Quaderni di Linguistica e Studi Orientali / Working Papers in Linguistics and Orientral Studies
n. 1 (2015), pp. 13-35
DOI: http://dx.doi.org/10.13128/QULSO-2421-7220-16514

Some Considerations on the *'s* Morpheme in English: Acquisition and Theory*

Elisa Di Domenico
Università per Stranieri di Perugia (<elisa.didomenico@unistrapg.it>)

Abstract

This article starts from the discussion of some data concerning the acquisition of English as a second language, which suggest that genitival *'s* and copular *'s* are considered one and the same morpheme by the experimental subjects. The *'s= is* Hypothesis is then examined throughout some relevant linguistic literature. The examination of arguments in favour and against it leads to the proposal that *'s* is indeed one and the same morpheme whose content is (third) person, in turn a quantificational feature which expresses denotation. In the final part of the paper extensions to plural *-s* and third person singular *-s* of lexical verbs are sketched.

Keywords: English, L2 Acquisition, Person, Possessive Constructions, *'s* Morpheme

1. Introduction

The relation between language acquisition and linguistic theory is a very tight one, at least since Chomsky (1965), which characterizes linguistic theory as a theory of language acquisition.

In this article, some second language (henceforth L2) acquisition data have been the input to my inquiry into linguistic theory.

The data in question come from the acquisition of the English *'s* morpheme by native speakers of Italian (Di Domenico 2013a and 2013b,

* Parts of this research were presented at the Carthography Workshop held at the University of Ghent (June 2014), and in talks given at the Università di Siena (May 2014), Università per Stranieri di Perugia (June 2014), and at the Università di Firenze (April 2015). I thank the audience and two anonymous reviewers for useful comments and suggestions. All errors are of course my own.

ISSN 2421-7220 (online)
www.fupress.com/bsfm-qulso

forthcoming), in which experimental results suggest that subjects make the hypothesis in (1), which I will call henceforth The *'s= is* Hypothesis:

(1) The *'s= is* Hypothesis
Is and *'s* are allomorphs of one and the same morpheme that can be merged DP internally and clause internally

In order to verify whether this hypothesis was either a wrong way to deal with the opacity of the *-s* morpheme in English or revealed a true property of this morpheme, after searching the relevant linguistic literature, I found traces of this hypothesis: den Dikken (1998a and 1998b, 1999), in the frame of a characterization of pre-nominal and post-nominal possessive constructions, assumes indeed an identity between the *'s* morpheme in English pre-nominal possessive constructions and the copula. Some additional data (namely L2 elicited productions, presented in Bennati and Di Domenico 2008) will receive an explanation in the light of The *'s= is* Hypothesis and of the tight relation assumed by den Dikken between pre-nominal and post-nominal possessive constructions.

I will furthermore examine a different hypothesis (Bernstein and Tortora 2005) which argues in favour of a non-identity between *'s* and *is*, suggesting that *'s* corresponds to the *-s* found in the verbal domain. The analysis of the arguments in favour and against The *'s= is* Hypothesis found in the literature will lead me to a proposal in which the basic insight of den Dikken's proposal is maintained albeit reformulated. My intermediate conclusions will be in favour of (1) with the additional assumption that the content of *'s*, and of the functional projection in which it is merged, is person.

In the final part of the paper I will speculate on the motivations for a person morpheme in *'s* Genitive Constructions, proposing that person expresses denotation, a necessary requirement of DPs and sentences. Then I will examine Manzini and Savoia's (2011a) analysis of the Latin/Romansh *-s* morpheme, characterized as expressing denotation as well. Finally I'll apply their characterization of denotation to English, reaching the conclusion that *'s* is not only *is* but also *-s*, though with a different content with respect to both den Dikken and Bernstein and Tortora.

In Section 2, I'll briefly review the experimental findings at the base of (1), while in Section 3 I'll review linguistic arguments and counterarguments for (1) found in the literature, concluding with my own analysis. In Section 4, I'll characterize the content of *'s* in the light of Manzini and Savoia's (2011a) characterization of denotation, while in Section 5 I'll draw some conclusions.

2. What's 's? A Grammatical Decision Task

The English *-s* morpheme displays a peculiar morpho-phonological opacity. With graphic and/or phonetic variants, it may indicate the plural of nouns,

the third person singular of the present (simple) tense of lexical verbs as well as, in its contracted form, of *be* and *have*, and the genitive. One interesting question is whether it may be considered one and the same morpheme and, if so, what its underlying specification might be. Can acquisition data help with this question?

