Case, Agreement and EPP: Evidence from an English-speaking child with SLI[1]

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1. Introduction

Chomsky (1998, 1999, 2001) has recently proposed a minimalist account of the morphosyntax of case. Simplifying somewhat, we can say that under Chomsky's account, a subject will originate internally within the verb phrase and be assigned nominative case and raise to specifier position within IP if the subject agrees in person and number with a tensed INFL constituent which has an EPP feature (i.e. a feature requiring it to project a specifier)[2]. Chomsky's analysis is an attempt to characterise particular aspects of a naturally occurring state of the Language Faculty ('an internal property of persons', as Chomsky 2001, p.1 puts it), and – given this goal – an important question to ask is whether the formal apparatus proposed by Chomsky adequately characterises the relevant state of the Language Faculty. From this perspective, data from (e.g.) dialect variation, language acquisition and language disorders can potentially offer complementary perspectives on the workings of the Language Faculty which may not necessarily be available from mature native grammars. In this paper, we use naturalistic data from a four-year-old American child with Specific Language Impairment/SLI (here referred to as JC[3]) to challenge aspects of Chomsky's

[1] An outline of an extended version of this paper was presented by Andrew Radford in oral form at the University of Tromsø in May 2001 and at the Max-Planck Institut fur Psycholinguistik (Nijmegen) in June 2001; we are grateful to members of the audience (and also to Martin Atkinson, Bob Borsley, Noam Chomsky, Harald Clahsen, Claudia Felser, Roger Hawkins and Anders Holmberg) for helpful discussion of particular points. Specific suggestions are acknowledged more directly in relevant parts of the text.

[2] Throughout, we will use the traditional label INFL/I to denote the relevant constituent rather than the label T which is used by Chomsky and in much other recent work. This is in part because we will argue later that (in some of its occurrences) INFL lacks tense features, calling into question the appropriateness of the label T.

[3] JC is a white middle-class American boy from Western Massachusetts with white parents who speak Standard American English. As reported in Ramos and Roeper (1995), when tested he had an average score in non-verbal intelligence, a moderately low score in verbal intelligence, moderately low scores in comprehensive and expressive subtests of the TOLD-P, average receptive and expressive vocabulary, age-appropriate articulation skills, normal hearing acuity, no known neurological or emotional problems, and an MLU of 5.4 at age 4;6. The JC corpus comprises 8 recordings of his spontaneous speech (each of roughly 10 minutes in duration) at ages 4;3.15, 4;4.20, 4;5.3, 4;5.14, 4;5.16, 4;5.23; 4;6.3, and 4;6.12, yielding a total corpus of 386 utterances.

account of case-marking and EPP. The claim that SLI data provide us with insights into the nature of the morphosyntax of case is familiar from earlier work by Loeb and Leonard 1991, Ramos and Roeper 1995, Clahsen, Bartke and Göllner (1997) Rice, Noll and Grimm (1997), and Wexler, Schütze and Rice 1998 – though the conclusions drawn here differ from those in earlier work in significant ways. We begin by outlining Chomsky's account of case-marking and EPP in §2.

2. The morphosyntax of case

Chomsky (1998, 1999, 2001) posits that case-marked noun and pronoun expressions enter the syntax with an unvalued case-feature, and serve as a *Goal* whose case feature is valued in the course of the derivation via an agreement relation with a c-commanding *Probe* (i.e. head) which carries a specific set of (semantically) interpretable features. Although Chomsky offers no precise formulation of case-marking (and in particular has nothing whatever to say in recent work about genitive case assignment), we shall assume that an account along the lines of (1) below is in keeping with the spirit of work on Minimalism:

(1) An unvalued case-feature on a (noun or pronoun expression serving as a) Goal is valued as specified below (and deleted[4]) via agreement in person and number with a c-commanding Probe (= higher head) which carries a specific set of interpretable features; the Goal's case feature is valued as:

(i) *nominative* if the Probe is a tensed INFL

(ii) *accusative* if the Probe is a transitive v

(iii) *genitive* if the Probe is a definite D

To give some idea how (1) works, consider (a simplified version of) the derivation of a sentence such as:

(2) Mary has burned John's letter

By hypothesis, the noun *letter* is merged with an abstract POSS morpheme[5] (which assigns to

[4] In Chomsky (1998, 1999), it is argued that case-features must be deleted in the syntax, since they are uninterpretable and hence (if not deleted) will cause the derivation to crash at the semantics interface (SEM). In Chomsky (2001, p.14), it is suggested that case features (once valued) are sent to the phonological component at the point of TRANSFER, and hence do not appear at SEM. As Noam Chomsky (pc) notes, it 'doesn't seem to be easy to distinguish' these two alternatives.

[5] In some languages, POSS appears to have an overt exponent – e.g. *sitt* in Norwegian *Peter sitt hus* 'Peter's house', as Merete Anderssen points out to me. POSS might be viewed as a light-noun of some kind, as in Carstens (2000), or Adger's (2001, p.181) proposal that 'possessor theta-roles are always assigned to the specifier of little *n*'. The reader might wonder why we don't suppose that *John* originates in spec-NP as the specifier of the noun *letter*. One reason is that such an analysis is incompatible with the binary-branching theory of phase structure is assumed in Minimalism;

letter the theta-role of POSSESSEE[6]), and the resulting constituent in turn merges with its specifier *John* (which is assigned the theta-role of POSSESSOR) to form the structure (3) below[7]:

(3) [POSSP John [POSS ø] letter]

The resulting POSSP is in turn merged with a null definite determiner [D ø], so forming:

(4) [DP [D ø] [POSSP John [POSS ø] letter]]

The null determiner [D ø] carries abstract agreement features and agrees with the possessor *John*, thereby valuing the unvalued case-feature on *John* as genitive in accordance with (1iii); hence *John* is eventually spelled out as the genitive form *John's*[8]. Since (by hypothesis) the null determiner is definite in interpretation[9], (4) will be roughly paraphraseable as '*the* letter from John'[10]. Following Kayne (1994), we assume that the genitive possessor *John's* does not raise to

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another is that (as argued by Grimshaw 1990) it is implausible to suppose that a non-event-denoting noun like *letter* has an argument structure and theta-marks its specifier (assigning it the role of POSSESSOR).

[6] This term is used by Zribi-Hertz (1997), and corresponds to the more traditional term POSSESSUM.

[7] All labelled bracketings are simplified throughout by showing only heads and maximal projections, not intermediate projections.

[8] I am following Abney (1987) in taking *'s* to be a genitive case marker here. An alternative analysis of *'s* is to take it as a syntactic head – e.g. the head POSS of POSSP, or the head D of DP (as in Chomsky 1995, p.263), or the head I of an IP complement of D (as in Kayne 1994, p.105). Under the *head* analysis, it is tempting to take *'s* in *Mary's laughter* to mark agreement with *Mary* (in the same way as auxiliary *'s* does in *Mary's laughing*): but this is not straightforward since *'s* allows its specifier to be singular or plural (cf. *the man's/the men's behaviour*) and first, second or third person (cf. *we/you/those three men's behaviour*): hence if *'s* is an INFL constituent, it more closely resembles *can* (in not overtly inflecting for agreement) than *be*. There are a number of problems with (any variant of) the head analysis. One is that we have to posit that *'s* has a null allomorph which (for mysterious reasons) is used with genitive pronoun specifiers like *my/your/his* etc – unless we are willing to countenance *ad hoc* morphological operations which map e.g. *me's* into *my*. Another is that it is not clear in what sense the specifier of *'s* is genitive, since *you* appears to be a nominative/accusative/default pronoun in structures like *you two men's behaviour*. A third is that the head analysis offers no straightforward account of why *'s* does not allow certain types of pronominal specifier like *that*, *this*, *what*? *which?*, *many*, *both*, etc. (cf. *which book's cover?/*which's cover?*). Note that throughout I have ignored the *adjectival* use of *'s* described in Zribi-Hertz 1997, (illustrated by sentences like 'There is a small green *girl's* bicycle on the lawn') since there are no instances of this use in the JC corpus

[9] Lyons (1999, p.23 fn.12) claims that the null determiner in possessive structures is always definite in interpretation: to simplify exposition, this is the assumption we have made here. However, Szabolsci (1994, p.225) argues that the null determiner may be either definite or specific in interpretation, noting that in a sentence like *I haven't read Chomsky's poem*, 'the poem may be definite, his only poem, or merely specific, one of his poems that is salient in discourse.' Claudia Felser points out that additional complications arise in relation to examples like *Every student read someone's poem*, if this permits a nonspecific indefinite reading. If Lobeck (1990) and Murusagi and Saito (1994) are correct in their observation that only a ϕ-complete functional head allows ellipsis of its complement, the fact that *`s* possessives allow complement ellipsis (in structures such as 'John's car is red, and *Mary's* is yellow') suggests that the relevant determiner is ϕ-complete.

[10] Abney (1987) proposes a very different analysis of nominals like *John's letter* under which *John* would originate as the complement of (and be theta-marked by) the noun *letter*, and would then raise to spec-DP in order agree with and be assigned genitive case by D. However, there are a number of aspects of Abney's analysis which are problematic. For one thing, the assumption that *John* is a θ-marked argument of the noun *letter* is untenable if we follow Grimshaw (1990) in positing that only nominals denoting complex events can have arguments. Moreover, agreement between D and the noun complement *John* is problematic within a minimalist framework, since it is not

spec-DP but rather (on the analysis outlined here) remains in situ in spec-POSSP[11].

The resulting DP in (4) is then merged with the verb *burn*, to form:

(5) [VP [V burn] [DP [D ø] [POSSP John's [POSS ø] letter]]]

The VP in (5) in turn is merged with a null transitive (causative) light-verb [v ø], and the resulting structure merged with the subject *Mary* to form:

(6) [vP Mary [v ø] [VP [V burn] [DP [D ø] [POSSP John's [POSS ø] letter]]]]

The transitive light-verb [v ø] carries abstract agreement properties and values the unvalued case-feature of the noun *letter* as accusative in accordance with (1ii). The verb *burn* raises to adjoin to the light-verb [v ø], deriving (7) below:

(7) [vP Mary [v *burn*+ø] [VP [V *t*] [DP [D ø] [POSSP John's [POSS ø] letter]]]]

We assume (following Chomsky 2001, p.9) that 'V → v movement is obligatory'[12].

The vP in (7) is then merged with a (present-tense) I constituent containing the auxiliary HAVE[13] (as a result of which, the verb *burn* is eventually spelled out as the perfect participle *burned*). The I constituent containing HAVE agrees with the subject *Mary*, and hence is eventually spelled out as *has*: the unvalued case-feature on *Mary* is valued as nominative in accordance with (1i), by virtue of agreeing with the tensed auxiliary *has* – hence, if *Mary* is replaced by a pronoun, the nominative form *she* is required. I carries an EPP feature which triggers raising of the subject *Mary* from spec-vP to spec-IP, with the result that *Mary* thereby becomes the subject of *has*, as shown in (8) below (where t marks a trace copy of *Mary* which will eventually be given a null spellout):

(8) [IP Mary [I has] [vP t [v *burn*ed] [VP [V *t*] [DP [D ø] [POSSP John's [POSS ø] letter]]]]]

Chomsky (1999, p.6) suggests that I can only have an EPP-feature when it is ϕ-*complete* (i.e. when it carries a complete set of person/number agreement features): for convenience, we refer to this as the *full agreement* account of EPP. Since I agrees in person and number with *Mary* in (8), this condition is clearly met.

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obvious why D should agree with the complement *John* rather than the head N *letter*. In addition, Kayne (1994, p.27) presents evidence from *binding* facts that possessors do not raise to spec-DP in English.

[11] Independent evidence in support of the assumption that the possessor remains in spec-POSSP (and does not raise to spec-DP) comes from the non-extractability of possessors in sentences like **Whose did he borrow car?,* which can be attributed to violation of Chomsky's *Phase Impenetrability Condition* if DP is a phase.

[12] We leave aside here the question of whether V-to-v movement is a syntactic or phonological movement operation.

[13] To simplify exposition, we assume that HAVE originates in (rather than raising to) INFL.

Finally, the resulting IP in (8) is merged with a null complementiser which marks the declarative force of the overall sentence, so forming the CP shown in simplified form in (9) below:

(9) [CP [C ø] [IP Mary [I has] burned John's letter]]
And (9) is the superficial structure associated with (2) *Mary has burned John's letter*.

