1. Introduction

- **Generalized -s in the present tense**: Major difference between Standard English and northern varieties of English:

<table>
<thead>
<tr>
<th></th>
<th>Standard English</th>
<th>Northern dialects of English</th>
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</thead>
<tbody>
<tr>
<td>1sg</td>
<td>sing</td>
<td>sing-s</td>
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<tr>
<td>2sg</td>
<td>sing</td>
<td>sing-s</td>
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<tr>
<td>3pl</td>
<td>sing</td>
<td>sing-s</td>
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</tbody>
</table>

Table 1: Verbal inflection (present tense), Standard English vs. Northern dialects

- **Northern Subject Rule (NSR)**: In many (Central) Northern varieties (in particular, Northumberland, Cumberland, Durham, Westmorland), the realization of verbal agreement (i.e., -s) is sensitive to:
  1. type of subject (pronouns vs. DPs);
  2. position of subject:

  1) **Northern Subject Rule (NSR)**

  A finite verb takes the ending -s except when it is directly adjacent to a non-3sg pronominal subject (i.e., I/you.sg/we/you.pl/they).

<table>
<thead>
<tr>
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<th>Northern dialects of English</th>
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<tbody>
<tr>
<td></td>
<td>Standard English</td>
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<tr>
<td>1sg</td>
<td>sing</td>
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<tr>
<td>2sg</td>
<td>sing</td>
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<tr>
<td>3sg</td>
<td>sing-s</td>
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<td>1pl</td>
<td>sing</td>
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<td>2pl</td>
<td>sing</td>
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<tr>
<td>3pl</td>
<td>sing</td>
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</table>

Table 2: Verbal inflection (present tense), Standard English vs. northern dialects + NSR

- As a result, the NSR dialects exhibit a three-way distinction dependent on type and position of subject:

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(2)  a. The birds (only) sings.
b. They sing.
c. They only/often sings.
d. They sing and dances.
e. they that sings

• The effects of the NSR can also be observed in cases where the pronoun is right-adjacent to the finite verb (i.e., in cases of subject-verb inversion):

(3)  a. Do they sing?
b. Does the birds sing?

• Inversion has a different effect on agreement with full subjects (consistent use of -s, cf. Pietsch 2005:110).
• In many varieties, the NSR also governs the distribution of the past tense forms was/were:

(4)  a. They were supposed to [...]  
(Pietsch 2005:100)
b. [...] they never was so strict, at that time, anyway.
c. [...] they both was yoked onto it.  
(Pietsch 2005: 101)

• Observation: Linguistic variation in most present-day varieties:

Little or no variation:
(i) 3sg subjects invariably trigger the presence of -s;
(ii) Personal pronouns (apart from 3sg and 2sg thou) do not trigger -s when adjacent to the verb.

Variation:
All other subjects trigger -s variably (non-adjacency of subject and verb favors the use of -s; see Pietsch 2005 for details).

• The NSR figures prominently in traditional dialectological and sociolinguistic studies (for an overview cf. Tagliamonte 2002, Chambers 2004, Pietsch 2005), but from a theoretical point of view no convincing explanation and analysis has been put forward so far.
• This paper: Post-syntactic analysis of NSR effects.
• Basic idea: -s vs. -Ø mark the absence/presence of positively specified agreement features (person/number) in the minimal phonological phrase the finite verb is part of.

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2 (4c) shows that floating quantifiers such as both or all also give rise to the adjacency effect characteristic of the NSR.
2. Previous accounts

2.1 The syntax of NSR effects

• The probably most comprehensive syntactic account of a related phenomenon is Henry (1995), focusing on what she calls ‘singular concord’ in Belfast English.

(5)  a. The teachers is/was busy.  
(Henry 1995:27)  
b. They are/*is going.  
(Henry 1995:33)

• Basic idea: Link between morphological case marking and the subject’s capability of triggering agreement on the verb:
  (i) Only elements that are clearly marked as nominative (the pronouns I, we, he, she, they; you is treated as an exception) move to SpecAgrsP and trigger ‘standard’ agreement on the verb (i.e., 3sg -s vs. -∅ in all other contexts);
  (ii) Full DP subjects occupy SpecTP, from which they cannot trigger verbal agreement ⇒ insertion of the default ending -s (pure tense marker).

