Semantic effects of head movement in negative auxiliary inversion constructions

Overview In this paper, I follow a line of thinking which revisits the idea that head movement is an operation that is available in the syntactic component of grammar. Support for the revisit comes from evidence that head movement has a semantic effect (Matushansky, 2006; Lechner, 2007; Szabolcsi, 2010; Roberts, 2010; Bhatt & Keine, 2013; Iatridou & Zeijlstra, 2013). In this paper, I argue that a phenomenon present in some varieties of English spoken in Texas, negative auxiliary inversion, provides further evidence for a semantic effect of head movement. I argue that the construction is derived by the movement of the negative auxiliary, the moved negative element is both pronounced and interpreted in its final landing site, and I provide two suggestions for how our assumptions of negation can be interpreted in its moved position. Additionally, I show that the movement is subject to known principles of scope economy to account for the construction’s unique subject restriction. The types of subjects that are possible in negative auxiliary inversion constructions behave uniformly in their scopal interaction with negation and, as such, the phenomenon furthers our understanding of why subject restrictions arise.

Negative auxiliary inversion Constructions exhibiting negative auxiliary inversion involve a clause-initial negated auxiliary or modal followed by a quantificational subject, as in (1a). Despite the apparent subject-auxiliary inversion, such sentences are declarative. The corresponding non-inverted construction is often also possible, as in (1b).

(1) a. Didn’t everybody go to the party.  b. Everybody didn’t go to the party.  (Foreman, 1999)

Negative auxiliary inversion and some of its properties were first observed in 1968 by Labov et al. for African American English. It is also attested in Appalachian English (Wolfram & Christian, 1976; Feagin, 1979) and West Texas English (Foreman, 1999, 2001). This paper focuses on data from varieties spoken in Texas but preliminary findings indicate that the analysis is extendable to (at least some) speakers of all three varieties.

The properties of negative auxiliary inversion which hold in Texas are observed by Foreman and are as follows: (i) negative auxiliary inversion is only licensed in the presence of sentential negation in its inflected form, n’t (*Will everybody fit in that car, *Will none of the students (not) go to the party); (ii) it is possible in embedded clauses with an overt complementizer (She loves the fact that don’t nobody like her); (iii) subjects which do not interact scopally with negation, such as definite subjects or positive polarity items, are ruled out (*Ain’t Jack seen the baby yet, *Didn’t some people live there then); (iv) other quantificational subjects, including strong ones, are licit (Didn’t everybody go to my party), as are indefinite subjects (Can’t a dog do that trick), including negative polarity items (Doesn’t anybody seem to understand) and, in constructions which also exhibit negative concord, n-words (Don’t nobody live there); (v) negation unambiguously scopes over the quantificational subject in a structure exhibiting negative auxiliary inversion (Didn’t everybody finish their homework (¬∀, *∀¬)) whereas its non-inverted counterpart, when possible, is ambiguous (Everybody didn’t finish their homework (¬∀, ∀¬)).

Syntactic Analysis Following prior movement analyses of negative auxiliary inversion (Labov et al., 1968; Labov, 1972; Martin, 1993; Foreman, 1999, 2001; Green, 2014), I assume that the construction exhibiting the phenomenon is derived by movement of the negative auxiliary over the subject, as in (2).

(2) \[
\text{[Neg}_2^\circ\text{ didn’t [TP everybody didn’t finish their homework]]}
\]

The subject is in canonical subject position, as evidenced by the fact that the subject of an appended tag question refers to the canonical subject (Can’t no man live forever, can he?: for more evidence, see Foreman, 2001).

Following Foreman (1999, 2001), I assume that the auxiliary raises to Neg$_2^\circ$, a projection which occurs below C$^\circ$ and is available in the CP layer of Texas English. The presence of this Neg$_2^\circ$ corresponds to the availability of head movement with a semantic effect.
**Semantic Analysis** The movement of logical negation is not, without further stipulation, able to gain scopal significance by moving. However, it must be able to do so in order to account for the empirical observation made in the literature about the interpretation of negation when it moves (Roberts, 2010; Szabolcsi, 2010) and the observation that negation does not lower at LF (Iatridou & Zeijlstra, 2013 and references therein). Furthermore, if Lasnik (1999) is correct and strong quantifiers such as every cannot reconstruct, the subject must be interpreted in its canonical subject position and negation must be interpreted higher. One possible way in which negation can be endowed with the ability to be interpreted in its moved position is to stipulate that negation does not leave behind a trace or, if it does, the trace is deleted on the way to LF. Another possibility is to treat negation like a nominal quantifier and raise its type. The trace of negation is its usual type, \( \langle t, t \rangle \), and the moved negation has the type \( \langle \langle \langle t, t \rangle, t \rangle \rangle \). The interpretation of negation could be \( \lambda N_{\langle(t,t),t\rangle}[^{-}N(\lambda f_t.f)] \). Either of these analyses would explain how negation can be interpreted in its moved position.

The subject restriction can be accounted for by appealing to known principles of scope economy. The observation that definite subjects are ruled out in negative auxiliary inversion constructions indicates that head movement in this case is sensitive to the Fox’s (2000) Principle of Scope Economy. Fox accounts for the fact that covert movement is restricted from occurring in the case in which it would be scopally uninformative. Extending the Principle of Scope Economy to apply to overt optional movement accounts for the subject restriction of negative auxiliary inversion constructions; the movement of negation cannot occur when it does not give rise to a new scopal interpretation.

The Principle of Scope Economy cannot account for the fact that negative auxiliary inversion constructions are unambiguous. The presence of multiple scope-bearing elements allows for two ways in which ambiguity could arise in the constructions despite the fact that it is not attested. Inverse scope could arise by either the subject outscoping negation or negation reconstructing. Both of these options violate another economy constraint, Scope Transparency (Bobaljik & Wurmbrand, 2012 and references therein), the idea that semantic scope and linear order should be transparent. Adopting such a constraint and an LF-first framework, as suggested by the authors, explains the lack of inverse scope in the constructions. The possibility of inverse scope in the non-inverted construction, however, violates this constraint, showing that it is violable. An interpretation which violates Scope Transparency can arise as a result of interaction with another constraint. Positing a constraint which requires that canonical word order be satisfied accounts for the unexpected interpretation; negation is interpreted in its moved position but pronounced in its base-generated position in order to satisfy canonical word order.

**Conclusion** The head movement in negative auxiliary inversion constructions is pronounced and interpreted in its moved position, providing evidence that head movement can have semantic effects. In this paper, I show that this optional movement, although overt, is restricted by the Principle of Scope Economy and I also show how negation can be interpreted in its moved position.

**References**