Since case is most clearly marked in English on personal pronouns, in (10) below we outline the assumptions we make here about how personal pronouns are spelled out in English[14]:

(10) 1Sg = *I* if nominative
= *my* if genitive
= *me* otherwise

1Pl = *we* if nominative
= *our* if genitive
= *us* otherwise

2 = *your* if genitive
= *you* otherwise

3MSg = *he* if nominative
= *his* if genitive
= *him* otherwise

3FSg = *she* if nominative
= *her* otherwise

3NSg = *its* if genitive
= *it* otherwise

3Pl = *they* if nominative
= *their* if genitive
= *them* otherwise

An interesting possibility opened up by the entries in (10) is that *default* (i.e. *otherwise*) forms fulfil a dual function, either serving to spell out a particular case (e.g. *me* spells out accusative case on the object of a transitive verb in *Don't hurt me!*) or serving to spell out *caseless* pronouns. It is plausible to suppose that pronouns are caseless (i.e. have no case feature) when they fall within the domain of no case assigner – as with *me* in the examples below, where *me* serves as a dislocated Topic in (11a), as the subject of a so-called *Mad Magazine* sentence in (11b), and as a sentence fragment in (11c):

(11)(a) *Me*, I love chocolate
(b) *Me* give up chocolate? Never!
(c) *Me* (e.g. in reply to 'Who wants a piece of chocolate?')

If we follow Chomsky in positing that case-marked pronouns enter the syntax carrying an unvalued and uninterpretable case-feature which must be valued and deleted via agreement with a specific type of Probe, it follows that pronouns like *me* in (11) which do not agree with any other constituent cannot carry a case feature, since if they did the derivation would crash, in part because the case feature would remain unvalued and so the phonological component would not be able to spell out the pronoun[15], and in part because the case feature would remain undeleted

[14] 1/2/3 indicate *person*; M/F/N indicate masculine/feminine/neuter *gender*; Sg/Pl indicate singular/plural *number*. (10) is simplified by ignoring the distinction between weak/strong possessives like *me/mine*, *your/yours* etc.

and so result in a semantic representation (SEM) containing a feature which cannot be given any semantic interpretation. In other words, within the framework assumed by Chomsky, it is plausible to suppose that a noun or pronoun expression has a case feature if it agrees with an appropriate kind of Probe, but no case feature otherwise[16].

3. The nature of SLI children's grammars

The grammatical errors made by children with SLI might in principle be a reflex of either a *lexical* deficit or a *syntactic* deficit (or both). As an example of a lexical deficit, consider a (hypothetical) child who has not yet acquired the pronoun *she* (and hence has a defective pronoun paradigm) and extends *her* from use as a genitive/accusative form to an additional use as a nominative form, producing utterances like:

(12) Her mummy smack her, cos her is naughty

For such a child, 3FSg pronouns would have the unique morphological spellout shown in (13a) below, whereas for adults they would have the dual spellout shown in (13b):

(13)(a) CHILD
3FSg = *her*

(b) ADULT
3FSg = *she* if nominative
her otherwise

This would mean that for an SLI child who spells out 3FSg pronouns as in (13a), a sentence like *Her is naughty* would not involve a syntactic error (if the child 'knows' that *is* requires a third person singular nominative subject) but rather would involve a lexical error (i.e. an error in the lexical entry (13a) which specifies how the relevant third person feminine singular pronoun is spelled out).

Alternatively (and of more direct relevance to the present paper), grammatical errors may result from a *syntactic* deficit of some kind. Recent work has suggested that SLI may involve a selective feature-deficit, resulting in the production of structures which are *underspecified for* (i.e. lack) specific types of grammatical feature. Of particular relevance to the account of case-marking given in (1) above are three types of claim made in (14) below:

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[15] At least, if we assume that the PF component can't spell out any item which has an unvalued feature. This is not of course a necessary assumption, in that we might alternatively assume that (e.g.) a 3MSg pronoun with an unvalued case feature will be spelled out as the default form *him*.

[16] Siguruðsson (1996, p. 14) suggests that we 'conceive of default forms as forms that have unspecified feature values'. This would suggest that default forms like *me* in (11) are not caseless, but rather have an unvalued and uninterpretable case feature [*uCase*]. Any item carrying this unvalued feature is then spelled out as the *otherwise* (default) form in accordance with (10). However, the problem which this raises (within the framework of Chomsky 1998, 1999, 2001) is that there will seemingly be no way to delete the uninterpretable [*uCase*] feature, causing the derivation to crash at SEM.

(14) SLI children show

(a) a *tense deficit* – sometimes omitting tense features in obligatory contexts (See e.g. Rice, Wexler and Cleave 1995; Rice and Wexler 1996; Rice Wexler and Herschberger 1998)

(b) an *agreement deficit* – sometimes omitting agreement features in obligatory contexts (See e.g. Clahsen 1989, Loeb and Leonard 1991, Ramos and Roeper 1995, Clahsen, Bartke and Göllner 1997)

(c) a *tense and agreement* deficit – sometimes omitting tense and/or agreement features in obligatory contexts (See e.g. Wexler, Schütze and Rice 1998)

Given the formulation of case-marking in (1) above, a failure to mark tense or agreement (or both) in obligatory contexts would be expected to result in concomitant case-marking errors. In the various sections below, we look at how JC case-marks objects, possessors and subjects, and ask whether the relevant data are consistent with the account of case-marking given in (1) above.

4. Case-marking of objects

If we look at the personal pronoun objects used by JC, we find that 100% (78/78) of his personal pronoun objects are (potential) accusative/default forms[17], as the data in (15) below show:

(15) **Frequency of pronouns used as objects by JC**
me = 10; *you* = 5; *him* = 9; *her* = 5; *it* = 38; *them* = 11

Illustrative examples of his use of personal pronoun objects are given in (16) below:

(16) He bit *me*. Long time ago, you give *me* that first. Dirt is falling all over *him*. I know *her* Me just jump overed *it*. Somebody else asked my mom to play outside with *them*.

JC's accusative case-marking of objects is in line with the findings of Wexler, Schütze and Rice (1998, p.331), who report that the 5-year-old English SLI children in their study showed more than 99% correct case-marking of object pronouns.

At first sight, this might seem to call into question *agreement-deficit* accounts of SLI, since if JC shows 100% correct accusative case-marking of transitive objects, we might conclude that he always marks agreement between a transitive Probe and an object Goal in appropriate contexts.

[17] It does of course need to be borne in mind that *you/it* can also function as nominatives, and *her* as a genitive.

However, suppose that JC does indeed sporadically fail to mark agreement on transitive Probes. If so, we should expect to find that the (object) Goal would then surface in a caseless default form (since any case feature on the Goal could not be valued or deleted if the Probe carried no agreement features). But since the caseless default form is homophonous with the accusative form in English, this would mean that agreeing objects would surface as accusative forms, and non-agreeing objects as caseless (accusative lookalike) default forms. Given that the two are homophonous in English, there is no way of telling from the data in (15/16) whether the object is an agreeing accusative pronoun or a non-agreeing caseless pronoun.

More revealing in this respect would be a language like German, Dutch or Russian in which nominative is the default case. In this connection, it is interesting to note that Schütze (1997, pp. 244-250) reports that normally developing German, Dutch and Russian children produce default (nominative lookalike) objects alongside accusative objects. This being so, we might expect to find that some of JC's objects are agreeing accusatives, and others are non-agreeing caseless default forms. Potential evidence that at least some of the objects used by JC are caseless forms comes from sentences like (17) below:

(17)(a) Me bigger *him*
(b) And then, you could get lots *fish* in there
(c) Me go *beach* not far away

In all three structures, the italicised object is used by JC without the transitive preposition which would be required to case-mark it in the adult grammar, suggesting that the object is a caseless noun or pronoun expression which has no case-feature to be valued. Moreover, in (17c) and (18) below:

(18)(a) Me teacher make *cake*
(b) I got my hair from *barber*

the italicised object is a bare count noun which – if we follow the assumptions made by Hoekstra, Hyams and Becker (1998), Hoekstra & Hyams (1998), and Hoekstra and Hyams (1999) – might be taken to lack number (and perhaps person) features, and hence to be unable to enter into a full agreement relation with the (light) verb/preposition of which it is the object: and if the verb lacks object-agreement features, its object must be caseless (since otherwise its uninterpretable case feature would remain undeleted, causing the derivation to crash)[18].

[18] Note that the claim that an object which lacks person/number features must be caseless does not entail that an object carrying person/number features need carry case, since whether or not the object carries case will depend on whether the verb/preposition agrees with it (which may or may not be the case if the object has person/number

5. Case-marking of possessors

The frequency of the various case-forms which JC uses to mark possessors in possessor+noun structures is listed in (19) below:

(19) **Frequency of forms used by JC to mark possessors**

(a) genitive	*my* = 12; *our* = 1; *your* = 1
(b) accusative	*me* = 16; *him* = 5; *them* = 3
(c) nominative	*he* = 9
(d) indeterminate[19]	*you* = 2; *her* = 2; bare (*s*-less) nominal = 7

Typical examples of the various kinds of possessor used by JC are given in the correspondingly numbered examples in (20) below:

(20)(a) But them cut *my* hair real tiny
(b) He lost *him* duck
(c) Only *he* mom can teach him make it good
(d) Where *Giovanni* sticker? (= 'Where's Giovanni's sticker?')

On the face of it, it would seem as if JC case-marks possessors not only as genitive (cf. *my*, *our*, *your*), but also as accusative (cf. *me*, *him*, *them*) and nominative (cf. *he*)[20]; his nominal possessors are always bare (i.e. lack genitive *'s*). Let's look at each of the relevant kinds of structure in turn.

5.1 Genitive possessors

As the table in (19) above shows, JC produces a number of structures with genitive possessors, e.g. in sentences such as those below:

(21)(a) *My* dad make eggs, but mushy eggs
(b) Me eat all *our* food
(c) Only you can brush *your* teeth very good

In default of evidence to the contrary, it would seem reasonable to suppose that JC's genitive have essentially the same morphosyntax as their adult counterparts, so that (e.g.) *my dad* in (21a) would

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features, but cannot be the case if the object lacks these). It may be that JC's apparent use of the complementiser *for* with a null subject in *Why her need this? Oh, so for to stick in here* provides further evidence that he has not mastered the case/agreement properties of transitive probes (in this case of the transitive complementiser *for*) as yet, since *for to* infinitives with null subjects are not characteristic of the variety of English he is acquiring. Roger Hawkins points out that nothing in the text precludes the possibility (however unlikely) that JC has not acquired object-agreement at all at this stage, and that JC's objects are therefore uniformly agreementless and caseless. However, the fact that JC generally uses appropriate prepositions (including the expletive genitive preposition *of*) to case-mark oblique objects would suggest that he has some tacit understanding of the case and agreement properties of objects.

[19] *You* and bare nominals could be nominative or accusative; *her* could be accusative or genitive.

[20] Some of the pronouns which JC uses to mark possession are clearly potentially ambiguous: e.g. *you* and bare nominals could be nominative or accusative, and *her* could be accusative or genitive.

be analysed as having the structure shown below:

(22) [DP [D ø] [POSSP *my* [POSS ø] dad]]

with *my* being assigned genitive case (in accordance with (1iii) above) via an abstract agreement relation with the null definite determiner [D ø] heading the overall DP.

5.2 Nominative possessors

Alongside genitive possessors, JC also produces structures containing nominative possessors like those in (23) below:

(23)(a) But, *he* bus is over here
(b) An owl did this with *he* eyes
(c) *He* family, he lost *he* family

Since nominative possessors do not occur in adult English and have not been reported in studies of normally developing children (e.g. Radford and Galasso 1998 report finding only genitive and accusative possessors), it might at first sight seem as if JC has developed a non-native case system of his own for assigning nominative case to possessors. Since nominative possessors are also found in (adult) Hungarian, a question which arises in relation to sentences such as (23) is whether there may be parallels between JC's use of nominative possessors and the use made of them in (adult) Hungarian.

Hungarian allows both dative and nominative possessors, as the following examples (from Szabolsci 1994, p.180) illustrate:

(24)(a) a *Mari* kalapjai (*Mari* = nominative)
the Mary hats 'Mary's hats'
(b) *Marinak* a kalapjai (*Marinak* = dative)
Mary the hats 'Mary's hats'

Nominative possessors follow and dative possessors precede the D constituent *a* 'the', suggesting that dative possessors are in spec-DP and nominative possessors occupy some position below D (e.g. spec-POSS in terms of the POSSP analysis outlined earlier)[21]. Could it be that JC's nominative possessors have a syntax parallel to that of Hungarian nominative possessors?