(6)  a. [CP [AgrsP They [Agr] are [TP [T [T’ VP going]]]]]
  b. [CP [AgrsP [Agrs’ TP The teachers [T’ is [VP busy]]]]]

• Conceptual problem: Position of the finite verb is dependent on the position of the subject.
• Empirical problem: While this approach accounts for the type-of-subject condition, it does not have much to say about the adjacency condition which characterizes all other NSR varieties.

2.2 Morphological aspects

• Basic question: What’s the feature specification of -s/-∅ in the NSR dialects?
• General problem: “Markedness paradox” (Pietsch 2005): -s is clearly the marked inflection in Standard English; the situation in the NSR dialects is more complex:
  (i) phrasal/non-adjacent subjects: -s as a default marker;
  (ii) Subject pronouns adjacent to the verb: -s seems to mark 3sg.
• Previous approaches:
  (i) -s with phrasal/non-adjacent subjects is a default inflection or pure tense/mood marker (Berndt 1956, Henry 1995, Pietsch 2005); problems: (a) accidental homophony of default -s and 3sg -s; (b) feature content of -∅?
  (ii) -s signals a difference in the categorial status of the subject (DP vs. pronoun, Pietsch 2005); problems: (a) -s with (adjacent) 3sg pronouns (and 2sg thou); (b) additional explanation necessary for position-of-subject constraint.
  (iii) -s is an agreement suffix that may not co-occur with pronouns that have been reanalyzed as prefixal agreement markers (Börjars & Chapman 1998); problems: (a) feature specification of -s unclear; (b) no account for the position-of-subject constraint (in they often talks, they must be a genuine pronoun; but then it is unclear why that form cannot be used in *they talks).

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3 Henry seems to assume that 3sg -s and default -s are separate markers, which happen to be homophonous.
4 But see de Haas (2008) for an account of the NSR based on Henry’s analysis.
3. A post-syntactic approach to the NSR

<table>
<thead>
<tr>
<th>Northern dialects of English</th>
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<tbody>
<tr>
<td>pron. subjects (adjacent to V)</td>
<td>elsewhere</td>
</tr>
<tr>
<td>1sg</td>
<td>sing-Ø</td>
</tr>
<tr>
<td>2sg</td>
<td>sing-Ø</td>
</tr>
<tr>
<td>3sg</td>
<td>sing-s</td>
</tr>
<tr>
<td>1pl</td>
<td>sing-Ø</td>
</tr>
<tr>
<td>2pl</td>
<td>sing-Ø</td>
</tr>
<tr>
<td>3pl</td>
<td>sing-Ø</td>
</tr>
</tbody>
</table>

Table 3: Verbal inflection (present tense), NSR dialects

(i) **Observations:** Different agreement patterns dependent on type/position of subject:
   (i) DP subjects: -s ending does not signal any person/number distinctions;
   (ii) Pronominal subjects (under adjacency): -s ending seems to signal the same set of distinctions as in Standard English (3sg vs. all other person/number combinations).

• **Basic claims:**
  (i) In the NSR dialects under discussion, there is only a single -s affix with a uniform specification (default marker/elsewhere case);
  (ii) The zero marker signals the presence of positive values for person or number features.\(^5\)
  (iii) Agreement is established in the post-syntactic components of grammar (cf. e.g. Embick & Noyer 2001, Ackema & Neeleman 2004, Bobaljik 2008):
    (a) Post-syntactic agreement rules that operate on feature bundles that are part of the same phonological phrase (cf. Ackema & Neeleman 2004); or
    (b) Insertion of dissociated agreement morphemes (copies of the subject’s phi-set) under adjacency (Embick 1997, Embick & Noyer 2001).

• **Adjacency effect:**

(7) -Ø marks the presence of positive specifications for [person] or [number] in the minimal phonological phrase the finite verb is part of.

