The status of head movement:

- At the beginning: syntactic operations such as Affix Hopping (Chomsky, 1957)
- In Government and Binding: head movement formed a class of operations subject to certain constraints (Koopman, 1983; Travis, 1984; Baker, 1985)
- In Minimalism: proposals to place head movement outside of the domain of syntax (Chomsky, 2000, 2001; Boeckx & Stjepanovic, 2001; Harley, 2004; Brody, 2000)
  - head movement appeared to not have semantic effects
  - head movement satisfied the morphological needs of lexical items which appeared to be independent of syntax
- More recently: head movement must be in syntax (Lechner, 2007; Szabolcsi, 2010; Roberts, 2010)
  - evidence for semantic effect of head movement

This paper:
- provides further evidence that head movement must be in the syntactic component of grammar
- head movement in negative inversion (a phenomenon present in some varieties of North American English) has an effect on interpretation
  - overt movement of a head has the effect of disambiguation

Roadmap:
- The properties of negative inversion
- The syntax of negative inversion and analysis
- Interaction with negative concord

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Green (in press) refers to this phenomenon as Declarative Negative Auxiliary Inversion in order to distinguish it from a phenomenon available in Standard English which is also referred to as negative inversion. Some examples of negative inversion in Standard English are sentences such as With no job would Marry be happy, Not a word did he say, Never would he marry another.
1 Negative inversion

(1) Didn’t everybody go to the party. (WTE; Foreman, 1999)

• Clause-initial negated auxiliary or modal, followed by a quantificational subject
• Declarative, receives the falling intonation of a declarative

The corresponding non-inverted construction is often also possible:

(2) Everybody didn’t go to the party. (WTE; Foreman)

Attested in:

• African American English (AAE)
• Appalachian English (AppE)
• West Texas English (WTE)

Attested examples exhibiting negative inversion in varieties of white speakers:

(3) a. *Will everybody fit in that car. (WTE)
b. *Will none of the students go to the party. (WTE; Foreman)
c. *Will none of the students not go to the party. (WTE)
d. *Will not none of the students go to the party. (WTE; Foreman)
e. Won’t everybody fit in that car. (WTE)

1.1 Properties of negative inversion

1.1.1 Negation is necessary to license negative inversion

• Sentential negation must be inflected morpheme n’t

(4) She loves the fact (that) don’t nobody like her. (WTE & AAE; Foreman, 1999)

1.1.2 Can be embedded

• Possible in embedded clauses with overt complementizer

(5) Mary won’t go on a date with nobody. (WTE; Foreman, 2001)

• clause contains multiple elements which bear negative morphology (sentential negation and n-words (Laka, 1990))
• clause interpreted as having a single instance of logical negation

1.1.3 Occurs only in varieties which also have negative concord

All varieties that exhibit negative inversion also exhibit negative concord

(5) Mary won’t go on a date with nobody. (WTE; Foreman, 2001)

• clause contains multiple elements which bear negative morphology (sentential negation and n-words (Laka, 1990))
• clause interpreted as having a single instance of logical negation

Although all varieties that exhibit negative inversion also exhibit negative concord, not all varieties that exhibit negative concord also exhibit negative inversion. Negative inversion is not attested in British varieties of English. Belfast English and Bristol English, for example, both exhibit negative concord but neither variety exhibits negative inversion (Henry, Maclaren, Wilson, & Finlay, 1997).
1.1.4 Subject restriction

- It is typically observed in the literature that definite subjects are not possible.

(6) a. *Didn’t Jack go to the party. (WTE)
b. *Wouldn’t I do that. (WTE; Foreman, 1999)
c. *Didn’t the teachers go to the party. (WTE; Foreman, 1999)

- The restriction is more subtle, at least for West Texas English.
  - A definite subject like both of 'em (Barwise & Cooper, 2002) is a possible subject.

(7) Didn’t both of ‘em sleep. (WTE)

- There are also indefinite subjects that are impossible such as some and few.

(8) a. *Didn’t some people come. (WTE)
b. *Didn’t few people live there then. (WTE)

2 The syntax of negative inversion: Movement vs non-movement analyses

The types of analyses proposed to negative inversion can be categorized into two groups:


- I will defend a movement analysis – better able to account for the subject restriction.

