Today, the population of Buckie is approximately 8000. More recently, there has been a drastic decline in the fishing industry, leading to fewer and fewer operational fishing boats in the town. However, this has not led to an exodus from the community which has become characteristic of similar rural areas, as alternative employment is found on the oil rigs in the North Sea. Moreover, the image of a depressed rural area, with the younger members of the community desperate to make their escape to more urban areas, is inappropriate here. The majority of the community members have no desire to leave the area, as strong community roots continue to exist, arising from a sense of pride in their native town (Smith 2000).

Although Buckie is not a linguistic enclave in the strict sense of the term, a community such as this can provide an interesting case for models of language variation and change, as in this north-east corner “the relative isolation and geographic semi-independence from the rest of Scots has assured a strong linguistic identity” (Johnston 1997: 445). In fact, this whole area sets itself off from the rest of Scotland linguistically by being “both well preserved and highly differentiated” (McClure 1979: 29). The remote geographic location of Buckie, coupled with its independence from more

urban centres on economic grounds, allows for the examination of linguistic features relatively unhindered by prescriptive norms. Indeed, many forms which have become obsolete in Standard Scots continue to be used in Buckie — for example, the retention of the velar fricative in lexical items such as *night* and *fight*, and the use of *-en* participles such as *putten* for *put* and *haen* for *had* (Smith 1996; Smith 2000).

3.2. *The informants*

As my aim was to collect a large body of data which was representative of the vernacular norms of the community, no attempt was made to stratify the informants by class or any other standard sociological indicators. I focused, therefore, on relatively insular informants who were chosen specifically on the basis of 1) native speaker status, 2) homogeneous socio-economic characteristics, and 3) dense networks. Thus, the speakers in the sample had been born and raised in the community, were working class, and exhibited networks that were generally confined to the community in question.⁷

3.3. *The data*

The data were collected using standard sociolinguistic methodology. The goal of obtaining a representative sample of vernacular Buckie English was greatly aided by my in-group status, as I am a member of one of the oldest families in the community. The data, which amounts to approximately forty hours of tape-recorded conversations, range from discussions about the fishing industry, to narratives of personal experience, and even local gossip. The corpus has been fully transcribed and consists of approximately 300,000 words. The speaker sample is shown in Table 1.

7) Although the majority of informants are in occupations deemed working class by standard registers such as the Registrar-General's occupational scale, the term *working class* needs to be viewed from within the cultural setting of the community under study. Many of the speakers are highly regarded within the community and are involved in civic duties of varied descriptions. Therefore unequal access to power and advantage (Milroy 1987:29) as an important indicator of class is inappropriate in this context.

Table 1: Speaker sample

| | male | female |
|-------|------|--------|
| 22–31 | 8 | 8 |
| 50–60 | 6 | 6 |
| 80+ | 4 | 5 |

3.4. Negation in present-day Scots and Buckie Scots

The formation of verbal negatives in Scots needs some explanation. The non-cliticised, stressed form is *no* [no] in dialects south of the Tay, and *nae* [ne] is used north of it (McClure 1994: 73).⁸ This is the phonetic form used in Buckie, as in (14).

- (14) They 're **nae** gan in nae cattle-boat. (134.28:h)

The unstressed enclitic is *-na* [nʌ] or *-nae* [ne], again depending on regional distribution. *Nae* was used in the east midlands of Scotland, but has in the last few decades spread to more western areas (Macafee 1983: 47). *Na* is used in the remaining areas, including Buckie, as in (15):

- (15) There **wasna** sik a thing as this forty hoor weeks. (654.9:3)
'There wasn't such a thing as a forty hour week.'

In common with most Scots dialects, negative question forms in Buckie Scots differ from standard English. The negative enclitic cannot appear with the auxiliary in these constructions, as in (16). In this case the negative particle, in non-cliticised form, appears after the verb, as in (17).

- (16) ***Dinna** you ken her?
(17) Do ye **nae** ken her? (568.2:t). 'Don't you know her?'

8) The latter is said to be the result of an assimilation of the verbal negative to the negative quantifier, which is *nae* in all dialects (McClure 1994: 73).