• **-s with 3sg pronouns:** 3sg pronouns are characterized by the absence of (positive) specifications for [person] and [number]\(^6\) ⇒ **insertion of the elsewhere marker -s**

• **-s with phrasal subjects:** Phrasal subjects are mapped onto a separate phonological phrase (Cinque 1993). Their feature content is therefore not visible to the workings of the relevant agreement operations ⇒ **insertion of the elsewhere marker -s**

• The analysis makes available a new perspective on 3sg -s in Standard English: -s is not explicitly specified for [person] and [number], but rather sensitive to the presence/absence of positive feature values for [person] or [number] (see Haeberli 2002 for a related analysis).

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\(^5\) Alternatively, we might assume that the -s ending marks the absence of positive specifications for person or number in the immediate phonological phrase the finite verb is part of. While this analysis seems to be a technical possibility, it fails to capture the elsewhere/default character of -s in the relevant varieties (e.g., under non-adjacency etc.).

• Open questions:
  (i) Use of a disjunctive feature specification in (7);
  (ii) Variation in the use of -s in the context of phrasal subjects/non-adjacency;
  (iii) Conditions that favor the use of -s (e.g., subject gaps, inversion with full subjects, cf. Pietsch 2005:109ff. for details)?

• Ad (i): To avoid the use of disjunctive feature specifications (cf. e.g. Blevins 1995 for discussion), we can make use of the idea that inflectional features are organized into a feature geometry (Noyer 1997, Harley and Ritter 2002, Georgi 2010):

(8) REFERRING EXPRESSION (Agr/pronouns)

  PERSON

  SPEAKER  HEARER

  NUMBER

  PLURAL  (CLASS/GENDER)

• Basic assumptions:
  (i) Only positive values are present (e.g., “3rd person” = absence of [person]);
  (ii) A higher node is active only if one of its dependents contains positive feature values.

• Vocabulary items (verbal agreement)/NSR dialects:

(9) -Ø ↔ [R(EFERRING EXPRESSION)]
    /-z/ ↔ elsewhere

• Ad (ii): Grammar competition (Kroch 1989, 1994)?
  (i) Little or no variation in those contexts where the agreement systems of Standard English and the relevant dialects overlap;
  (ii) Variation in contexts where there is a conflict between the two systems.

• Ad (iii): Beyond the scope of this paper, but see the appendix for some relevant observations concerning historical stages of English.

4. Concluding summary
• Synchronic analysis of the NSR in terms of an agreement rule which operates post-syntactically and establishes agreement between elements that are part of the same (minimal) phonological phrase.
• The zero marker signals positive values for [person] or [number]; -s is analyzed as the elsewhere case.
• Position-of-subject constraint: No agreement can be established when the adjacency of verb and pronoun is disrupted by intervening material.
• Type-of-subject constraint: Full phrasal subjects are mapped onto a separate phonological phrase and thus do not trigger agreement on the verb.

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7 This was pointed out to us by Gereon Müller (p.c.). See Harley and Ritter (2002) for a more elaborate feature geometry.
Appendix: The historical development of the NSR

A.1 Facts

- **Historical stages in the rise of the NSR:**
  1. During the transition from OE to northern ME, 2sg -es, 3sg -eð and pl -að / -as fell together in -(e)s (rise of an underspecified inflectional marker);
  2. After the loss of vowels in the final syllable, northern ME exhibited an opposition between 1sg -Ø and all other contexts (-s);
  3. Extension of -s to 1sg; **NSR**: introduction of the zero marker in plural contexts (lexical verbs + adjacency): first with 1pl/2pl, later with 3pl;
  4. Analogical extension to forms of be (including was/were);* replacement of thou is with you are (originally a plural form) in the EModE period (not in all dialects).

<table>
<thead>
<tr>
<th>Old English</th>
<th>Northern ME I</th>
<th>Northern ME II</th>
<th>Northern ME III/ EModE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sg sing-e</td>
<td>sing-e</td>
<td>sing-Ø</td>
<td>I sing-Ø</td>
</tr>
<tr>
<td>2sg sing-es(t)</td>
<td>sing-es</td>
<td>sing-s</td>
<td>you sing (&lt; thou sing-s)</td>
</tr>
<tr>
<td>3sg sing-eð</td>
<td>sing-es</td>
<td>sing-s</td>
<td>he/she/it sing-s</td>
</tr>
<tr>
<td>1pl sing-að</td>
<td>sing-es</td>
<td>sing-s</td>
<td>we sing-Ø</td>
</tr>
<tr>
<td>2pl sing-að</td>
<td>sing-es</td>
<td>sing-s</td>
<td>you sing-Ø</td>
</tr>
<tr>
<td>3pl sing-að</td>
<td>sing-es</td>
<td>sing-s</td>
<td>they sing-Ø (&lt; they sing-s)</td>
</tr>
</tbody>
</table>