2.1 Non-movement analyses

Parallelism to existential expletive constructions in SE:

(9) a. Canonical subject movement:

  \[ \text{TP} \text{ nobody is nobody doin’ anythin’ wrong} \]

b. Existential:

  \[ \text{TP} \text{ there is nobody doin’ anythin’ wrong} \]

(10) a. Non-inverted:

  \[ \text{TP} \text{ nobody ain’t nobody doin’ nothin’ wrong} \]

b. Inverted:

  \[ \text{TP} \emptyset \text{ ain’t nobody doin’ nothin’ wrong} \]

<table>
<thead>
<tr>
<th>Possible subjects</th>
<th>everybody</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>all the NP</td>
</tr>
<tr>
<td></td>
<td>five NP</td>
</tr>
<tr>
<td></td>
<td>both of them</td>
</tr>
<tr>
<td></td>
<td>a NP</td>
</tr>
<tr>
<td></td>
<td>many NP</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impossible subjects</th>
<th>Jack (proper names)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>you (pronouns)</td>
</tr>
<tr>
<td></td>
<td>the NP</td>
</tr>
<tr>
<td></td>
<td>their NP</td>
</tr>
<tr>
<td></td>
<td>some NP</td>
</tr>
<tr>
<td></td>
<td>few NP</td>
</tr>
</tbody>
</table>

Figure 1: The subject distribution for negative inversion in WTE
Advantage:

- Assimilation to existential expletive constructions explains the definiteness restriction on subjects

(11) Existentials in SE
   a. There’s a person/nobody in the hall. (SE)
   b. *There’s the man/Jack in the hall. (SE)

(12) Negative inversion
   a. Can’t a person/nobody get in the hall. (WTE)
   b. *Can’t the man/Jack get in the hall. (WTE)

Disadvantages:

- Assimilation is not perfect:
  - Existentials in SE are incompatible with universally quantifying noun phrases and with partitive phrases

(13) a. *There’s every student here yet. (SE)
    b. *There are both of them outside. (SE)
  - Negative inversion is compatible with those types of subjects

(14) a. Ain’t every student here yet. (WTE; Foreman, 1999)
    b. Didn’t both of ‘em sleep. (WTE)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Exist.</th>
<th>Neg. Inv.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uniform distribution</td>
<td>a NP</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>no NP</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>the NP</td>
<td>×</td>
</tr>
<tr>
<td></td>
<td>Jack</td>
<td>×</td>
</tr>
<tr>
<td>Different distribution</td>
<td>every NP</td>
<td>×</td>
</tr>
<tr>
<td></td>
<td>both of them</td>
<td>×</td>
</tr>
</tbody>
</table>

Figure 2: Comparing the subject distribution

- Difficult to explain why it is that inversion only occurs in sentences containing sentential negation morpheme n’t

3 Analysis: Movement sensitive to scope economy principles

Parallelism to T-to-C movement in SE:

(15) a. Canonical subject movement:
   [TP nobody is doin’ anythin’ wrong]
   b. Yes-no question:
      is [TP anybody doin’ anythin’ wrong]

(16) a. Non-inverted:
   [TP nobody ain’t doin’ nothin’ wrong]
   b. Inverted:
      ain’t [TP nobody ain’t doin’ nothin’ wrong]

3.1 Restricting negative inversion to negative context

- I follow Foreman (1999, 2001) in assuming that the position to which the modal or auxiliary raises is Neg_2
  - Neg_2 is a higher position for negation available in all varieties which allow negative inversion
• Movements are triggered by a feature \([u_{\text{NEG}}]\), this feature attracts a head which bears a \([\text{NEG}]\) feature.

\[ \text{Neg}_2 \times \text{TP} \]

- CP
- \(\text{C}^\circ\) Neg2P
- \(\text{Neg}_2^\circ\) TP
- DP \(T'\)
- \(T^\circ \)...

3.2 Accounting for the subject restriction

A scope fact:
- Foreman (1999, 2001) observes for West Texas English that sentences containing negative inversion are unambiguous, the negative modal or auxiliary has wide scope over the subject.

\(\text{(17)}\) Didn’t everybody go to the party. \((\neg \forall, \forall \neg)\)

Its non-inverted counterpart is ambiguous.

\(\text{(18)}\) Everybody didn’t go to the party. \((\neg \forall, \forall \neg)\)

- The lack of ambiguity in negative inversion constructions is the key to accounting for the subject restriction and to understanding why head movement is semantically active.