Therefore negative particles in Scots and Buckie Scots differ both phonetically and distributionally from Standard English.⁹

3.5. *Circumscribing the variable context*

The context of periphrastic *do* variability is highly circumscribed — *do* absence only occurs in negative declarative sentences in the simple present tense, as in (18).¹⁰ In cases where *do* is absent, stress falls on the pronoun, and the negative particle is unstressed, i.e. appears as the cliticised form *na*. Past tense negative declaratives are categorically standard, therefore examples like (19b) are not used.

- (18) a. Cos usually I **dinna** like bobbies. (445.28:j)
 b. I **na** like nothing, ken too hot. (275.2:y)
- (19) a. He **did** na say nothing. (150.23:a)
 b. *He **na** said nothing.

Every context of negative declaratives in the present tense where *do* is obligatory in contemporary standard English was extracted from the data, regardless of whether *do* was actually present or not. This amounted to a total of 756 variable contexts.¹¹ Each variant was coded for a series of internal and external features that could have an effect on the presence or absence of *do*.

9) The form *div* from the historical record, as an alternative to periphrastic *do*, continues to be used in some dialects as the stressed form in the present tense (Macafee 1983:50). In the Buckie dialect, it also appears in negative declaratives, although only one token appears in this data set: “My crowd *div na* like barley.” (27.45:q).

10) There is one example of *do* absence in the data in an interrogative construction: “You nae like bairns?” (522.8:q). This may be indicative of the same underlying processes operating on *do* absence in negative declaratives. It may, on the other hand, be simply an intonation question. In addition, this deletion phenomenon also appears to apply to the auxiliary *have*, as in: “I na seen G for ages.” (334.5:k). However, these structures cannot be explored quantitatively, given their rare occurrence in the data.

11) This number may appear relatively low — however, negative contexts are generally rare in corpus-based data. For example, in Tottie’s (1991) study of negation, negative contexts represent only 2.76% of the spoken data (as a count of all words in the database).

3.6. Coding

3.6.1. Person and number of the subject

It is well documented that grammatical features are highly constrained by person and number of the subject (see, for example, Godfrey and Tagliamonte 1999; Smith and Tagliamonte 1998; Tagliamonte and Smith 1999). Moreover, initial observations and my own grammaticality judgements suggested a person and number constraint. Therefore, a distinction was made between 1st singular, as in (20), 2nd singular,¹² as in (21), and 1st plural, as in (22). For 3rd person singular and plural, pronouns, as in (23) and (24), were categorised separately from full NPs, as in (25) and (26).

- (20) a. She's in the huff if **I dinna** let her. (659.13:g). 'She gets in a bad mood if I don't let her.'
 b. God, **I na** ken far my ain face is here. (654.18:a). 'I don't know where my own face is here.'
- (21) a. **Ye dinna** think ye'll be drunk. (349.56:n). 'You don't think you'll be drunk.'
 b. '**Ye na** hear o' him onywy, ken. (54.86:u). 'You don't hear of him anyway, you know.'
- (22) a. **We dinna** really socialise that much. (329.53:k). 'We don't really socialise that much.'
 b. We **na** hae raffles. (32.30:*). 'We don't have raffles.'
- (23) a. **He does na** get word fae the loon. (526.19:c). 'He doesn't hear anything from the boy.'
 b. **It does na** cost nothin' to walk ower the hill. (604.21:1). 'It doesn't cost anything to walk over the hill.'
- (24) a. **They dinna** gie them great pay, like. (493.26:4). 'They don't give them very good pay.'
 b. **They na** lose trade. (44.32:*). 'They don't lose trade.'
- (25) a. No, **Willy** does **na** play much golf. (455.56:3). 'Willy doesn't play much golf.'
 b. **The car** does **na** ging in the garage. (58.0:x). 'The car doesn't go in the garage.'
- (26) a. **Bairns dinna** coont. (492.20:u). 'Children don't count.'
 b. **My crowd** div **na** like barley. (27.45:q). 'My crowd don't like barley.'

12) There are no examples of negative declaratives with 2nd person plural in the data.