Table 4: Historical development of verbal inflection, Northern dialects

- NSR is not attested in late (northern) OE records (dating from the mid-10th century); it appears to be firmly established in the works of Richard Rolle (early (northern) ME, 1290–1349):

  (10) *Some þe devell deceyves þurgh vayne glory, þat es ydil joy: when any has some the devil deceives through vain glory that is idle joy when any has pryde and deilty in þamself of þe penance þat þai suffer, of gode dedes pride and delight in themselves of the penance that they suffer of good deeds þat þai do. of any vertu þat þai have; es glad when men loves þam, sari that they do of any virtue that they have is glad when men love them sorry when men lackes þam, has envy to þam þat es spokyn mare gode of þam. of when men lack them have envy to them that is spoken more good of than of þam; them (CMROLLEP, 86.368)

  (11) *He says þat he lufes þam þat lufes hym, and þai þat arely wakes til hym he says that he loves them that loves him and they that early wakes till him sal fynde him*. shall find him (CMROLLEP, 76.212)

  (12) *and God confortes his lufers mare þam þai wene þat lufes by noght. and God comforts his lovers more than they think that love him not (CMROLLEP, 63.44)

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* Apparently, the use of *is* and *was* in the plural was never as categorically as the use of -*s* with lexical verbs (cf. e.g. Montgomery 1994). However, it seems that present-day dialects exhibit a different tendency, in that they preserve the NSR more strongly with forms of *be* (Pietsch 2005).
A.2 Towards an analysis

• **Basic claims:** After the breakdown of the OE agreement system, the NSR developed via a combination of generalized V2 in the northern varieties + agreement weakening in inversion contexts, which was also at work in OE (and turned into the NSR after the loss of V2).

• **Observation:** (late) OE exhibits agreement variation/weakening in inversion contexts (Quirk & Wrenn 1955:42, Campbell 1959:296, van Gelderen 2000): In cases where a 1pl/2pl pronoun follows the inverted finite verb, regular agreement is suspended (present indic. -að, past indic. -om replaced by schwa).⁹

(13) a. Ac hwæt *wille* we þonne secgan [...] but what want we then say (Alfred, *Boethius*, 22.23; van Gelderen 2000: 191)

b. Nu *hæbbe* ge gehyred [...] now have you heard (Ælfric, *Catholic Homilies*, 280.4; van Gelderen 2000: 193)

• **C-agreement in OE:** Contextual allomorphy of 1pl/2pl forms dependent on the structural position of the finite verb (cf. e.g. Roberts 1996):¹⁰

(i) **C°** in contexts with fronted operators (wh, negation etc.);

(ii) A lower inflectional head (*Infl*°/*T°*) in all other contexts (cf. e.g. Cardinaletti & Roberts 1991/2002; Pintzuk 1999; Hulk & van Kemenade 1995; Kroch & Taylor 1997; Haeberli 1999, Fischer et al. 2000, and many others):

(14) a. \([\text{CP Op } [\text{C } + \text{C} + \text{V} \text{fin} \text{[TP subject pronoun } [\text{T } + \text{T } + \text{V} \text{fin} \text{[VP ... ]}]]]] \Rightarrow \text{agreement weakening}\]

b. \([\text{CP XP } [\text{C } + \text{C} + \text{V} \text{fin} \text{[TP subject pronoun } [\text{T } + \text{V} \text{fin} \text{[VP subject ... ]}]]]] \Rightarrow \text{regular agreement}\]

c. \([\text{CP XP } [\text{C } + \text{C} + \text{C} + \text{V} \text{fin} \text{[TP subject pronoun } [\text{T } + \text{V} \text{fin} \text{[VP subject ... ]}]]]] \Rightarrow \text{regular agreement}\]