From a learnability perspective, such a (nominative-possessor) analysis would be undesirable in principle, since it raises the question of how JC learns the 'wrong' (nominative) case-marking for

[21] As would be expected (given Chomsky's *Phase Impenetrability Condition*) if DP is a Phase, dative possessors can be extracted under A-bar movement, but nominative possessors cannot.

possessors (given that his speech input contains no examples of nominative possessors). Moreover, there is strong empirical evidence against the claim that JC case-marks possessors as nominative. Note (from the table in (19) above) that all 9 of the examples of unambiguously nominative possessors which JC produces involve the use of *he* as a possessor. If we were to posit that JC has acquired a non-native case-marking system which allows him to assign nominative case to possessors, we should expect him to be using not only *he* as a possessor, but also other nominative pronouns he uses like *I*, *we*, and *they*: the fact that he uses *no* other unambiguously nominative pronouns as possessors suggests that he has not developed a Hungarian-style case-marking system which licenses nominative possessors. So why does he use *he* as a possessor?

The answer seems to be that his *he* possessors are the result of a lexical gap, in that he has not yet acquired the adult genitive form *his* and generalises *he* from nominative use to genitive use. Evidence for this comes from the table in (25) below:

(25) **Frequency of *he/him/his* in nominative, accusative and genitive contexts for JC**

Pronoun form	nominative contexts	accusative contexts	genitive contexts
he	67	0	9
him	3	10	5
his	0	0	0

Recall from (19) above that JC generally alternates between accusative/default possessors like *me* and genitive possessors like *my*. His *him* possessors in (25) can plausibly be taken to be accusative/default forms, so we would expect to find him also using genitive *his* possessors as well. But in fact he does not seem to have acquired *his* at all, and in place of *his* seems to use *he*. This suggests that there is a *lexical gap* in JCs pronoun paradigm (relative to the adult pronoun system) in that he has not yet acquired *his* and extends *he* to use as a genitive as well as a nominative pronoun[22]. Under this analysis, 3MSg pronouns have a different spellout in JC's grammar than in the adult grammar, as shown informally in (26) below:

(26)

ADULT GRAMMAR	**JC'S GRAMMAR**
3MSg = *he* if nominative	3MSg = *he* if nominative or genitive
= *his* if genitive	= *him* otherwise
= *him* otherwise	

If (as argued here) *he* can indeed function as a genitive pronoun in JC's grammar, it follows that we no longer need assume that JC has developed a non-native case-marking system which allows

[22] A question raised by Roger Hawkins is why JC should extend *he* rather than *him* to use as a genitive. One possible answer is that he hypothesises that genitive forms are morphologically distinct from default forms.

him to assign nominative case to a possessor: hence, all his *he* possessors can be treated as genitive possessors.

An interesting corollary to JC's use of *he* as a (genitive) possessor comes from sentences like (27) below which (at first sight) might seem to suggest that JC is using the reflexive anaphor *heself* as a nominative object:

(27)(a) He burn *heself* here (b) No, he could burn *heself*

However, it seems unlikely that *heself* is a nominative object here. After all, JC uses no other (potentially) nominative objects whatever – as we see from the fact that all 78 of the other personal pronoun objects he uses are (potential) accusative forms (see (15) above). Rather, it seems more likely that JC analyses reflexive anaphors as structures of the form *possessor+self*, with the possessor being either genitive or accusative: and indeed we find that the only other *self* forms produced by JC are *myself*, *herself* and *himself* (i.e. structures of the form *genitive+self* and *accusative+self*). On this view, *heself* is of the form *genitive+self*[23].

Overall, then, there seems to be no reason to suggest that JC ever assigns nominative case to possessors: rather, his *he* possessors are more plausibly analysed as genitive forms which are a reflection of a gap in his pronoun paradigm (hence a lexical rather than a syntactic error).

5.3 Accusative possessors

As the table in (19) above shows, alongside genitive possessors, JC uses accusative (*him/them/me*) possessors in structures such as the following:

(28)(a) He lost *him* duck (= 'He lost *his* duck')
(b) Forgot to take *them* eyes out (= 'Forgot to take *their* eyes out')
(c) Her give *me* dad a lobster (= 'She gave *my* dad a lobster')

An interesting question to ask is whether there are parallels between JC's use of accusative possessors in structures like (28) above and the syntax of accusative possessors in (adult) Korean structures like (29) below (from Cho 1993, p.252):

(29) Chelswu-ka *Yengi-lul* **olunccok-ul** palp-ass-ta
Chelswu-Nom *Yenghi-Acc* **foot-Acc** step-Past-Dec (*Dec* = declarative mood particle)
'Chelswu stepped on Yenghi's foot'

In the type of structure illustrated in (29), the italicised possessor is assigned the same case as the bold-printed possessee (which is accusative by virtue of being the object of the transitive verb

[23] Trudgill (1990, p.82) reports that reflexive anaphors have an analogous genitive+self structure in many nonstandard varieties of adult English, giving rise to forms such as *hisself* and *theirselves*.

palpassta 'stepped'). Accordingly, when the possessee is nominative (as in (30) below), the possessor is also nominative[24]:

(30) *Swunhi-ka* **apechi-ka** pwucaisi-ta
Swunhi-Nom **father-Nom** rich-Dec (*Dec* = declarative mood particle)
'Swunhi's father is rich'

Informally, (29/30) seem to involve some form of *case copying*[25] under which the case feature assigned to the possessee is copied onto the possessor. Could JCs accusative possessors in sentences like (28) be the result of a similar case-copying operation?

From a learnability perspective, this seems implausible, given that adult English makes no use of case-copying to case-mark possessors. Moreover, there is empirical evidence to suggest that this is not how accusative possessors come about in JC's grammar. If (contrary to what we are suggesting here) some form of possessor-possessee case copying were operating in JC's grammar, we should expect the following to hold:

(31)(i) JC produces nominative possessors in structures where the possessee is nominative
(ii) JC produces accusative possessors in structures where the possessee is accusative

However, neither generalisation seems to hold. If (as argued in §5.2) JC's *he* possessors are genitive rather than nominative, it follows that JC uses *no* nominative possessors whatever, and hence that (31i) does not hold. Moreover, even if (contrary to what was argued in §5.2) *he* possessors are treated as nominative, the generalisation in (31i) still fails to hold in that – as the table in (32) below shows – JC uses *he* possessors not only in structures like (23a) *But he bus is over here* in which the possessee *bus* is a subject, but also in structures like (23b) *An owl did this with he eyes* in which the possessee *eyes* is an (accusative or caseless) object, and in structures like (23c) *He family, he lost he family* in which the (first) possessee *family* is a (caseless) dislocated topic:

(32) **Function of possessee in structures with a nominative possessor**

Possessor/Possessee	Subject possessee	Object possessee	Topic possessee
Nominative possessor	3	5	1

In short, it is clear that even if *he* possessors were nominative (rather than genitive, as argued in §5.2), they could not be assigned nominative case via case concord with the possessee.

[24] Korean also allows the possessor to be genitive in both structures, but we are not concerned with genitive possessor structures in this section.
[25] Or, multiple case/agreement-marking (in the sense that the relevant Probe agrees with and assigns the same case to both the possessor and the possessee).

Moreover, the data in the table in (33) below would suggest that (31ii) does not hold either:

(33) **Function of possessee in structures with an accusative possessor**

Possessor/Possessee	Subject possessee	Object possessee	Other possessee
Accusative possessor	13	7	3

The table in (33) tells us that JC used an accusative possessor in 13 structures like (34a) below in which the possessee was a subject, 7 in structures like (34b) in which it was an object, and 3 in structures in which it serves some other function – 2 in which the possessee was a caseless sentence fragment as in (34c), and 1 in which it was a (caseless) predicate nominal as in (34d):

(34)(a) *Me* mom don't use paint brush

(b) He lost *him* duck

(c) *Me* daddy too (< "Nobody shoveled the snow?" – "Yeah, my dad")

(d) That *me* friend (= 'That's my friend')

In short, it is implausible to suppose that accusative possessors are the result of case-copying.

A more credible analysis of accusative possessors is proposed by Ramos and Roeper (1995), who suggest that they may arise as a result of an agreement deficit. More specifically, they suggest that: 'If agreement features in the Determiner Phrase (DP) assign genitive case to... possessive pronouns... perhaps JC lacks agreement in DP'[26]. For concreteness, let's take this to mean that the head D of DP lacks possessor-agreement features in structures containing accusative possessors. It follows from this (within the framework of Chomsky 1998, 1999, 2001) that the possessor must lack case, since otherwise its case feature (which must be valued and deleted via agreement with D) would remain unvalued and undeleted, causing the derivation to crash. In other words, so-called *accusative* possessors are in fact caseless default forms which are mere accusative lookalikes. On this view, the difference between structures like *my car* and *me car* is that in the former, D carries possessor-agreement features and the possessor carries case, whereas in the latter D is agreementless and the possessor is caseless, as shown in simplified schematic form in (35) below:

(35)(a) [DP [D_{+Agr} ø] [POSSP my_{+Case} [POSS ø] car]]

(b) [DP [D_{-Agr} ø] [POSSP me_{-Case} [POSS ø] car]][27]

This would imply that JC is at an *optional agreement* stage at which he optionally marks agreement features on D – a stage which would be consistent with a range of *agreement-deficit* accounts of SLI

[26] The quotation comes from their 1-page abstract.

[27] A variant of the analysis in (39b) would be to posit that structures with accusative possessors contain no D projection: however, this would violate Rizzi's (2000, p.288) *Categorial Uniformity Principle*, and would raise the question of how we account for the observation that structures with accusative possessors seem to have the same definite interpretation as structures with genitive possessors.

such as those referred to in (14b/c) above[28]. Where agreement is not marked, the possessor surfaces as genitive; where agreement is not marked, the possessor surfaces in the default form[29].

5.4 Bare nominal possessors

One final question of detail which should be mentioned is that it would appear that (although he has acquired some genitive pronouns such as *my*, *our*, *your* and *her*), JC seems not to have acquired genitive *'s* at all[30]. As examples like those below illustrate, he invariably uses bare possessors in contexts where adults require possessors containing genitive *'s*:

(36)(a) Where *Giovanni* one?
(b) Where *Giovanni* sticker?
(c) *Me sister* name Dawn
(d) This is *somebody else fishing* (= somebody else's fishing game)

There are two conclusions which might be drawn about JC's non-acquisition of genitive *'s*. One is to suppose that (because he has not yet acquired *'s*), he has no means of forming genitive nominals, and so the only nominal possessors he can produce are bare (caseless) possessors like *Giovanni* in *Giovanni sticker*. However, an alternative possibility is that just as some children extend *her* from accusative/genitive use to nominative use (so that *her* functions as a universal form, as in (12/13) above), so too JC extends a bare nominal like *Daddy* from nominative/ accusative use to genitive use (so that *Daddy* is a universal form which can be used in nominative, accusative, genitive and default contexts alike): on this alternative view, bare nominal possessors would represent a lexical rather than a syntactic error (i.e. failure to acquire the morphological spellout of genitive case on possessors, rather than failure to assign genitive case to possessors in the syntax). Unfortunately, there is no empirical evidence from JC's corpus which would provide us with any way of telling whether bare nominal possessors are bare genitive forms, caseless default forms, or a mixture of both – and indeed it is hard to envisage

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[28] It is interesting to note that structures like *me car* would be problematic under Abney's (1987) account of possessive DPs, since the corresponding initial structure would be *car me*, and if accusative possessors indicate absence of agreement, and movement of the possessor to spec-DP is contingent on D having an EPP feature (which is turn is contingent on D having a complete set of agreement properties, if we follow Chomsky (1999, p.6) in positing that only a ϕ-complete head can have an EPP-feature), there is no obvious way of motivating movement of the possessor from N-complement position to spec-DP. A further possibility which is related to the later discussion of the possibility of subjects being assigned *quirky case* is that the possessor in structures like *me car* might be assigned inherent case by POSS, with *accusative* being the canonical exponent of inherent case.

[29] If nominative is the default case in German, it may be that bare possessors in child German structures like *Sonja autos* 'Sonja cars' reported in Eisenbeiss 2000 are default (nominative lookalike) forms.

[30] JC's non-acquisition of the *'s* morpheme might be attributable to a variety of factors, including its lack of phonetic salience (cf. Leonard 1989, 1998), its morphophonological non-uniformity (i.e. the fact that it has the four allomorphs /s/, /z/, /ɪz/ and /ø/), its relatively low frequency of occurrence in adult speech (compared to plural *–s*, for example), problems which SLI children have in acquiring regular affixes (cf. Gopnik and Crago 1991), and so on.

what kind of empirical evidence could in principle help us answer this question[31].