3.6.2. *Lexical verb*

Lexical verb type has been shown to have an effect on language variation and change in synchronic data (see, for example, Poplack and Tagliamonte *fc.*; Tagliamonte and Smith 1999), where certain verbs favour one variant over another. This constraint is also seen in the diachronic record, including the development of *do* (Ellegård 1953; Engblom 1938; Ogura 1993; Traugott 1972). For example, the verb *know* is singled out as resisting *do* as late as the 18th century (Ellegård 1953; Engblom 1938; Nurmi *fc.*; Ogura 1993; Tieken-Boon van Ostade 1987; Traugott 1972), while the verb *think* had a much higher rate of *do* use (Ellegård 1953: 201). Ogura (1993) attributes these different rates of *do* usage to word frequency — the more frequent a word, the less likely it was to appear with the innovative *do* construction.

Following from these findings on the differential status of frequent lexical verbs, every verb which had over 15 instances was coded separately. These were *ken* ‘know’, as in (27), *mine* ‘remember’, as in (28), *think*, as in (29), *like*, as in (30), and *get* as in (31). The remaining verbs were grouped together.

- (27) a. We **dinna ken** fit they’ve been dabblin in. (56.0:w). ‘We don’t know what they’ve been dabbling in.’
 b. I **na ken** fit I imagined Edinburgh to be like. (175.12:w). ‘I don’t know what I imagined Edinburgh to be like.’
- (28) a. I **dinna mine** you fae nae wye. (349.29:j). ‘I don’t remember you from anywhere.’
 b. And I **na mine** hoo al’ he was. (168.24:u). ‘And I don’t remember how old he was.’
- (29) a. I **dinna think** I could handle hotel work. (277.33:i). ‘I don’t think I could handle hotel work.’
 b. Cos I **na think** I ever went tae a school. (192.23:u). ‘Because I don’t think I ever went to a school.’
- (30) a. Cos usually I **dinna like** bobbies. (445.28:j). ‘Because usually I don’t like policemen.’
 b. I **na like** nothin’, ken, too hot. (75.2:y). ‘I don’t like anything, you know, too hot.’
- (31) a. You **dinna get** dole at that time, see. (276.19:q). ‘You don’t get social security at that time.’
 b. I **dinna get** the chance tae drink. (56.45:i). ‘I don’t get the chance to drink.’

Constructions with VP ellipsis, as in (32), were coded separately.

- (32) a. Alison dees hers wi' butter but I **dinna**. (16.41:q). 'Alison does hers with butter, but I don't.'
 b. Nae in the Sloch, you **dinna**. (31.18:!). 'Not in the Sloch, you don't.'

3.6.3. *Following complement*

The conditioning effect of following complement on sentence structure is documented in both the diachronic and synchronic record. Ellegård (1953:195) found that during the development of *do*, transitive sentences were more likely to contain *do* than intransitives. Cheshire and Ouhalla (1997) demonstrate that verbal *-s* does not appear on the verb when the complement of the verb is a clause. This is explained in terms of information packaging, where clausal complements do not integrate into the verb. Verbal coda deletion in the study of topic restricting *as far as* was shown to have a strong correlation with the complexity of the following complement (Britain 1998; Rickford *et al.* 1995). The more weighty/complex the following complement, the more likely verbal coda deletion will occur. This can be attributed to the fact that "long complex elements put an extra burden on the parser" (Wasow 1997:94), therefore the processing load is less if certain elements in the clause are deleted.

These studies concur in suggesting that following complement of the verb has an effect on the observed variation. To test whether it had a conditioning effect on the use of *do* in the Buckie data, I differentiated the following complement types: sentential, as in (33), and no complement, as in (34). Pronouns (35a), full NPs (35b), both with and without modifiers, and other types of complements, such as infinitival clauses (35c) and prepositional phrases (35d), were coded together due to small numbers. This results in a three-way distinction — no complement, sentential complement and "other".

- (33) a. I says 'I **na** ken **fa's wi' him**.' (587.21.e). 'I said "I don't know who's with him."''
 b. I **do na** think **they wid've gien it up**. (215:6:a). 'I don't think they would've given it up.'
 (34) a. Well, I **na** ken, me and Nan might go back. (276.35:y). 'Well, I don't know, me and Nan might go back.'
 b. Mention nae names, I **dinna** suppose. (510.24:m). 'Mention no names, I don't suppose.'