Empirical observations concerning the interpretation of negative inversion and their non-inverted counterparts:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Noninv. constr.</th>
<th>NAI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possible subjects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>everybody</td>
<td>ambiguous</td>
<td>− high</td>
</tr>
<tr>
<td>all the NP</td>
<td>ambiguous</td>
<td>− high</td>
</tr>
<tr>
<td>five NP</td>
<td>ambiguous(^a)</td>
<td>− high</td>
</tr>
<tr>
<td>many NP</td>
<td>ambiguous</td>
<td>− high</td>
</tr>
<tr>
<td>a NP</td>
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<td>− high</td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>Jack (proper names)</td>
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<td>*</td>
</tr>
<tr>
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<td>*</td>
</tr>
<tr>
<td>the NP</td>
<td>unambiguous</td>
<td>*</td>
</tr>
<tr>
<td>their NP</td>
<td>unambiguous</td>
<td>*</td>
</tr>
<tr>
<td>some NP</td>
<td>unamb. ((- low))</td>
<td>*</td>
</tr>
<tr>
<td>few NP</td>
<td>unamb. ((- high))</td>
<td>*</td>
</tr>
</tbody>
</table>

\(^a\)Speakers report that the interpretation in which negation scopes over the numeral five receives an idiomatic interpretation.

\(^b\)The determiner \(a\) can be specific. Ambiguity is present only when \(a\) has a non-specific reading.

Figure 3: The interpretation of subjects.
• Negative auxiliary inversion disambiguates; one of the interpretations from the non-inverted counterpart is available, always the one in which negation has **wide scope**

A way to account for the subject restriction:

• Compare post-movement structure to pre-movement structure
• Rule out post-movement structure if movement does not result in a less ambiguous structure
• Appeal to principles of scope economy

### 3.2.1 Principle of Scope Economy in the spirit of Fox (2000)

(19) **Principle of Scope Economy**

A scope-shifting operation can move an operator $O$ overtly only if the resulting structure is less ambiguous than its source, i.e.

$$\left[ \begin{array}{c} X \\ O \\ Y \\ t \end{array} \right] \subset \left[ \begin{array}{c} Y \\ O \end{array} \right]$$

Assumption:

- The interpretation of a structure is a set of meanings (May, 1985)

Ruling out definite subjects:

(20)

$$\left[ \begin{array}{c} \text{Neg}^2 \text{P} \\ \text{didn't} \\ \text{TP} \\ \text{Jack} t \ldots \end{array} \right] \not\subset \left[ \begin{array}{c} \text{TP} \\ \text{Jack didn't} \ldots \end{array} \right]$$

- suppose $\text{Neg}^2$ is merged into a structure that doesn’t have a quantificational subject

- its $[u\text{NEG}^*]$ feature needs to be checked, so movement of the negative auxiliary is triggered
- there is only one scope-bearing element – scopally uninformative; unambiguous
- interpretation of post-movement and pre-movement structures is identical
- derivation is ruled out by the principle of scope economy

Allowing quantificational subjects:

(21)

$$\left[ \begin{array}{c} \text{Neg}^2 \text{P} \\ \text{didn't} \\ \text{TP} \\ \text{everyone} t\ldots \end{array} \right] \subset \left[ \begin{array}{c} \text{TP} \\ \text{everyone didn’t} \ldots \end{array} \right]$$

- $\text{Neg}^2$ is merged
- its $[u\text{NEG}^*]$ feature needs to be checked, so movement of the negative auxiliary is triggered
- there are two scope-bearing elements which can outscope each other in the non-inverted construction – ambiguity
- interpretation of post-movement structure is a proper subset of the interpretation of pre-movement structure
- derivation is allowed by the principle of scope economy

### 4 Apparent counterexample: Negative indefinites

Negative indefinites are possible subjects in sentences containing negative inversion

(22) a. Ain’t none of the students done their homework. (WTE; Foreman, 1999)
b. *None of the students ain’t done their homework.  
(WTE; Foreman, 1999)

- In construction exhibiting negative concord, there is only one instance of logical negation
- Non-inverted counterpart is not ambiguous
- In fact, non-inverted counterpart is not possible
- How are we able to derive the structure containing negative inversion if its non-inverted counterpart is out?

In the case of negative indefinites:

- Head movement of the negation may not disambigate
- Instead, head movement raises in order to license the *none of *em
- The availability of negative indefinites in negative inversion is not a counterexample
- Instead, it provides us with more evidence that head movement has a semantic effect

5 Conclusion

In this paper, I showed that negative inversion in West Texas English and possibly other varieties is an instance of semantically-active head movement

- Negative inversion is head movement that disambiguates
  - It provides an unambiguous interpretation for one of the meanings available in its non-inverted counterpart
- It is only licensed when it has an effect on interpretation and it is ruled out by scope economy when it does not
  - The principle of scope economy accounts for the subject restriction

Motivation for head movement being syntactic:

- Head movement licenses negative polarity items in subject position of interrogatives by subject-auxiliary inversion (Roberts, 2010)

(25)  a. *Anyone didn’t see John.  
(SE; Roberts, 2010)

b. Did(n’t) anyone see John?  
(SE)
References


Green, L. (2008, April). *Negative inversion and negative focus*. (Paper presented at Georgetown University)