6. Case-marking of subjects

Almost all the clauses with overt subjects which JC produces occur in tensed contexts (i.e. in contexts where adults would use a clause containing an auxiliary or verb overtly marked as past/present tense). Chomsky (1998, 1999, 2001) takes tensed clauses to be non-defective clauses, and thus to have the status of CPs which contain an I constituent carrying tense and agreement features. In accordance with the generalisation in (1i) above, we should expect tensed clauses to have nominative subjects. Chomsky (2001, p.13) takes the tensed probe responsible for assignment of nominative case to be an INFL constituent 'which has the semantic properties of true Tense', and further maintains (ibid.) that INFL only has true tense 'if it is selected by C'.

If JC's clauses have the same structure as in adult English, we should expect to find that he uses only nominative subjects in tensed contexts. However, what we in fact find is that JC alternates between using nominative and accusative subjects in tensed contexts (e.g. as the subject of present tense forms like *can/don't* and past tense forms like *saw/said*), as the examples in (37) below illustrate:

(37)(a) After that *I* can do that (b) *Me* can have this
(c) Why *he* don't have a nose? (d) Why *him* don't have eyes?
(e) *I* never saw one of these stove (f) Then *me* said "Oh!"

In what follows below, we shall first look at JC's use of nominative subjects (in the remainder of this section) before turning to look at his use of accusative subjects (in §7).

6.1 Nominative subjects

The frequency with which JC uses unambiguously nominative subjects in different types of clause structure is shown in the table below:

(38) **Frequency of nominative subjects in clauses of various types**

Clause involving	number of occurrences of nominative subjects
(a) BE [*'m/'s/are*]	*I* = 6; *he* = 5; *they* = 1
(b) CAN [*can/can't/could*]	*I* = 7; *we* = 1; *he* = 9

[31] If the possessor is genitive, D will carry agreement features; if the possessor is a caseless default form, D will lack agreement features. However, since D is null, it is obviously impossible to determine whether it is marked for agreement or not.

(c) DO [*don't*]	*I* = 7; *he* = 2
(d) past tense verbs[32]	*I* = 2; *he* = 12
(e) bare verbs[33]	*I* = 37; *we* = 5; *he* = 23
(f) BE/HAVE-drop[34]	*I* = 7; *we* = 5; *he* = 18

Typical examples of each type of structure are given in the corresponding examples below:

(39)(a) *I'm* cooking something for dinner. *He's* funny. *They*[35] *are* straps

(b) *I can't* put this on. *We can* do all over again. No, *he could* burn heself

(c) *I don't* have a doctor set. Why *he don't* have a nose?

(d) *I* never *saw* one of these stove. And then *he drived* away.

(e) *I like* warm tea. *We take* one at a time. Then *he bring* it.

(f) *I* got on my shirt and have trouble doing my back. *We* making books. *He* happy

In the various subsections below, we consider whether the use of nominative subjects in each of these structures is consistent with the *tense-and-agreement* account of nominative case-assignment sketched in (1) above.

6.2 Straightforward occurrences of nominative subjects

A number of the structures produced by JC can be accounted for in a relatively straightforward fashion consistent with the *tense-and-agreement* account of nominative case-marking in (1i). For example, structures like those in (38a/39a) are unproblematic since the verb forms *'m/'s/are* are overtly inflected for both tense and agreement, so that (e.g.) *I'm cooking something for dinner* will have a simplified superficial structure along the lines of (40) below[36]:

(40) [CP [C ø] [IP I [$I_{1SgPres}$ (a)m] cooking something for dinner]]

Nor are modal structures like (39b/40b) problematic if we assume (as is traditionally done in relation to adult English) that INFL in such cases carries abstract agreement properties, so that JC's sentence *We can do all over again* would have the simplified superficial structure (41) below:

(41) [CP [C ø] [IP we [$I_{1PlPres}$ *can*] do all over again]]

And if we treat past tense verbs in the same way as modals (and posit that they carry covert agreement properties when used with nominative subjects), they too are unproblematic – e.g. if *I*

[32] This heading includes both regular and irregular pasts, since they do not differ in respect of the types of subject they allow.
[33] I.e. Clauses like *I find it* which contain a verb like *find* which is not overtly inflected.
[34] I.e. structures which lack (but in the adult grammar would require) progressive/copular BE or perfect HAVE.
[35] We have taken [eɪ] to be a realisation of *they*, though in JC's corpus it is orthographically transcribed as *these*.
[36] [C ø] is a null (declarative-force) complementiser.

never saw one of these stove has the superficial structure (42) below:

(42) [CP [C ø] [IP I never [$I_{1SgPast}$ ø] saw one of those stove]]

Overall, then, JC's sentences containing tensed forms of *be*, modals, and past tense verbs are unproblematic for the tense-and-agreement analysis of nominative case assignment. However, there are a number of structures which do appear (on the face of things, at least) to be problematic for the analysis. We examine each of these in turn in the relevant subsections below.

6.3 Nominative 3Sg subjects with *don't*

One apparent problem for the *tense-and-agreement* account of nominative case-assignment is posed by structures like (43) below in which we find *don't* used with a third person singular nominative subject:

(43)(a) He don't have this jacket (b) Why he don't have a nose?

At first sight, *don't* might appear to encode (present) tense features but not agreement features (since the corresponding third person singular form is *doesn't* in Standard English). However, JC never uses the form *doesn't* with 3Sg subjects but rather only the form *don't*, which occurs 7 times in the JC corpus with a 3Sg subject – including in the examples below:

(44)(a) It don't have a mouth (b) Me mom don't use paint brush

And indeed, *don't* is used in many varieties of English in informal styles as an invariable form which occurs with all types of subjects (including 3Sg)[37]. Accordingly, there seems no reason not to treat *don't* in much the same way as the adult negative modal *won't*, and assume that it carries covert agreement features. This being so, a sentence such as (43b) can be analysed as having the following simplified superficial structure:

(45) [CP Why [C ø] [IP he [$I_{3SgPres}$ don't] have a nose]]

And we can then suppose that the tense and agreement features of INFL are jointly responsible for the assignment of nominative case to the subject *he* – in accordance with (1i) above.

6.4 Nominative subjects in BE/HAVE-drop structures

A further class of clause structures which prove potentially problematic for the *tense-and-agreement* account of nominative case assignment are structures like (38f/39f) in which (from the perspective of the adult grammar) a finite form of BE or HAVE is omitted in an obligatory context.

[37] Fans of the infamous BBC soap opera *East Enders* will no doubt recall Lisa complaining about Phil that 'He don't love me no more' (a line which is also familiar from countless forgettable pop songs).

Typical examples of this type of BE/HAVE-drop structures produced by JC are given in (46) below:

(46)(a) He making a mess
(b) He not real
(e) I got on my shirt and have trouble doing my back.

Wexler, Schütze and Rice (1998) make the assumption summarised below about such structures:

(47) Finite forms of the auxiliaries HAVE and BE have a null exponent when underspecified for tense, agreement or both.

If this is so, it is clear that sentences like (46) are not compatible with the *tense-and-agreement* account of nominative case assignment in (1i), since if T lacks tense or agreement features or both, (1i) would wrongly predict that the subject cannot be nominative[38].

An alternative approach to structures like (46) which would enable us to retain the *tense-and-agreement* account of nominative case-marking would be to posit that T contains a full set of tense and agreement features, but is given a null realisation for independent reasons. Speculating along these lines, we might suppose that a sentence like (46a) *He making a mess* has essentially the same structure (48) below as its adult counterpart, save that *(i)s* has a null spellout (symbolised below by the use of outline type-face):

(48) [CP [C ø] [TP he [$T_{3SgPres}$'s] making a mess]]

The subject *he* receives nominative case in accordance with (1i), so allowing us to continue to maintain the *tense-and-agreement* account of nominative case assignment. An analysis along the lines of (48) is what would traditionally be assumed for adult African American English sentences such as *He makin' a mess*, hence is by no means intrinsically implausible. However, what remains to be accounted for under the analysis in (48) is why BE should receive a null spellout.

Guasti and Rizzi (1996) and Guasti (2000) offer a syntactic account of null auxiliaries which incorporates the following postulate:

(49) The specifier and/or head of a root projection can be null

They argue that possibility of a root projection having a null head and/or null specifier follows from UG principles relating to the identification of empty categories: a category can be empty

[38] Wexler, Schütze and Rice conclude that it is agreement alone that is responsible for nominative case-assignment; but as we shall see later, this conclusion is problematic within the Minimalist framework.

(i.e. have a null spellout) only if (i) it can be morphologically identified, or (ii) it can be syntactically identified by a c-commanding antecedent, or (iii) it occurs in a root position where it cannot in principle have a (c-commanding) syntactic identifier. In order to make the *null root head* analysis of sentences like (46) workable, it is necessary to assume that the root CP layer of clause structure in (48) is *truncated*, leaving only the IP layer shown in simplified form in (50) below:

(50) [IP he [$I_{3SgPres}$ BE] making a mess]

This would leave BE occupying a root head position, hence allow it to be null in accordance with (30).

However, Guasti and Rizzi's account proves problematic in respect of utterances such as (51) below produced by JC:

(51)(a) I don't know [what he saying]
(b) This one, he cooking up a hot dog
(c) And he sad cause he crying

In (51a), the bracketed clause is neither a root projection nor a CP-truncated (i.e. CP-less) IP, since it contains the preposed wh-word *what*, and preposed wh-words are conventionally taken to occupy spec-CP. Likewise, the sentence in (51b) cannot be a CP-less IP either, since it contains a dislocated topic constituent *this one* (which Rizzi 1997 argues to occupy a specifier position within a split CP projection). Nor can the *cause*-clause in (51c) be a CP-truncated TP – at any rate if subordinating conjunctions like *because* occupy a maximally high head position within a split CP (or select a CP complement). The bottom line would seem to be that Guasti and Rizzi's proposal cannot account for the full range of AUX-drop structures which JC produces.

An alternative approach would be to assume that AUX-drop is phonologically conditioned. This possibility cannot be ruled out in principle, since we find instances of phonologically conditioned AUX-drop in adult English. For example, in sentences like (52) below, an auxiliary which is reducible to schwa can be further reduced to a null form, giving rise to optional AUX-drop:

(52)(a) What (are) you doing?
(b) Where (have) you been?

As Wyn Johnson points out to me, this is arguably a reflex of a more general *schwa-drop* phenomenon whereby (e.g.) the schwa of expletive *there* can be dropped in (e.g.) *there are...* (giving rise to |ðrə|) or the schwa of *gonna* dropped in *I'm gon(na) go home*. AUX-drop in such

cases in adult English appears to be phonologically conditioned – hence it is by no means implausible to suppose that it may be phonologically conditioned in child English as well.

One possibility along these lines is that auxiliaries with a reduced variant which comprises only a fricative segment (like *'s* and *'ve*) typically have a null exponent before a word beginning with a consonant – the null realisation of the fricative serving to overcoming difficulties which children have in articulating consonant clusters (as reported in Templin 1957[39]). In this connection, it is interesting to note that 14/15 cases in which JC omits *'s* occur before a word beginning with a consonant, and all 10 structures in which JC omits *'ve* likewise occur before a consonant. An interesting contrast is illustrated by the example below:

(53) Nuh uh, This girl is ... *her* not (< 'I think this girl is pretending she's a bus driver')

Here, JC produces the full form *is* in final position, but omits *'s* in preconsonantal position before *not*[40]. Overall, then, it seems plausible to suppose that AUX-drop for JC is conditioned by phonological factors. If so, there is no reason not to maintain the *tense-and-agreement* analysis of nominative case-marking outlined in (1i) above.

6.5 Nominative subjects with bare verbs in present tense contexts

A further class type of structures which are potentially problematic for the *tense-and-agreement* account of nominative case-marking are structures like (38e/39e) above in which we find a bare verb form used with a nominative subject. There are two rather different types of problem which arise from such structures. One relates to sentences like (54) below in which we find a bare with a 3Sg nominative subject in a present-tense context:

(54)(a) *He like* Danny talking like that

(b) Now *he have* them two.

At first sight, it would appear as if the verb in such structures cannot agree with the subject *he*, since the verb lacks the *–s* inflection found with present-tense verbs like *likes/has* which agree with 3Sg subjects. However, an important point to note here is that (as Ramos and Roeper 1995 report), JC has not acquired the regular 3SgPres inflection *–s* at all (hence produces not a single *s*-inflected regular verb form), and in present tense contexts where a regular verb has a 3Sg subject consistently

[39] For example, Templin's study showed that only 12/60 normally developing 3-year olds could correctly articulate the cluster /sp/ in the word *grasp*.