- (35) a. Oh, you probably **na** mine **this**. (597.18:m). ‘Oh, you probably don’t remember this.’
 b. You **na** really see **her face**. (635.4:t). ‘You don’t really see her face.’
 c. I says ‘Well, I **dinna** like **to tell** ye.’ (142.32:e). ‘I said “I don’t like to tell you.”’
 d. Ye **dinna** bide **in the camp**, ye see. (1155.22:q). ‘You don’t stay in the camp, you see.’

3.6.4. *Extra-linguistic features*

The sample is stratified by age and sex only (see Table 1). Three generations are represented in order to allow for apparent time analysis of the data.

In order to uncover the underlying mechanisms constraining the variable use of *do* in negative declaratives, the internal and external factors described above were analysed individually and then simultaneously, where possible, by means of Goldvarb (Rand and Sankoff 1988).

4. Results

4.1. *The question of data distribution*

Preliminary examination of the data revealed that one verb, *ken*, accounted for 43% of the data set. Moreover, it had one of the highest rates of *do* absence. This has obvious implications for the analysis at hand, as it presents a classic case of skewed data distribution (Guy 1988: 129). For this reason, I initially separated the verb *ken* from all other verbs in both distributional and multivariate analyses. These separate results showed that despite *ken* having higher frequencies of *do* absence, the constraints operating on it were identical to those of other verbs. Therefore, in the analyses that follow, all verb types are analysed together.

4.2. *Overall distribution of forms*

Table 2 shows that the overall distribution of *do* absence is 40%. This shows that the variability of periphrastic *do* is not marginal but robust in the Buckie dialect.

However, overall frequencies reveal little about the underlying mechanisms which constrain the variable use of *do*. Using the information from both the

Table 2: Overall distribution of periphrastic *do*

| | with <i>do</i> | without <i>do</i> | Total |
|---|----------------|-------------------|-------|
| N | 451 | 305 | 756 |
| % | 60 | 40 | |

historical record and contemporary literature, I now conduct a distributional analysis to establish the factors conditioning the presence or absence of *do*. In all cases, the percentages are expressed in terms of *do* absence.

4.3. Person and number of the subject

Table 3 shows the distribution of *do* absence by person and number of the subject.

Table 3: Distribution of *do* absence by person and number of the subject

| | N | % |
|--------------------------------------|-----|----|
| 1st person singular <i>I</i> | 460 | 63 |
| 2nd person singular <i>you</i> | 86 | 13 |
| 3rd person singular <i>he/she/it</i> | 120 | 0 |
| 3rd person singular — full NP | 22 | 0 |
| 1st person plural <i>we</i> | 16 | 19 |
| 3rd person plural <i>they</i> | 40 | 5 |
| 3rd person plural — full NP | 12 | 0 |
| TOTAL | 756 | |

Note the dramatic split in absence/presence of *do*. 3rd person singular pronouns, and singular and plural full NPs show categorical use of *do*. In other words, they are categorically standard. The remaining contexts, on the other hand, are variable. This categorical versus variable use of *do* is crucial for the study at hand, as it demonstrates that grammatical person is an important effect on the use of *do*. This finding will be returned to later in the discussion. With the fully variable contexts, there is a further split. Observe the wide range of percentages of *do* absence in these contexts —

63% for 1st person singular, while 2nd person singular *you*, 1st person plural *we*, and 3rd person plural *they* show relatively little *do* absence.

4.4. Variable rule analysis

I now conduct a multivariate analysis of the contribution of all factors discussed above to the probability of *do* absence in Buckie.

Only the variable contexts identified in Table 3 are included in the multivariate analysis. In addition, contexts of VP ellipsis (N=19), as in (32), were not included as these were categorically standard, hence the different N's in Tables 3 and 4.¹³ Table 4 shows the results.

All language-internal factors are selected as significant to the absence of *do*.

With person and number of the subject, in line with the distributional analysis discussed earlier, only 1st person singular favours *do* absence with a factor weight of .63. All other persons and numbers disfavour it.

Note the factor weights for lexical verb type. While some of the frequent lexical verbs, namely *mine*, *like* and *ken*, favour *do* absence, with factor weights of .73, .59 and .58 respectively, *think* and *get* disfavour it, with factor weights of .33 and .15. Verbs with less than 15 tokens in the data (categorised under "other") disfavour *do* absence at .43.

In the following complement factor group, sentential complements favour *do* absence at .63, while other types of complements, or no complement at all, disfavour it.