• **Northern varieties:** The OE pattern in (13) was generalized to all contexts with adjacent non-3sg subject pronouns, leading to the zero ending after the loss of final schwa (cf. Rodeffer 1903, Pietsch 2005).¹¹

• **Why only in the northern dialects?** In contrast to the southern OE dialects, the northern varieties developed generalized V2 (cf. Kroch & Taylor 1997, Trips 2002):

(15) \([\text{CP XP } [\text{C } + \text{C} + \text{V} \text{fin} \text{[TP subject pronoun/DP subject } [\text{T } + \text{T } + \text{V} \text{fin} \text{[VP subject ... ]}]]]]\]

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⁹ Similar observations hold for early OHG (1pl), cf. Braune & Reiffenstein (2004:262), and present-day Dutch (Ackema & Neeleman 2004):

(i) a. *Jij* loop-\(\text{t}\) dagelijks met een hondje over straat.

you walk-2SG daily with a doggy over street

b. Dagelijks loop-\(\text{Ø}\) *jij* met een hondje over straat.

daily walk you with a doggy over street

(Ackema and Neeleman 2004: 193)

¹⁰ **Alternative analysis:** Syncopation for purely phonological reasons (assignment of word stress): 1pl/2pl pronouns are clitics that attach to the verb; to ensure that word stress falls on the first/penultimate syllable (most often the verb stem), the inflectional ending is replaced by schwa, which cannot bear stress (see Haiman 1971 and Haiman and Benincà 1992 on a similar constraint in Rhaeto-Romance varieties).

¹¹ Rodeffer’s proposal is criticized by Berndt (1956), who argues that quantitative data from Northumbrian OE texts indicate that there is no direct link between agreement weakening in OE and the NSR (more precisely, Berndt argues that the evidence available to us suggests that agreement weakening had already been in decline in the northern varieties before -s was generalized to all persons and numbers). See Pietsch (2005:50ff.) for comprehensive discussion and a critical assessment of Berndt’s arguments.
Result: The context that induced agreement weakening ($V_{\text{fin}}$ in C) was much more frequent than in the southern variants (i.e., syncopated forms were not confined to operator contexts, but occurred in all contexts with 1pl/2pl subjects). ⇒ Extension of “agreement weakening” to all 1pl/2pl contexts

Extension to 3pl: In ME, the Northern varieties replaced the original OE 3pl pronoun $hīo$/hēo with the Scandinavian $ðai$ (which later spread to all varieties). This innovation led to cluster reduction of [s+ð] to [ð] for phonetic reasons (which was possibly promoted by analogical pressure (1pl/2pl), cf. Pietsch 2005:56).

After the loss of generalized V2, learners could not any longer attribute “agreement weakening” to properties of the C-head ⇒ reanalysis in terms of a post-syntactic agreement rule that is sensitive to adjacency and distinguishes between (non-3sg) pronouns and non-pronouns

Speculation: Rise of the NSR was promoted by language contact with the Brythonic Celtic languages, which exhibit a similar distinction between pronouns and non-pronouns (cf. Hamp 1976, Klemola 2000, Filppula, Klemola and Pitkänen 2002, de Haas 2008):

(16) a. gwelsan (nhw) ddraig.
   saw-3PL (they) dragon
   ‘They saw a dragon.’

b. gwelodd/*gwelsan y dynion ddraig.
   saw-3SG/saw-3PL the men dragon
   ‘The men saw a dragon.’

(Welsh; Borsley and Roberts 1996:40)

“Markedness reversal”: ‘weak’ syncopated OE forms turn into the marked inflections in the NSR dialects (signaling positive feature values):

a) -s ending generalized to all contexts in the northern dialects;

b) Reanalysis of OE agreement weakening leads to zero ending in the NSR dialects: (i) 1pl/2pl; (ii) extension to 3pl; (iii) extension to 2sg (2pl you >>> 2sg);

c) Extension of -Ø to 1sg in NSR contexts facilitates a reanalysis of -s as the elsewhere marker (with -Ø signaling positive values for [person] and [number]).
References


Hulk, Aafke and Ans van Kemenade. 1995. Verb second, pro-drop, functional projections and language


Trips, Carola. 2002. From OV to VO in Early Middle English. Amsterdam: John Benjamins.