[40] For JC, *is* and *'s* seem to be in complementary distribution, with *'s* being used after a pronoun not ending in a sibilant, and *is* being used elsewhere: hence, we find *he's*, *it's, who's, what's* and *that's,* but *this is*, *dirt is*, *he bus is* etc.

uses a bare verb form – as is further illustrated by the examples in (55) below:

(55)(a) *That mean* is already cook

(b) *Me daddy like* mustard

In fact, JC seems to have the impoverished system of regular verb morphology shown overleaf:

(56) A regular verb carries the inflection
(i) *–d* if past[41]
(ii) *–ing* if progressive[42]
(iii) *–ø* otherwise

His non-acquisition of 3SgPres *–s* would appear to be consistent with the claims by Gopnik and Crago (1991) and Ullmann and Gopnik (1994) that children with SLI have particular problems in acquiring regular inflectional affixes[43].

The observation that JC has not yet acquired the regular 3SgPres affix *–s* means that examples like those in (54) pose no particular problems for the tense-and-agreement analysis of nominative case assignment. More specifically, we can suppose that a sentence such as (54a) has the simplified structure shown in (57) below, in which INFL carries both (present) tense and (3Sg) agreement features:

(57) [CP [C ø] [IP he [$I_{3SgPres}$ ø] like Danny talking like that]]

The subject *he* will then be assigned nominative case under (1i) by virtue of agreeing in person and number with the tensed probe T. The (3SgPres) tense and agreement features of INFL will ultimately have a null spellout in accordance with (56). The more general conclusion to be drawn is that sentences like (55) are unproblematic for the tense-and-agreement analysis of nominative case assignment.

6.6 Nominative subjects with bare verbs in past tense contexts

[41] He produces over-regularised past tense forms like *drived*, *taked* and *jump-overed*. There is no evidence that he makes productive use of *–d* as a marker of perfect aspect or passive voice.

[42] JC produces a few examples of what appear to be gerunds ending in *–ing*, but these appear mainly in the expressions *go hiking* and *go camping*, and it is not clear exactly what significance we should attach to this.

[43] As frequently noted in the SLI literature, this problem affects some inflectional affixes more than others (e.g. 3SgPres *–s* more than noun plural *–s*, as noted by Rice and Oetting 1993). It should not be assumed that JC's problems with 3Sg *–s* are attributable to an inability to handle agreement, since – as we saw earlier – he is able to correctly mark agreement on *be*. As Roger Hawkins observes, it would seem that he only spells out agreement morphology overtly on items positioned in INFL: maybe he lacks the operation which lowers person/number agreement features from INFL onto a lexical verb in the head v position of vP, with the result that the relevant agreement features are given a null realisation on a null expletive auxiliary in INFL.

A more serious problem for the tense-and-agreement analysis is posed by bare verbs with nominative subjects used in what are clearly past tense contexts (since the relevant verbs are co-ordinated with a past tense verb, or occur with a past adverbial, or are used in reply to a past tense question) – as with the italicised bare forms in the examples overleaf:

(58)(a) No, **took** it off of...then *he eat* it
(b) He **shoveled** him truck, and then *he dump* it
(c) **Long time ago** *I have* a big eye
(d) **Long time ago**, *I go* camp and hiking at the same time
(e) Because *he want* to put it (Reply to '**Why did he do that?**')

Overall, JC uses 29 bare verb forms in past tense contexts with nominative subjects. On the face of it, bare verbs used in past tense contexts would appear to be tenseless (at least, in the sense that there is no morphological marking of tense) – and indeed this is consistent with *tense-deficit* accounts of SLI like those referred to in (14a/14c) above. However, if the relevant verbs (and the INFL constituent associated with them) lack tense features, sentences like (58) present an empirical challenge to the *tense-and-agreement* account of nominative case-marking sketched in (1i) above. This is because if the sentences in (58) are tenseless, it is hard to see how the claim in (1i) can be maintained that only a *tensed* probe can be a nominative case-assigner. How can we overcome this problem?

The solution proposed by Wexler, Schütze and Rice (1998) is to suppose that it is *agreement* alone (and not tense and agreement together) which is responsible for the assignment of nominative case: cf. their (1998, p.324) remark that 'It is not Tns, but rather Agr, that assigns Nom case'. Although they offer no specific formulation of nominative case assignment, one possible formulation which would seem to capture the spirit of their analysis is:

(59) Nominative case is assigned to a Goal which agrees with a Probe in person and number

However, a generalisation along the lines of (59) would wrongly predict that objects are assigned nominative case by agreement with a transitive probe, and likewise that possessors are assigned nominative case by agreement with a definite D. Of course, we can rule out these possibilities by tightening up (59) along the lines of (60) below:

(60) Nominative case is assigned to a Goal which agrees with INFL in person and number

But (60) in turn poses both theoretical and descriptive problems. A significant descriptive

problem which arises with (60) concerns the case properties of the PRO subject of control clauses like that bracketed in (61) below:

(61) I want [CP [C ø] [IP PRO [I to] break free]]

Chomsky posits that PRO is assigned null case via abstract person/number agreement with an infinitival INFL: hence, an analysis along the lines of (60) would wrongly predict that control clauses have nominative subjects – yet this is not the case, as we see from the ungrammaticality of **I want they to break free*.

A further theoretical problem with (60) is that if INFL has only uninterpretable (person/number) agreement features in clauses like (58) and entirely lacks tense features, it is hard to see in what sense the relevant constituent corresponds to an adult INFL constituent (a defining characteristic of which is its interpretable *Tense* feature). More importantly, an INFL which contains only uninterpretable agreement features and no interpretable (e.g. Tense) feature will be uninterpretable at the semantics interface with conceptual-intentional systems (i.e. systems of thought) and the derivation will crash. It is clear, then, that INFL must carry an interpretable feature of some kind. It is difficult to see how this could be a *tense* feature, unless we appeal to some extremely abstract tense feature which has no morphological realisation and which is distinct in nature from the abstract tense feature found in control infinitives (since the latter assigns null rather than nominative case to its subject). Let's therefore pursue the possibility that INFL may carry some interpretable feature other than tense, and that it is this other feature (in conjunction with agreement) which is responsible for nominative case assignment.

One possibility along these lines is to suppose that although INFL lacks (morphosyntactic) tense features in (the relevant clauses of) sentences like (58), it nonetheless carries an interpretable *mood* feature, and that it is the mood features of INFL which determine case spellout, in that an agreeing INFL which is indicative, subjunctive or imperative in mood has a nominative subject, whereas an agreeing INFL which is infinitival in mood[44] has a null PRO subject. Given these assumptions, we can revise our earlier formulation of nominative case assignment given in (1i) above along the lines shown informally in (62) below:

(62) An unvalued case-feature on a Goal is assigned the value *nominative* via person-number agreement with a Probe with an (indicative/subjunctive/imperative) *mood* feature[45]

[44] Hyams (2001, p.49) suggests that infinitival *to* encodes *irrealis* mood, noting that 'It is plausible that the irrealis meaning associated with the *to* infinitive comes from *to*'. Alternatively, it may be that infinitives contain no mood feature, in which case null case will be assigned to PRO by an agreeing INFL which is moodless – though this raises the question of what interpretable features infinitival INFL contains if it has neither tense nor mood features.

We might further suppose that only clauses marked for indicative mood carry tense in English: this assumption would account for the fact that the (italicised) main verb in subjunctive clauses like that bracketed overleaf shows no overt tense contrast[46]:

(63) They are demanding/had demanded [that he *resign*]

On the assumptions made here, INFL in the bracketed clause in (63) would carry (subjunctive) mood and (third person singular) agreement properties, but no [±Past] tense feature. If we assume that regular verb forms in adult English surface in the manner shown informally in (64) below:

(64) A regular verb carries the inflection:

(i) *-s* if 3Sg Present Indicative[47]

(ii) *-d* if Past, Perfect or Passive

(iii) *-ing* if Gerund or Progressive

(iv) *-ø* otherwise

it follows that verbs in subjunctive clauses (like *resign* in (63) above) will be expected to surface as a bare verb form. It also follows from (62) that the *he* subject of the bracketed subjunctive clause in (63) would correctly be predicted to be nominative[48].

Under the alternative *mood-and-agreement* analysis of English nominative case assignment proposed in (62), we can retain the essential intuition of Wexler, Schütze and Rice that clauses like (58) (which contain a bare verb used in a past tense context with a nominative subject) show a *tense* deficit, in that T carries mood and agreement but is underspecified in respect of (i.e. lacks) tense features – as shown below in schematic form for the second clause in (58a):

(65) [CP [C ø] [IP then he [I_{3SgInd} ø] eat it]]

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[45] Such an account might be extended to Korean data like (30) in which the predicate is overtly inflected for mood but not tense and has a nominative subject. For concreteness, I assume that *tense* and *mood* features are syncretised on a single (INFL-like) head in English, but do not rule out the alternative possibility that they project into separate *Tense* and *Mood* heads. An alternative formulation of (62) might be to suppose that it is *finiteness* rather than *mood* which (in conjunction with agreement) is responsible for nominative case assignment. However, since a finite verb is traditionally assumed (see e.g. Crystal 1981) to carry both tense and mood features, I have avoided this term here.

[46] Moreover, Henry (1995) argues that imperatives are tenseless. Nonetheless, they have nominative subjects – as can be seen from the use of *she* in sentences such as *You sit next to him and she sit next to me, please!*

[47] The feature *indicative* is redundant if only indicative forms are marked for [±Past] tense, but is added here for clarity of exposition.

[48] There is also cross-linguistic evidence in support of the view that *tense* features of INFL are not universally responsible for the assignment of nominative case. For example, Yoruba has no tense morphology on verbs, yet (in weak pronouns) maintains a distinction between nominative and accusative pronouns. Tallerman (1998) argues that Welsh has a construction in which finite verb forms like *bod* 'be' which are morphologically marked for agreement but not tense nonetheless allow an overt subject (which is presumably assigned nominative case, though the absence of overt case contrasts in Welsh makes this difficult to establish empirically). Roger Hawkins points out to me that Chinese L2 learners of English often use bare verb forms with nominative subjects in past tense contexts.

The absence of (morphologically marked) tense-features on INFL means that the verb will surface as the tenseless (bare) form *eat*, but the presence of mood and agreement features means that the subject will be nominative. It may be that children like JC omit the tense features of INFL when the temporal reference of the event denoted by the clause is explicitly marked by a temporal adjunct (like *then*) or when it is implicit from the context (e.g. as in the case of a tenseless clause coordinated with an overtly tensed clause, or a tenseless clause used in reply to a past-tense question)[49].

Our discussion here is consonant with the claim by Hyams (2001) that mood is a more primitive property than tense, and that bare verbs forms in child English (like *break* in *Robin break it, your pen*[50]) are specified for (realis) mood but unspecified for tense: cf. her (2001, p. 48) remark that 'the bare form is realis but has no specific temporal reference'.

7. Accusative subjects

In addition to producing clauses with nominative subjects, JC produces a substantial number of clauses with accusative subjects. The frequency with which he uses accusative subjects[51] in different types of clause structure is shown in the table below:

(66) **Frequency of accusative subjects in clauses of various types**

Clause involving	number of occurrences of accusative subjects
(a) BE [(*a*)*m*/(*i*)*s*/*are*]	none
(b) CAN [*can*/*can't*]	*me* = 2; *her* = 3
(c) DO [*don't*]	*me* = 2; *him* = 1
(d) past tense verbs	*me* = 6; *her* = 2; *them* = 2
(e) bare verbs	*me* = 28; *him* = 2; *her* = 10; *them* = 4
(f) BE/HAVE-drop	*me* = 12; *her* = 6

Illustrations of each type of occurring structure are given in the correspondingly numbered examples in (67) below:

(67)(b) *Me can't* go back home to go shopping. I don't know where *her can* cook

(c) *Me don't* know. Why *him don't* have eyes?

(d) Then *me said* 'Oh!' Then *her got* hurt

(e) When *me go* outside to play, *me* go like that. Why *them* both *have* pincers?

[49] Under the mood-and-agreement analysis of nominative case-marking suggested here, bare verbs used with nominative subjects in present tense contexts in sentences like (54) might also be tenseless – though (for children like JC who have not yet acquired 3SgPres –*s*) some or all of them could equally contain a present-tense feature.

[50] This utterance occurred in a past tense context and elicited the adult reply 'No, he didn't break it'.

[51] I have taken *her* to be an accusative subject since there are no clear examples of JC using genitive subjects like *my*, *your*, *Daddy's* etc. The term *accusative subject* is used as a label of convenience; as noted in the text, it is more likely that the relevant subjects are caseless default forms which are homophonous with accusatives.