None of the extra-linguistic factors was selected as significant to the absence of *do*, despite this being a productive community norm with 35 of the 39 speakers exhibiting variable use of *do*.¹⁴

13) Only 19 of these constructions were found in the data, but it is clear from both my own and others' grammaticality judgements that these are not variable in Buckie English. The categorical presence of *do* in these contexts may be due to the fact that overt inflection is required to identify the null VP (Bresnan 1973; Lobeck 1995).

14) The fact that age is not selected as significant to *do* absence, despite having a range of 13, suggests that there may be interaction between this factor group and others. To test this, I conducted separate multivariate analyses with each age group. These revealed that while the older age group had higher frequencies of *do* absence, the three age groups patterned identically. Therefore, the results shown here indicate that while age has an effect on the use of *do*, it is not significant compared to the internal factors.

Table 4: Variable rule analysis of do absence by person and number of the subject, lexical verb type, following complement, age, and speaker sex
Input: 0.492

| | % | Probability | Ns |
|----------------------------------|----|-------------|-----|
| Person and number of the subject | | | |
| 1st person singular <i>I</i> | 64 | .63 | 450 |
| 1st person plural <i>we</i> | 19 | .24 | 16 |
| 2nd person singular <i>you</i> | 13 | .17 | 82 |
| 3rd person plural <i>they</i> | 6 | .08 | 35 |
| <i>Range</i> | | 55 | |
| Lexical verb type | | | |
| <i>mine</i> | 73 | .73 | 15 |
| <i>like</i> | 57 | .59 | 23 |
| <i>ken</i> | 65 | .58 | 327 |
| <i>think</i> | 47 | .33 | 83 |
| <i>get</i> | 5 | .15 | 22 |
| other | 24 | .43 | 113 |
| <i>Range</i> | | 58 | |
| Following complement | | | |
| sentential | 69 | .63 | 243 |
| other | 33 | .41 | 209 |
| no complement | 53 | .40 | 131 |
| <i>Range</i> | | 23 | |
| Speaker sex | | | |
| female | 55 | [.52] | 400 |
| male | 46 | [.45] | 183 |
| <i>Range</i> | | 07 | |
| Age | | | |
| old | 69 | [.61] | 98 |
| middle | 48 | [.48] | 166 |
| young | 50 | [.48] | 319 |
| <i>Range</i> | | 13 | |

5. Discussion

How can these results be interpreted? I have described the rise of negative *do* in the historical record and presented a quantitative analysis of data from a contemporary dialect in which variability exists in this context. A number of questions regarding the conditioning of this variability need to be addressed:

1. Why is *do* variability so highly circumscribed, i.e. to negative declaratives in the present tense only and to certain grammatical persons only?
2. In the variable contexts, what is the explanation for the differing probabilities of *do* absence across internal factors?
3. What are the implications of these results for language variation and change?

5.1. *Phonological deletion?*

Recall the examples in (13) from the SND (s.v. *no*), where constructions without *do* were attributed to “absorption of the auxiliary”, in other words, a product of phonological deletion. However, a number of arguments militate against such a conclusion in the data seen here. All phonological environments are the same in each pronominal person and number of the subject in which *do* occurs — preceding vowel and following nasal. For example, *I ... na/he ... na*. If this were a case of phonological deletion, then it would be predicted that it could be deleted in all environments which are phonologically similar.¹⁵ But the variation is highly constrained to specific grammatical persons. Similarly, negative declaratives in the past tense and cases of VP ellipsis have the same phonological environment, but are not variable. The highly specific distributional facts that this analysis reveals make it unlikely that phonological deletion provides the answer to *do* absence.

5.2. *A relic feature?*

It may be argued that the pattern of *do* absence is derived from the OE preverbal negator *ne/na*, as documented in Section 2. In its surface syntactic

15) Of course, the possible forms within this context — *do*, *does* and *div* — are not the same, but the environments in which they occur are.

form, the construction employed in the Buckie dialect is identical to the one employed in OE, a use which continued in Older Scots, as shown in (8) and (9) above. However, the grammar of Scots is well documented, therefore it would be curious if such a major issue were not fully attested in the diachronic record. In addition, the distributional facts of *do* absence in Buckie differ significantly from the OE/Older Scots preverbal negator *ne/na*. In (36), the construction is 3rd person singular, and past tense.

