Quantitative cross-dialectal insights into the role of syntax and discourse-pragmatics in the use of *not*, *no* and negative concord

Negative concord, as in (1), has been studied extensively from both formal syntactic perspectives (e.g. Zeijlstra 2004; Penka 2011) and sociolinguistic approaches (e.g. Labov 1972; Smith 2001). Sociolinguistic accounts, however, have paid comparatively little attention to the two standard alternatives to negative concord: *not*-negation, which consists of the form *not* with a post-verbal *any-* indefinite (2), and *no*-negation, where negation is not marked on the verb but there is a negative indefinite (3). I argue that *not*-negation, *no*-negation and negative concord are in fact three variants of a single linguistic variable that are derived from the same underlying structure, under the principles of Zeijlstra's (2004) Multiple Agree account of negative concord. The present study takes an inter-disciplinary approach to investigate the variable in data from vernacular speech corpora collected in Glasgow (Scotland), Tyneside (North East England) and Salford (North West England). Specifically, I use insight from syntactic theory to generate hypotheses regarding the structure and distribution of variants, which are then tested quantitatively using variationist sociolinguistic methods.

(1) **Negative concord**
    I don't have no money.
(2) *Not*-**negation**
    I don't have any money.
(3) *No*-**negation**
    I have no money.

Under Zeijlstra's (2004) Multiple Agree account, the variants in (1)-(3) all have a single interpretable negative feature ([iNEG]), which explains why they have the same referential meaning. This [iNEG] feature is in NegP, either on a covert negative operator or a negative marker (-*n't* or *not*). Any negative indefinites in the predicate (e.g. *no, nobody*) are not inherently negative but have an uninterpretable negative feature ([uNEG]) that must be bound by the negative operator/marker in NegP. Therefore, in (1), -*n't* ([iNEG]) and *no* ([uNEG]) enter an Agree relation and the uninterpretable feature is deleted. In (2), on the other hand, *any* does not have an uninterpretable negative feature, so there is no Agree relation between –*n't* and *any*. In (3), the indefinite *no* has [uNEG] and therefore must enter an Agree relation with the covert negative operator with [iNEG] that resides in NegP.

On the basis that syntactic distance/complexity increases the likelihood of non-standard agreement between a subject and verb (Pietsch 2005; Corbett 2006: 235-6; Buchstaller et al. 2013), I propose that increased syntactic distance/complexity will similarly increase the likelihood that for the variable under study there will be lack of agreement between the negative marker/operator and indefinite items as described above. As a consequence, *not*-negation is more likely to appear in such contexts, because deriving this variant does not involve an Agree relation (unlike *no*-negation and negative concord). In particular, because main verb BE (obligatorily) and HAVE (optionally) move to I for tense and agreement marking, whereas lexical verbs remain in the VP, lexical verbs constitute additional material in the structure between the negative marker/operator and the indefinite item in the predicate, which could disrupt potential Agree relations. Thus, Hypothesis 1 is that *not*-negation will be more likely to occur with lexical verbs than with BE or HAVE. Any auxiliary and modal verbs present in the sentence would also remain in a position between the negative operator and the indefinite item, leading to the formation of Hypothesis 2: sentences with auxiliary or modal verbs will be more likely to take *not*-negation than those with only a single main verb. In addition to these

syntactic effects, a third hypothesis is formed to reflect a discourse-pragmatic effect that has been observed in previous research into the variable (Tottie 1991). Specifically, Hypothesis 3 is that *not*-negation will tend to be used in the expression of a discourse-old proposition whereas *no*-negation will be preferred for the introduction of information that is new to the discourse.

To test these three hypotheses, tokens of *not*-negation, *no*-negation and negative concord were extracted from the three regional speech corpora. The results of the distributional analysis and mixed effects logistic regression using lme4 (Bates *et al.* 2014) in *R* (R Core Team 2014) reveal a robust effect of verb type in all three dialects under study. BE and HAVE consistently favour *no*-negation while lexical verbs strongly favour *not*-negation, as predicted by Hypothesis 1. Hypothesis 2 is also supported by the data as constructions with modals and auxiliaries have greater propensity to take *not*-negation than those with a simple main verb. Furthermore, this constraint operates in the same way regardless of the type of main verb in the sentence. There is also a strong discourse-pragmatic effect whereby *not*-negation is favoured for the expression of discourse-old propositions, whereas *no*-negation is favoured for introducing discourse-new information, which supports Hypothesis 3. Yet again, this effect holds regardless of the type of main verb. Therefore, although the overall frequencies of each variant differ between the three regional varieties of English, the variation is subject to the same core syntactic and discourse-pragmatic constraints which operate consistently even though the communities are geographically- and dialectally-distinct.

As this investigation demonstrates, formal syntactic theory and quantitative comparative sociolinguistic methodology can be combined to provide unique insights into the nature of the linguistic constraints that condition syntactic variation in non-standard varieties of English. Syntactically-grounded hypothesis-testing using statistical methods provides a means of ascertaining the syntactic structure and constraints that underlie even the most complex and variable phenomena.

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