(f) *Me* too tired. *Her* pretending to be a doctor

A finding which appears to emerge from the table in (66) is that there are no examples whatever of accusative subjects used with verbs overtly inflected for agreement (e.g. with finite forms of BE). This is consistent with Wexler, Schütze and Rice's (1998) hypothesis that:

(68) Where INFL lacks agreement features, the subject is a caseless default form (homophonous with the corresponding accusative form)

A claim such as (68) would seem to be broadly compatible with minimalist assumptions: if INFL has agreement features, its subject[52] must be active (by virtue of having a structural case-feature) in order that the subject can value and delete the agreement features of INFL; if INFL lacks agreement features, its subject cannot have a structural case-feature, since this could not be valued and deleted by INFL[53].

At first sight, it would seem relatively unproblematic to analyse all the structures in (66/67b-f) as clauses containing an INFL constituent which lacks agreement properties[54]. For example, we could account for the difference between a nominative-subject sentence like (43b) *Why he don't have a nose?* and its accusative-subject counterpart (67c) *Why him don't have eyes?* by positing that INFL carries agreement features (along with present tense and indicative mood) features when the subject is *he*, but lacks agreement features when the subject is *him*– as shown in simplified form below:

(69)(a) [CP Why [C ø] [IP he [$I_{3SgPresInd}$ don't] have a nose]]

(b) [CP Why [C ø] [IP him [$I_{PresInd}$ don't] have eyes]]

The presence of agreement features on INFL in (69a) would require the subject to have a structural case feature which would be valued as nominative under the *tense-and-agreement* analysis of nominative case assignment in (1i), or under the alternative *mood-and-agreement* analysis in (62). The absence of agreement features on INFL in (69b) would mean that the subject has no structural case feature, and so surfaces in the default (accusative lookalike) form *him*. It should be apparent that (with minor modifications of detail) a parallel *no-agreement* analysis could be devised for the other accusative-subject structures in (66/67).

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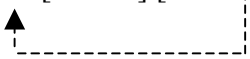
[52] More accurately, the expression which INFL agrees with.

[53] If (as Chomsky 1999 posits) valuation and deletion of structural case features takes place under agreement.

[54] As Harald Clahsen points out, the analysis proposed in the text does not account for differences in the relative frequency of nominative/accusative subjects in the different types of clause structure listed in (38) and (66). For example, 76% of the subjects of the auxiliaries *can/can't/could/don't* are nominative, compared to 58% of the subjects of past tense lexical verbs. This would seem to suggest that agreement is marked more frequently on structures containing (auxiliary) verbs in INFL than on structures containing (lexical) verbs which remain within vP. Whether the lower frequency of agreement marking on lexical verbs is (in some measure) attributable to avoidance of the additional operation required to lower the agreement features of INFL onto the lexical verb in the head v position of vP or to some other factor(s) remains an open question.

However, there is a potential technical complication posed by this analysis. If we follow Chomsky in assuming the *vP-internal subjects hypothesis*, the subject *him* will originate within vP as an argument of *have*, and then subsequently raise to become the subject of the INFL constituent *don't*[55], as shown in schematic terms in (70) below:

(70) [IP *him* [I don't] [vP ~~*him*~~ have eyes]



This means that INFL must have an EPP-feature which drives movement of the subject to spec-IP. But if we follow Chomsky's (1999, p.6) proposal 'to associate EPP with ϕ-completeness'[56], it follows that INFL can only have an EPP-feature if it carries a complete set of agreement features (i.e. a complete set of person and number features).

We therefore find ourselves in an apparent dilemma. Movement of the subject in front of *don't* suggests that INFL must carry abstract agreement features in (70), yet the absence of nominative case-marking on the subject *him* suggests the contrary. How can we resolve this dilemma? In the subsections below, we examine at a number of possibilities.

7.1 Accusative subjects as strong pronouns

An interesting possibility suggested by Anders Holmberg is that children who alternate between nominative and accusative subjects may have developed a contrast between *strong* and *weak* subject pronouns. This is by no means intrinsically implausible, in that Trudgill (1990, p.90) reports that there are a number of adult English dialects which have a strong/weak contrast in nominative pronouns[57], and indeed in adult standard English we find strong/weak alternations in nominative forms like *he/'e* and *you/ya*. If a child assumes that the pronoun forms found in single-word sentence fragments such as *Me!* (in reply to *Who wants an ice-cream?*) are strong forms which serve as the subject of an ellipsed finite clause, it may be that the child concludes that such forms can function as

[55] To simplify exposition, we shall assume that *don't* is a unitary lexical item which is directly merged in INFL – though more complex assumptions could clearly be made. Although the discussion here relates to the *don't* structure in (70), available evidence suggests that JC always raises subjects (whether nominative or accusative) to spec-IP. For example, all the auxiliary structures he produces (whether with nominative or accusative subjects) have subjects in spec-IP, preceding the auxiliary in INFL. Moreover, in the auxiliariless negative structures he produces (like *Me no have to go bath. But he not there. He not real*) the subject is always raised to some position above the negative, and hence appears to be in spec-IP. If so, INFL always has an EPP-feature in the clauses JC produces in finite contexts.

[56] ϕ-features are (e.g. person/number) agreement features. See Nasu (2001) for crosslinguistic evidence suggesting a correlation between EPP and ϕ-completeness.

[57] Moreover, in Radford (1998), I argued that the *my* subjects used by some children are strong nominative forms, and not (as claimed e.g. by Vainikka 1994 and Schütze and Wexler 1996) genitives.

strong nominative pronouns. Reasoning along these lines, we might hypothesise that such a child will spell out (e.g.) 1Sg pronouns in the manner shown below:

(71) 1Sg = *I* if a weak nominative[58]
my if a weak genitive
me otherwise

It would then follow that *me* can function not only as a caseless default form and strong or weak accusative form, but also as a strong nominative or genitive form – so accounting (perhaps) for the occurrence of accusative subjects alongside nominative subjects and accusative possessors alongside nominative possessors. If JC's 3MSg pronouns are spelled out along the lines shown in (72) below:

(72) 3MSg = *he* if a weak nominative or genitive pronoun
him otherwise

we can maintain that (e.g.) the *him* subject JC uses in *Why him don't have eyes?* is not an accusative subject after all, but rather a strong nominative subject – as shown in schematic form in (73) below:

(73) [CP Why [C ø] [IP him_{Nom} [$I_{3SgPresInd}$ don't] have eyes]]

Under this analysis, INFL would carry both tense and agreement features (and indicative mood), and we could then maintain that the agreement features of INFL (in conjunction with its tense or mood features) assign nominative case to the subject: the subject is (by hypothesis) a *strong* pronoun which will surface in the form *him*, in accordance with (72) above. We can further suppose that since INFL in (73) is ϕ-complete (i.e. carries both person and number agreement features), it can have an EPP-feature, so triggering movement of the subject out of vP into spec-TP, as shown in diagrammatic form in (70) above. The relevant data would then be consistent with the ϕ-completeness account of EPP[59].

7.2 Accusative subjects as spellout errors

Noam Chomsky (pc) suggests an alternative possibility under which accusative subjects represent a *spellout* error: he suggests that (for overt subjects) 'the phonology spells out structural case as default always, but optionally nominative in agreement with INFL'. He also notes that nominative subjects appear to have optional default spellout in co-ordinate structures like *Him and me left* (alongside *He and I left*), so the child's default spellout of accusative subjects may involve generalising whatever spellout mechanism accounts for the default spellout of co-ordinate subjects.

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[58] *I* may be analysed as a weak nominative form in part because it lacks the *m-* stem found in other 1Sg pronouns like *me/my/mine*, and in part because it occurs in clitic structures such as *I'm*.

[59] Since the *strong pronoun* analysis turns out to be flawed in essentially the same ways as the *spellout error* analysis discussed in §7.2, we have postponed discussing the nature of the relevant flaws until the end of §7.2.

If we extend this analysis to account for JC's alternation between genitive and default possessors, we might suppose that children like JC spell out case in the manner outlined informally below:

(74) A structural case feature on an overt noun or pronoun expression is
either (i) spelled out in accordance with (1/62)
or (ii) spelled out as the default form

The *optional default spellout* analysis would enable us to maintain an agreement-based account of EPP along the lines sketched in (73) above, with the difference that *him* would not be a strong nominative pronoun but rather would be a nominative pronoun which is optionally spelled out as a default (accusative lookalike) form in accordance with (74ii). We might speculate that processing difficulties of some kind make it difficult for the child to access (or apply) the adult spellout rules in (1/62), and that default spellout is used as a way of overcoming these difficulties. On this view, accusative subjects would represent a lexical (spellout) error rather than a syntactic error. We could assume that INFL agrees in person and number with the subject, and hence that INFL can have an EPP feature triggering raising of the subject, as in (70): this would allow us to maintain the assumption that only a ϕ-complete INFL can have an EPP-feature.

Intriguing though these two (strong form/default spellout) analyses are, an important observation which neither manages to account for is that (as recorded in (66a) above), JC never uses accusative subjects with agreeing verbs: e.g. he never says *Me'm hungry* or *Him's hungry* (only *I'm hungry* and *He's hungry*). In other words, the *strong pronoun* and *default spellout* analyses of accusative subjects wrongly predict the occurrence of forms which do not occur in the JC corpus. It would therefore seem that neither provides a descriptively adequate account of JC's accusative subjects. Let us accordingly explore other possibilities.

7.3 Accusative subjects and quirky case

A very different possibility which might be pursued is that accusative subjects carry *quirky case*. Sigurðsson (1996, p.3) reports that Icelandic allows structures like (75) below in which the italicised subject has quirky (inherent) accusative case (assigned as a function of its theta-role), and the verb appears in the default (3sg) form:

(75) Hana vantar vinnu
Her$_{Acc}$ lack$_{Def}$ job$_{Acc}$ 'She lacks a job'

Sigurðsson claims (1996, p.4) that quirky subjects occur in 'exactly the same positions as do nominative subjects' and hence canonically move to spec-IP. INFL in such sentences in Icelandic agrees with a nominative argument within its domain if there is one (e.g. a nominative object, or the

nominative subject of an infinitive complement), and is assigned the default value 3Sg otherwise. Since INFL is ϕ-complete (i.e. has a complete set of agreement features) in clauses with quirky subjects, it can have an EPP feature and trigger raising of the quirky subject. This raises the possibility that in JC's structures like *Why him don't have eyes?* the subject *him* has quirky accusative case (with *accusative* being the canonical exponent of inherent case in English), originating within vP raising to spec-TP.

Since quirky case is spelled out as a function of the theta-role of the subject, we should expect to find that if JC's accusative subjects have quirky (inherent) case, they will only occur when the subject carries a specific type of theta-role (e.g. where it is an EXPERIENCER, but not where it is an AGENT). In (76) below we have listed typical predicates which JC uses with accusative subjects:

(76)(a) *have*, *go*, *want*, *get*, *know, fall, remember*, *like*, *see*, *need*, *bigger*, *tired*, *sad*

(b) *make*, *put*, *cook*, *say*, *jumpover*, *talk*, *eat*, *take*, *cry*, *take*, *crack*, *give*, *drink*, *cut*.

There seems no real evidence from (76) that accusative subjects correlate with specific theta-roles; e.g. while the predicates in (76a) have non-agentive subjects (e.g. the subject of *have* is a POSSESSOR, that of *go* is a THEME, that of *want* is an EXPERIENCER and so on), the vast majority of verbs used by JC have AGENT subjects – as in (76b). There thus appears to be no clearcut evidence that he is assigning quirky case to subjects on the basis of θ-roles[60]. Indeed, it would be surprising if he were, given that there is no quirky case marking of subjects in English, and (as Anders Holmberg points out) quirky case-marking is a highly marked phenomenon cross-linguistically.

7.4 Accusative subjects as topics

A further possibility which we might consider is that movement of the subject in structures like (70) correlates not with agreement feature on INFL, but rather with some peripheral (e.g. *topic*) feature carried by an appropriate functional head. Within the split CP framework of Rizzi (1997), it might be supposed that so-called accusative subjects are caseless default forms which move directly to spec-TopP (i.e. specifier position within a Topic Phrase), so that (67c) *Why him don't have eyes?* has the simplified structure (77) below:

(77) [CP Why [C ø] [TopP him [Top ø] don't have eyes]]

with movement of *him* to spec-TopP being driven by an EPP feature on the Top head (which attracts a constituent carrying a topic feature – in this case, the subject *him*)[61]. If *Top* is a weak head,

[60] Unless we assume that *all* arguments can be assigned quirky case, and that accusative case is the sole exponent of quirky case in JCs grammar.

such an analysis would account for the observation that none of JC's questions with accusative subjects show auxiliary inversion[62]. The analysis outlined in (77) is reminiscent of (though differs in substantive detail from) Gruber's (1967) *topic* analysis of accusative subjects.