(36) He *na* dyd it bot in saufte of the schyp (DOST s.v. *na* adv.2)

These are the two contexts which do not allow *do* absence in the Buckie data. From the available evidence, no such constraints existed in Older Scots during the use of pre-verbal negation. Again therefore, the distributional facts are not compatible with a “relic” argument.

Is it possible that the later examples from the historical record seen in (13) in Section 2.2. are the precursors of the patterns of variability seen in present-day Buckie Scots? Although these more recent examples have the same distributional patterns (i.e. non 3rd person pronouns), the phonetic realisation of the negative particle appears to be different. The orthography of the examples in (13) — *no* — suggests that the negative particle is stressed (see Section 3.4.). This is in contrast to the Buckie data — in the cases of *do* absence, the negative particle is the unstressed, enclitic form (see Section 3.5.). Therefore for phonetic and distributional reasons, I suggest that these examples are unlikely precursors to the structures seen in present-day Buckie.

What seems clear however is that at various stages in the history of English, different syntactic structures existed to express negation. So it is perhaps not surprising that in Buckie, we see yet another structure employed. But if *do* absence cannot be explained in terms of phonological deletion, nor continuation of older patterns, how can it be accounted for?

5.3. A syntactic explanation

I submit that the categorical versus variable absence of *do* in Buckie looks much more like a phenomenon whose variability is determined by syntactic factors. A comparison of the underlying structure of negative sentences in Middle English and Modern English tells us why.

Recall that in the Middle English and Early Modern English period, negatives were formed by placing the negative particle *not* immediately after

the tensed verb, but in Modern English, negatives are formed with preverbal negation and periphrastic *do*.

In current syntactic frameworks which deal with the historical development of negation in English (see, for example, Kroch 1989) the change from postverbal to preverbal negation is explained in terms of the position of the verb. Specifically, as shown in Figure 2, the earlier verb-negation order is assumed to arise because the verb, initially in V, moves to INFL where it receives tense and agreement marking (e.g. 3rd person *-s*, past tense *-ed*), and results in structures such as (37) below:

(37) He sees **not** Cleopatra. (1678: Dryden, *All for Love*, Act II, Scene i)

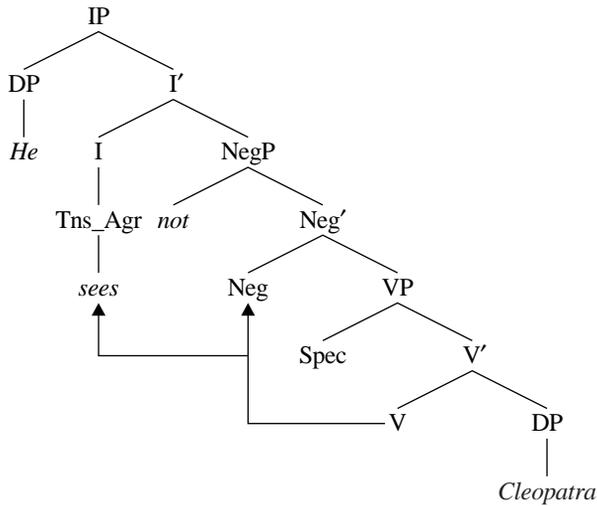


Figure 2: Underlying structure of post-verbal negation in ME and EModE

In Modern English, however, the verb does not receive its tense and agreement marking in the same way, as it remains in post-negation position.¹⁶ I assume that in order for tense and agreement features in INFL to be expressed in Standard English, *do* is inserted as a support for these. This is illustrated in Figure 3, and results in sentence types such as (38) below:

16) This is evident from word order facts such as placement of adverbs (Pollock 1989).

(38) He **does not** see Cleopatra.

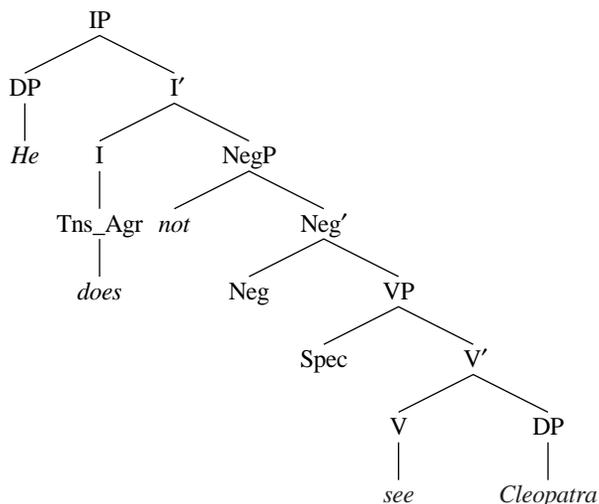


Figure 3: Underlying structure of preverbal negation with *do* in Modern English

How can the underlying structure of these sentence types be related to the categorical versus variable use of *do* in the Buckie data? It seems safe to assume that the Buckie community followed the same developmental path as other dialects of English in the formation of negatives in the history of English, i.e. from postverbal to preverbal negation, but the surface realisations of these forms differ. Crucially, *do* is categorical only in contexts which carry an overt inflection — the *-s* suffix in present indicative and past tense verb marking. Moreover, the fact that the negative particle is unstressed in cases of *do* absence, and is therefore the cliticised form, suggests that underlyingly, *do* is present, but is not obligatorily pronounced.

This explanation predicts that only 3rd person singular has categorical *do* presence, but recall Table 3, which showed that plural NPs are also categorically standard. While this may simply be the result of statistical fluctuation due to small Ns (N=12), a more likely explanation is the fact that the inflectional system for the present tense in Buckie is subject to the northern personal pronoun rule (Ihalainen 1994; Montgomery 1994; Murray 1873),

attested from as far back as the 13th century (Murray 1873:212). In northern ME and Middle Scots, the *-s* suffix was not only present with 3rd person singular, as in present-day standard English, but also with 2nd singular *you* and plural NPs. However, during the course of the 16th century the 2nd person singular pronoun *thou* changed to *ye* (Baugh 1951:292) with the result that the *-s* suffix was no longer used in 2nd singular.¹⁷ This resulted in a system where 3rd person singular pronouns, and both singular and plural NPs appeared with the *-s* inflection, albeit variably, making the subject type rather than person and number of the subject the important trigger in agreement (Murray 1873:212). This pattern from the historical record remains prevalent in the Buckie data¹⁸. The correlation between this paradigm and the use of *do* in the Buckie data is demonstrated in Table 5.

The variable vs. categorical uses of *do* in the Buckie data are closely related to constraints attested in the historical record for inflection in the present tense paradigm in the diachrony of Scots. The only place that it is variable is in the contexts in which there is no inflection to be supported.¹⁹ Therefore, there is a strict correlation between obligatory use of *do* and those categories which carry overt inflection on regular verbs.

The syntactic explanation I propose predicts categorical *do* presence vs. categorical *do* absence in specific contexts, but what we witness here is variable use of *do* in the contexts which don't require it to support tense and agreement features. Furthermore, there are highly differential rates of *do* absence amongst these variable contexts — *do* absence is overwhelmingly favoured by 1st person singular but much less so by the other person and number contexts which also permit variable use of *do*. What can account for these findings?

17) This demonstrates that the inflection depends on the pronoun, not the category.

18) This pattern for *-s* inflection pertains for present tense affirmatives too, where *-s* inflection with 2nd person singular *you* is extremely rare, but much more common with full NP plurals. From the twelve tokens of negative contexts with *do*, two appear with the non-standard *-s* inflection: “A lot of families *does na* get what that cats get.” (478.28:e); “But eh, maybe some- maybe some churches *does na* do it.” (820.46:e). This is obviously an area of the grammar which exhibits great variability, reflected in the use of *do*.

19) It might be argued that 3rd person plural pronoun *they* should be considered categorical as *do* appears 94% of the time in this context. The dichotomy between categorical and variable status indicated in the table is only maintained when “categorical” refers to 100% use.