Intriguing though the *topic* analysis is, learnability considerations cast doubt over its plausibility. If subjects are initially misanalysed as topics, this raises the question of how children (at a later stage of development) come to differentiate the two and learn that they occupy distinct positions e.g. in adult sentences such as:

(78) [TOPIC Wine] would [SUBJECT you] prefer – or beer?[63]

Moreover, the *topic* analysis in (77) assumes that the wh-word *why* occupies a higher position than the (supposed) topic *him* – and yet sentences like (79) below provide us with evidence that a topic like *Minimalist Syntax* occupies a higher position than a wh-expression like *why* in the adult grammar[64]:

(79)(a) *Minimalist Syntax*, **why** does nobody seem to understand?

(b) ***Why** *Minimalist Syntax* does nobody seem to understand?

This raises the twin questions of how the child learns the 'wrong' *wh+topic* order at an early stage and then unlearns this analysis and comes to learn the 'right' *topic+wh* order at a later stage[65]. Moreover, it is hard to square the topic analysis of JC's subjects with his use of expletive subjects in sentences such as *It's hard to find this*[66], since it is not clear in what sense expletives are *topics*. In short, the *topic* analysis leaves a number of important questions unanswered.

7.5 The *completeness* of T

The essential intuition underlying Chomsky's (1999, p.6) assumption that only an INFL which

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[61] An alternative possibility (within a framework that allows heads to have multiple specifiers) would be to posit that *why* and *him* are different specifiers of C, with *him* 'tucked in under' *why* (in the terminology of Chomsky 2001).

[62] By contrast, we find auxiliary inversion in *What's I talking about?* (presumably 'What *was* I talking about?') with a nominative *I* subject. However, we also find an example of an uninverted auxiliary with a nominative subject in *Why he don't have a nose?* raising the question of whether *he* is a topic which raises through spec-TP to spec-TopP (unlike accusative subjects which might be supposed to raise directly to spec-TopP).

[63] An interesting possibility might be to assume that Top and T are initially syncretised on a single head and only later differentiated into distinct heads allowing distinct specifiers (spec-TP housing subjects and spec-TopP housing topics).

[64] The phenomenon seems to be more general, as we see from the title of the Italian pop song *Tu chi sei?* (literally *You who are*) 'You, who are you?', where *Tu* is a dislocated topic and *chi* a preposed wh-word.

[65] As Harald Clahsen points out, the argument here is based on the premise that children with SLI like JC eventually come to master the morphosyntax of case-marking. Although we have no information on JC's subsequent development, we note that Wexler, Schütze and Rice (1998) argue that children with SLI typically master the morphosyntax of case by age 7 or 8 years of age.

[66] JC's corpus contains no instance of expletive *there*; however, we take this to be an accidental gap attributable to the relatively small size of the corpus.

carries a complete set of (person/number) agreement features can have an EPP-feature is essentially (80) below:

(80) Only an INFL which is *complete* can have an EPP-feature

The assumption embodied in (80) is that INFL is somehow *incomplete* in defective clauses (e.g. raising and ECM clauses). What Chomsky wants to say is that (under what he refers to in his 1999 paper as as the *Alternative II* analysis) in raising constructions like:

(81) *Several prizes* are likely [to be awarded *t*]

the subject *several prizes* moves directly from being complement of *awarded* to becoming subject of *are* without ever becoming the subject of the bracketed *to*-clause. The story he offers is that the *to*-clause is defective by virtue of being headed by an INFL which carries no (person or number) agreement features; hence the relevant INFL cannot have an EPP-feature and so cannot trigger movement of *several prizes* to become the subject of the *to*-clause. He suggests that there may be a correlation between the completeness/incompleteness of INFL and the presence/absence of (person and number) agreement features on INFL.

However, an alternative possibility would be to suppose that:

(82) INFL is *complete* when selected by C (and defective when not selected by C)

(82) would imply that a complete clause is a CP (and a defective clause an IP); (80) would then in turn imply that only in a complete clause (i.e. in a CP) can INFL have an EPP-feature. (82) seems consistent with Chomsky's (2001, p.13) observation about INFL that 'If it is selected by C... it is also complete' (p.13). Given (80) and (82) and the assumption that the bracketed *to*-clause in (81) is a defective clause (hence an IP and not a CP), it would follow that the subject *several prizes* would move directly from being complement of *awarded* to becoming subject of *are* in a 'single step'.

Consider now the implications of the assumptions made in (80/82) for (67c) *Why him don't have eyes?* Since (67c) contains an initial wh-word, and if wh-words occupy spec-CP, we can assume the relevant clause to have the simplified superficial structure (83) below:

(83) [CP Why [C ø] [IP him [I don't] have eyes]]

The overall clause would be a CP, hence INFL would be complete by (82) and could have an EPP-feature by (80), triggering movement of *him* from being subject of *have* to becoming subject of *don't*, as in (70) above. INFL would, however, be underspecified for agreement, and hence have the caseless default subject *him*. On this view, EPP would not require the presence of agreement features

on INFL. Indeed, if we follow Chomsky (2001, p.10) in supposing that a head has an EPP-feature 'only if that yields new scopal or discourse-related properties', the function of EPP would be essentially to create a structure carrying a specific kind of semantic interpretation[67] – and (from a conceptual perspective) it is not clear why one would want to tie EPP to uninterpretable agreement properties of INFL if the function of EPP is to create a configuration which will be assigned a specific semantic interpretation[68].

7.6 A person-based account of EPP

An explicit acknowledgment of the problems posed by associating EPP with full agreement comes in fn.56 of Chomsky (2001), where he notes in relation to EPP that 'For English it appears to hold invariably for T, as we can see in raising constructions', and that in raising constructions 'T, though defective, must satisfy EPP'[69]. One type of structure Chomsky highlights in this regard is:

(84) *John* seems to Bill [t_1 to appear to himself [t_2 to like Mary]]

In order to account for the fact that *himself* refers back to *John* here, Chomsky supposes that the *appear* clause must have a trace of *John* as its subject, hence that INFL (= T) in the *appear*-clause has an EPP-feature triggering movement of *John* to spec-IP, even though INFL in raising constructions is defective and lacks a complete set of person/number features.

Chomsky (1998) posits that defective INFL in raising clauses carries person but not number, and its EPP feature requires that it have a specifier with person properties[70]. At first sight, it might seem as

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[67] A suggestion along these lines made by Anders Holmberg is that the EPP-feature of INFL/T might serve to create a predication structure (cf. Rothstein 1983, 1995): one instantiation of this idea (suggested by Claudia Felser) would be to suggest that a constituent headed by a category with an EPP feature is a predicate in Rothstein's sense and thus requires a structural subject. However, as Noam Chomsky points out, it is not clear what kind of *predication* would be involved, nor how such an analysis would square with the syntax of expletives and idiom chunks, or with successive-cyclic movement. However, expletive and idiom chunk subjects also pose potential problems for Chomsky's suggestion that EPP 'yields new scopal or discourse-related properties' – at any rate, if we follow Chomsky in positing that expletives have no interpretable features.

[68] There are also adult constructions which also seem to call into question any association between agreement and EPP. One is *for-to* infinitives like *It would be wrong [for me to intervene]*, where it is hard to see how the subject *me* could move to spec-IP because INFL has an EPP-feature by virtue of having a complete set of agreement features, if *me* is assigned case by (and hence agrees with) the transitive complementiser *for*: on the other hand, it should be noted that other possibilities exist, e.g. that *me* raises to some position within a split *for*-projection, as in Radford 1997, pp.449-50 (though without moving through spec-TP). Moreover, it might be claimed that quirky case constructions with default verb forms also challenge the claimed relation between agreement and EPP, if T in clauses with quirky subjects entirely lacks agreement features (rather than having agreement features which are assigned the default value).

[69] Chomsky uses T to label the constituent traditionally (and here) labelled as INFL/I.

[70] The assumption that EPP is a property related to person (rather than e.g. number or case) follows from Chomsky's assumptions that expletive *there* (which can satisfy the EPP requirement of INFL) carries no number or case features but only an uninterpretable person feature. The assumption that *there* is numberless accounts for the fact that it is the associate rather than the expletive itself which triggers agreement (as we see from contrasts such as *There is likely to*

if an analysis essentially along these lines could be proposed for structures like (70) *Why him don't have eyes?* More specifically, we might suppose that the INFL constituent *don't* carries (present) tense and (third) person agreement properties but lacks number agreement properties, so that the relevant sentence has the superficial structure (85) below:

(85) [CP Why [C ø] [IP him [$I_{3PresInd}$ don't] have eyes]

If (as assumed in 1i/62 above) nominative case assignment requires the presence of *both* person *and* number agreement features, it follows from the relevant formulation of nominative case valuation that if INFL carries person (but not number) features, the subject will surface in the caseless default form *him* rather than the nominative form *he*. If the EPP feature of INFL is a person feature (requiring INFL to have a specifier with person properties), we can suppose that INFL in (85) (by virtue of carrying a person feature) can have an EPP-feature triggering raising of the subject to spec-IP. By contrast, the corresponding nominative-subject structure (43b) *Why he don't have a nose?* would have the structure (86) below:

(86) [CP Why [C ø] [IP he [$I_{3SgPresInd}$ don't] have a nose]]

and the subject would be spelled out as the nominative form *he* in accordance with (62) by virtue of agreeing in person and number with an INFL constituent which carries an (indicative) *mood* feature.

However, there are technical problems posed by the analysis of sentences like (85). Chomsky posits that a constituent must be *active* (by virtue of containing an uninterpretable feature) in order to undergo movement. In sentences like (86), what makes the subject *he* active is its uninterpretable case feature. However, if we suppose that the subject *him* in (85) is a caseless default form, it will have no uninterpretable feature and hence be inactive (and thereby ineligible to undergo movement to spec-IP). Conversely, however, if we suppose that the *him* subject in (85) has an uninterpretable case feature, we run up against the problem that Chomsky's account of case-marking presupposes that a case feature can only be valued and deleted by a ϕ-complete head which agrees with the case-marked expression in *both person and number*: hence, if INFL contains only person and not number, the case-feature of the subject can be neither valued nor deleted.

How can we resolve this obvious dilemma? One possibility would be to suppose that raised accusative subjects do indeed contain an unvalued case feature, and that INFL in such cases is indeed ϕ-complete and hence carries both number and person features (with the person feature having the EPP-property of requiring the projection of a specifier). However, we might suppose that

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be a problem/There are likely to be problems); the assumption that *there* lacks case may account for the absence of the genitive form **there's*.

case valuation sometimes breaks down for JC, and that when this happens the case-marked constituent is assigned the default value (accusative), and the person/number features of the agreeing head are likewise assigned the default (3Sg) value. To illustrate how such an analysis might work, consider what would happen at the stage of derivation shown in schematic terms in (87) below[71]:

(87) [IP [I *Pres-Tns*, *Ind-Mood*, *u-Pers*$_{EPP}$, *u-Num*] [vP [SU *1-Pers*, *Sg-Num*, *u-Case*] ...]]

If nominative case valuation (62) applies successfully, the unvalued case feature *u-Case* of the subject will be valued as Nominative. If we follow Chomsky (2001, p.12) in positing that:

(88) Only a nominative expression can value unvalued person/number features of INFL[72]

it follows that the subject (by virtue of being nominative) can value the unvalued person/number features of INFL as first person singular; if the person feature property of INFL has the EPP property, it will trigger preposing of the subject as in *Why he don't have a nose?*

However, if nominative case valuation (62) fails, the subject is instead assigned the default value *accusative* (the case feature being deleted at the end of the relevant phase by the ϕ-complete INFL). Since the subject is not nominative, it cannot (given the assumption in (88) above) value the person/number features of INFL, which are therefore assigned the default (3Sg) value[73]. If the person feature of INFL has the EPP property, it will trigger preposing of the subject, so ultimately resulting in structures such as *Why him don't have eyes?*[74]

A prediction made by the analysis outlined above is that sporadic failure of case-valuation will lead to alternations between structures containing a moved nominative subject with an agreeing verb on the one hand, and a moved accusative subject with a non-agreeing verb (in the default 3Sg form) on the other. More concretely, it predicts that failure of case-valuation will result in children alternating between structures like *I want one* and *Me wants one*, and between *I'm naughty* and *Me's naughty*. Unfortunately, this prediction can only be partially tested in relation to the JC corpus. It cannot be tested in relation to structures containing lexical verbs or auxiliaries like *can/don't*, since JC does not overtly inflect these for person/number. The only verb in the JC corpus which can be used to test this

[71] The prefix *u* marks an unvalued uninterpretable feature; *Pres-Tns* is a present tense feature; *Ind-Mood* is an indicative mood feature; Pers*, Num,* and *Case* mark person, number, EPP and case features respectively; SU denotes the subject; the EPP subscript on the person feature indicates that it has the EPP property.