Table 5: Relationship between “northern concord rule” and *do* in negative declaratives in Buckie

| person and number of the subject | -s inflection | categoryical use of <i>do</i> in negative declaratives in Buckie English |
|-------------------------------------|---------------|--|
| <i>singular</i> | | |
| 1st person pronoun <i>I</i> | x | x |
| 2nd person pronoun <i>ye</i> | x | x |
| 3rd person pronoun <i>he/she/it</i> | ✓ | ✓ |
| 3rd person full NP | ✓ | ✓ |
| <i>plural</i> | | |
| 1st person pronoun <i>we</i> | x | x |
| 2nd person pronoun <i>ye</i> | x | no data available |
| 3rd person pronoun <i>they</i> | x | x |
| 3rd person full NP | ✓ | ✓ |

Table 4 shows that 1st person singular is by far the most frequent in the data set, with a total of 450 tokens. 2nd person singular, 1st person plural and 3rd person plural pronouns, on the other hand, are far less frequent.

Tottie (1991:440) states that “the more frequent a construction is, the more likely it is to be retained in its older form for a longer period of time”. Ellegård (1953:200) also proposes a “fixed phrase” explanation for the fact that some forms resist *do* longer than others, as does Nurmi (1999). The “fixed phrase” argument may equally apply in the Buckie data. Due to its frequent use, I suggest that 1st person singular without *do* has become fixed in the community grammar, and through repeated use is less likely to be subject to pressures from standardisation.

What part does lexical verb type play in this variability? The most common verbs in the data set show a range of factor weights in Table 4, so a frequency argument cannot be invoked to account for the variability here. Note, however, that two of the three verbs which favour *do* absence are dialectal forms — *mine* ‘remember’ and *ken* ‘know’. It is perhaps not surprising therefore that these local forms are used more with the non-standard structure. Furthermore, the verb *ken*’s standard counterpart, *know*, is consistently singled out as resisting the change from postverbal to preverbal negation in the development of *do* (see Section 3.6.2.). Two other

verbs provide direct parallels with the historical record — the verb *think* favours *do* in Ellegård's (1953: 201) diachronic data, while *like* disfavoured it — we see these patterns mirrored in the Buckie data. The important point here is that not all verbs are equal with regard to *do* absence, and it is in fact not unlikely that “each word has its own history” (Ellegård 1953: 201).

How can the favouring effect of sentential complements be explained? One hypothesis is that processing constraints are involved, as “long complex elements put an extra burden on the parser” (Wasow 1997: 94). In the data under investigation here, the majority of sentential complements (56%) were over 5 words long, and therefore put a heavy load on the listener in terms of processing. Compare this to verbs with no complement at all, or other types of complements (labelled “other” in Table 4) in which the majority (66%) were only one word long. The processing burden is much less in such cases. A tentative suggestion for this patterning may be that when the processing burden is high, as in the case of sentential complements, the speaker can dispense with “additional” items in the preceding clause, in this case, *do*, in order to lighten the load and allow the hearer to concentrate on the new information in the following clause. This hypothesis would account for the split between sentential complements on the one hand, and verbs with shorter complements or no complements at all in the other.

Neither age nor sex were selected as significant to *do* absence — this, despite “the social situation [being] the most powerful determinant of verbal behavior” (Labov 1972: 212). Here we have a classic case of stable variation, as *do* absence has not undergone significant change over the last 70 years. This attests to the socio-cultural impact of a community on language behaviour — the relatively isolated nature of the Buckie dialect allows this highly unusual linguistic variable to proceed relatively uninfluenced by standard norms.

Most striking in this study was that categorical vs. variable patterning of negative *do* suggests a syntactic process, and this leads to questions of a more theoretical level. Formal theories of *do*-support, based on standard English, assume that *do* must be present whether the inflection is overt or not. In this dialect, however, only overt tense and agreement features force *do* to be present, while in other contexts it is variable. This raises interesting questions for current theories of *do* support (see, for example, Lasnik 1974), but ones which are beyond the scope of this paper.

To sum up, the categorical vs. variable use of *do* in Buckie Scots is determined by internal syntactic factors. The variable contexts can be explained in terms of lexical restrictions, frequency effects and processing constraints. The fact that no significant change has taken place over the last three generations in this dialect points to a stable linguistic variable, uninfluenced by processes of standardisation.

6. Conclusion

In this analysis, I have appealed to theoretical, historical and sociolinguistic factors to account for the variable patterns of use of *do* absence. This study highlights the fact that a dialect such as Buckie Scots can provide insights into language processes which may be inhibited in varieties more influenced by prescriptive norms. Indeed, “the real life of language is in many respects more clearly seen and better studied in dialects” (Sweet 1909: 74).

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