[72] Chomsky's precise formulation is 'the features of T can be checked only by nominative'.

[73] We also have to assume that default valuation of a feature leads to deletion of the feature at the end of the relevant phase – though we leave aside here the precise mechanism by which this is effected.

[74] An interesting variant of this analysis would be to suppose that the feature-matching component of agreement sometimes breaks down (so that INFL falls to be assigned the person/number values of its subject, leading to assignment of default values to the person/number features of INFL), and that nominative case assignment can only apply where matching is successful (default accusative assignment applying where matching breaks down).

prediction is BE, since this overtly inflects for agreement: however, the picture is complicated by the fact that JC produces relatively few structures containing an inflected form of BE with a subject whose case is unambiguously identifiable. As predicted, the nominative subject *I* occurs only with the agreeing form *(a)m*, and likewise *they* only with the agreeing form *are*. The accusative subject *me* does not occur with either *am* or *(i)s*, only in the three BE-drop structures in (89) below:

(89) Me bigger than Gio and him. *Me* bigger him. *Me* too tired

Given that *(i)s* has a null exponent before words beginning with a consonant in JC's grammar, it is certainly possible that structures like (89) contain a null variant of *'s* – though there are clearly other alternative accounts of BE-drop in such structures (e.g. in terms of tense-underspecification).

However, it is interesting to note in this regard that both Loeb and Leonard (1991) and Wexler, Schütze and Rice (1998) report children with SLI frequently producing accusative subjects with 3Sg verbs. For example, in Loeb and Leonard's study, 36% of the accusative subjects produced by one of their children (SLI3) who (at 4;5) was roughly the same age as JC occurred with 3Sg *s*-forms. Wexler, Schütze and Rice's study reported that 30% of the 3Sg verb forms the children with SLI in their study produced had accusative subjects, resulting in structures such as (90) below[75]:

(90) Now *him* is back. Now *him* is eating. *Him* is a wild cat. *Him* bites people. *Him* wants to lie down. No, *him* scratches.

Such structures would be predicted to occur under the analysis suggested here[76].

The analysis of accusative subjects suggested here could in principle also be extended to accusative possessors. That is, we might suppose that JCs possessive structures are DPs headed by a null D with person/number agreement features, with a POSSP complement whose POSSESSOR specifier has an unvalued case feature. If genitive case valuation (1iii) succeeds, the case feature of the possessor is valued as genitive and deleted by the ϕ-complete D, and the abstract person/number of features of D are likewise valued and deleted. But if genitive case valuation fails, the case feature of the possessor is assigned the default value accusative (and erased by the ϕ-complete D), and the person/number features of D are assigned default values (and erased). This would mean that

[75] The data come from a spontaneous speech transcript of an SLI child aged 4;6 – one of the subjects included in SWR's study (subject number 19700128): I am grateful to Mabel Rice for providing me with a copy of the relevant transcript. Note that the Wexler, Schütze and Rice study focused on structures containing 3Sg subjects.

[76] It may be that adult Welsh provides evidence in support of the plausibility of the analysis outlined here. Bob Borsley points out to me that in Welsh, nominal subjects raise to spec-IP (e.g. over negation) in finite clauses, but the verb surfaces in the default (3Sg) form. (Pronominal subjects also raise to spec-IP and require person/number agreement on the relevant finite verb.)

(contrary to what was suggested earlier) neither accusative subjects nor accusative possessors are caseless forms – rather, they are forms which enter the derivation with an unvalued case feature which is assigned the default (accusative) value as a result of the failure of (canonical i.e. non-default) case valuation.

8. Conclusions

In this paper, we have argued that naturalistic data from a four-year-old child with SLI (JC) provide evidence about aspects of the morphosyntax of case-marked constituents. In particular, we claim that JC's use of bare verb forms with nominative subjects in past tense contexts is inconsistent with the *tense-and-agreement* account of nominative case-marking proposed by Chomsky in recent work, and more consistent with a *mood-and-agreement* account (an account which receives independent support from other sources, and which echoes recent claims by Nina Hyams that mood is a more primitive property than tense). In addition, we suggested that JC's preposed accusative subjects in finite contexts reflect a failure in feature-valuation, with a nominal which cannot be assigned the relevant canonical structural case-feature value (because of feature-valuation breakdown) instead being assigned the default (accusative) value, and with the person/number features of the relevant Probe concomitantly being assigned default (3Sg) values. We suggested that a parallel account could be developed for JC's accusative possessor structures.

It is interesting to note that Schütze (1997) reports that normally developing children produce virtually no clauses with accusative subjects and 3Sg verbs (like *Him is naughty*), and virtually no nominals with accusative possessors. If his observation is robust, it would suggest that children with SLI face particular problems in relation to *feature-valuation* (i.e. assigning values to unvalued uninterpretable features), with breakdown leading to assignment of default values to the relevant case/person/number features. If the breakdown of feature-valuation is indeed a characteristic of SLI, an interesting question which needs to be addressed in future research is to what extent this may reflect more general processing difficulties, if (as Leonard 1998, p.119 claims) 'SLI children show weaknesses in areas of functioning that...are clearly cognitive'.

8. References

Abney SP (1987) *The English Noun Phrase in its Sentential Aspect*, PhD diss, MIT

Adger D (2001) *Core syntax: A minimalist approach*, ms. University of York.

Carstens V (2000) 'Concord in Minimalist Theory', *Linguistic Inquiry*, vol. 31, no. 2

Cho, I (1993) 'A reconsideration of case assignment in inalienable possession constructions in Korean', *Harvard Studies in Korean Linguistics*, 5: 252-261

Chomsky N (1995) *The Minimalist Program*, MIT Press, Cambridge Mass

Chomsky N (1998) *Minimalist Inquiries*, MIT Working Papers in Linguistics, no. 15

Chomsky N (1999) *Derivation by Phase*, MIT Working Papers in Linguistics, no. 18.

Chomsky N (2001) *Beyond Explanatory Adequacy*, ms. MIT

Clahsen H (1989) 'The grammatical characterization of developmental dysphasia', *Linguistics* 27: 897-920

Clahsen H, Bartke S & Göllner S (1997) 'Formal features in impaired grammars: A comparison of English and German SLI children', *Journal of Neurolinguistics*, 10: 151-171

Crystal D (1980) *A First Dictionary of Linguistics and Phonetics*, Deutsch, London

Eisenbeiss S (2000) 'The acquisition of the Determiner Phrase in German child language' in Friedemann & Rizzi (eds) pp. 26-62

Friedemann M-A & Rizzi L (2000) *The Acquisition of Syntax*, Longman, London

Gopnik M & Crago MB (1991) 'Familial aggregation of a developmental disorder', *Cognition* 39:1-50

Grimshaw J (1990) *Argument Structure*, MIT Press, Cambridge Mass.

Gruber JS (1967) 'Topicalisation in child language', *Foundations of Language* 3: 37-65

Guasti MT (2000) 'An excursion into interrogatives in Early English and Italian', in Friedemann & Rizzi (eds) 105-128

Guasti MT & Rizzi L (1996) 'Null Aux and the acquisition of residual V2', BUCLD 20: 284-295

Henry A (1995) *Belfast English*, Oxford University Press

Hoekstra T, Hyams N & Becker M (1998) 'Agreement and finiteness of V2: Evidence from child language'. In A Greenhill et al (eds) *Proceedings of the 22nd Annual Boston University Conference on Language Development*, Cascadilla Press, Somerville Mass, pp. 360-373

Hoekstra T & Hyams N (1998) 'Aspects of root infinitives', *Lingua* 106: 81-112

Hoekstra T & Hyams N (1999) 'The eventivity constraint and modal reference effects in root infinitives' in A Greenhill et al (eds) *Proceedings of the 23rd Annual Boston University Conference on Language Development*, Cascadilla Press, Somerville Mass, pp. 360-373

Hyams N (2001) 'Now you hear it, now you don't: the nature of optionality in child grammars' in A H-J Do, L Domínguez & A Johansen (eds) *Proceedings of the 25th Annual Boston University Conference on Language Development*, Cascadilla press, Somerville Mass, pp.34-58

Kayne RS (1994) *The Antisymmetry of Syntax*, MIT Press, Cambridge Mass.

Leonard LB (1989) 'Language learnability and specific language impairment in children', *Applied Psycholinguistics 10: 179-202*

Leonard LB (1998) *Children with Specific Language Impairment*, MIT Press, Cambridge Mass.

Loeb D & Leonard L (1991) 'Subject case marking and verb morphology in normally developing and specifically language-impaired children', *Journal of Speech and Hearing Research* 34: 340-346

Lobeck A (1990) 'Functional heads as proper governors', *Proceedings of NELS* 20: 348-362

Lyons C (1999) *Definiteness*, Cambridge University Press

Murusagi, K & M Saito (1994) 'Adjunction and cyclicity', *Proceedings of the 13th West Coast Conference on Formal Linguistics*, pp. 302-317

Nasu N (2001) 'Towards a theory of non-cyclic A-movement', *Essex Graduate Student Papers in Language and Linguistics*, 3: 133-160 (author's e-address: *nnasu@essex.ac.uk*)

Radford A (1997) *Syntactic Theory and the Structure of English*, Cambridge University Press

Radford A (1998) 'Genitive subjects in child English', *Lingua* 106: 113-131

Radford A (2000) 'Children in search of perfection: Towards a minimalist model of language acquisition', *Essex Research Reports in Linguistics* 34: 57-74

Radford A & Galasso J (1998) 'Children's possessive structures: a case study', *Essex Research Reports in Linguistics* 19: 37-45

Ramos E & Roeper T (1995) 'Pronoun case assignment by a SLI child', poster presentation presented to convention organised by *American Speech and Hearing Association*

Rice ML, Noll KR & Grimm H (1997) 'An Extended Optional Infinitive stage in German-speaking children with Specific Language Impairment', *Language Acquisition* 6: 255-295

Rice ML & Oetting JB (1993) 'Morphological deficits of children with SLI: Evaluation of number marking and agreement', *Journal of Speech and Hearing Research* 36: 1249-1257

Rice ML & Wexler K (1996) 'Towards Tense as a clinical marker of Specific Language Impairment', *Journal of Speech and Hearing Research* 39: 1239-1257

Rice ML, Wexler K & Cleave P (1995) 'Specific Language Impairment as a period of Extended Optional Infinitive', *Journal of Speech and Hearing Research* 38: 850-863

Rice ML, Wexler K & Herschberger S (1998) 'Tense over time: The longitudinal course of Tense acquisition in children with Specific Language Impairment', *Journal of Speech, Language and Hearing Research* 41: 1412-1431.

Rizzi, L (1997) 'The fine structure of the left periphery' in L Haegeman (ed) *Elements of Grammar*, Kluwer, Dordrecht, pp. 281-337

Rizzi L (2000) 'Remarks on early null subjects' in Friedemann & Rizzi (eds) pp. 269-292

Rothstein SD (1983) *The Syntactic Forms of Predication*, PhD diss., MIT

Rothstein SD (1995) 'Pleonastics and the interpretation of pronouns', *Linguistic Inquiry* 26: 499-529

Scabolsci A (1994) 'The Noun Phrase', *Syntax and Semantics* 27: 179-274

Schütze C & Wexler K (1996) 'Subject case licensing and English root infinitives', in A. Stringfellow, D. Cahana-Amitay, E. Hughes and A. Zukowski (eds) *Proceedings of 20th Boston University Conference on Language Development: Vol 2*, Cascadilla Press, Somerville Mass., pp. 670-681.

Schütze C (1997) *INFL in Child and Adult Language: Agreement, Case and Licensing*, PhD diss, MIT

Sigurðsson H (1996) 'Icelandic Finite Verb Agreement', *Working Papers in Scandinavian Syntax* 57: 1-46

Tallerman MO (1998) 'The uniform case-licensing of subjects in Welsh', *The Linguistic Review* 15: 69-133

Templin M (1957) *Certain Language Skills in Children*, University of Minnesota Press, Minneapolis

Trudgill, P (1990) *The Dialects of England*, Blackwell, Oxford

Ullman M & Gopnik M (1994) 'The production of inflectional morphology in hereditary specific language impairment', *McGill Working Papers in Linguistics* 10: 81-118

Vainikka A (1994) 'Case in the development of English syntax', *Language Acquisition* 3: 257 -325.

Wexler K, Schütze C & Rice M (1998) 'Subject case in children with SLI and unaffected controls: Evidence for the Agr/Tns Omission Model, *Language Acquisition* 7: 317-344

Zribi-Hertz, A (1997) 'On the dual nature of the "possessive" marker in Modern English', *Journal of Linguistics* 33: 511-537