Let us start from first language acquisition data, as from seminal work by Brown (1973). In the frame of a characterization of the order of acquisition of 14 grammatical morphemes in three children, Brown (1973) interestingly shows that different kinds/uses of *-s* are acquired in a sequence correlated with MLU (Mean Length of Utterances).[1] In Table 1 (adapted from Brown's 1973 Table 38) the order of acquisition of various kinds of *-s*-related grammatical morphemes is shown (the values in the right column represent the average MLU in Eve, Adam and Sarah):

Table 1. Order of Acquisition of *-s*-Related Grammatical Morphemes (based on Brown 1973)

Plural	3.00
Possessive	6.33
Non contractable copula	6.50
Third person singular	9.66
Non contractable auxiliary	11.66
Contractable copula	12.66
Contractable auxiliary	14.00

These data reveal the interesting fact that the possessive and the (non contractable) copula are acquired at a very similar stage (6.33 and 6.50 respectively).[2]

A similar, though not identical, order of acquisition has been found by Dulay and Burt (1974) in L2 children with different L1s (Spanish and Chinese): the important difference, with respect to Brown's data, is that the copula is acquired earlier than the possessive.

[1] The Mean Length of Utterances expresses the average number of words in the utterances of a corpus collected in a given experimental session. In L1 acquisition studies this measure is generally considered more reliable and predictive than the age of the experimental subjects in the establishment of stages in the acquisition process.

[2] NB In comparing his findings with De Villiers and De Villiers (1973), Brown (1973) notes an extremely converging path with one interesting exception: in De Villiers and De Villiers the contractable forms of the copula and auxiliary are acquired earlier than the non contractable forms. Neither Brown nor De Villiers and De Villiers, as Brown acknowledges, can provide a satisfying explanation for this fact.

These data, however, do not help with the question of whether these are different homophonic morphemes or one and the same morpheme with different merging sites.

Some metalinguistic tasks, of course not suitable for very young acquirers, could possibly be more revealing in this respect. L2 acquisition with post-infancy onset can therefore be a convenient situation to study this question.

Di Domenico (2013b) submitted a written grammatical decision task to two different groups (the Pilot Study group and the Second Study group) of native speakers of Italian aged 10-12, beginners or near beginners of L2 English. Given the written nature of the task, two uses of the *'s* morpheme which are homophonic and homographic, i.e. totally nontransparent, were chosen: the case in which *'s* is a (contracted) form of BE and the case in which it is a genitive. Subjects were given 5 sentence patterns. In two of them the value of *'s* is third person singular of BE and in three of them it is genitive. The items contained no violations and were not ambiguous.[3]

The patterns are reported in Table 2:

Table 2. Experimental Materials

Value of *'s*	Pattern	Example
1.BE	Common noun + *'s* + PP	The car's in the garage
2.BE	Proper name + *'s* + PP	Jodie's in the garden
3.GV	Is + Subj+Poss Simple NP + *'s* + N	Is this Jack's tracksuit?
4.GV	Is + Subj+Poss Conjoined NP + *'s* +N	Is this Tom and Jenny's car?
5.GV	Proper name + *'s* + BE +AP	Rosie's dog is very friendly

Subjects were asked to decide whether the value of *'s* in each sentence was BE or Genitive.

Results revealed first of all an unexpectedly high number of non-target decisions, which was furthermore almost persistent in the experimental time span: 32.4 % in the first session of the Pilot Study, 27.8% in the second session of the Pilot Study which took place 6 months later. This looks consistent with Xanthos *et al.* (2011) findings concerning first language acquisition, i.e. that the morphological richness of a language is positively related to the speed of morphological acquisition, and so acquisition of opaque morphemes is delayed.

[3] 50 subjects participated in each experimental study. They were all beginners or near-beginners of English aged between 10 and 12, attending the first year of Scuola Media. In the Pilot Study, the experimental group included 2 dyslexic subjects, while for 13 of the remaining 48 subjects Italian was a near native L2. In the Second Study, there were 2 dyslexic subjects, while for 10 of the remaining 48 subjects Italian was a near native L2. See Di Domenico (2013a and 2013b, forthcoming) for further details.

But what is more interesting is that results clearly revealed that the various patterns were not equally difficult for the subjects. In particular, in the Pilot Study a statistically significant difference for target decisions was found between Pattern 2 (the pattern with less target decision) and Pattern 3 (the pattern with more target decision): χ^2=5. 4726 p=.05; with Yates correction χ^2= 4.5228 p=.05.

In the Second Study, a statistically significant difference for target decisions was found between Pattern 5 (the pattern with less target decisions) and Pattern 3 (the pattern with more target decisions): χ^2= 9.4044 p=.05 (significant also at p=.01 and at p=.005).

What makes Pattern 2 and Pattern 5 significantly more difficult than Pattern 3?

The answer to this question cannot be found but assuming that subjects make the underlying assumption in (1), here repeated for convenience:

(1) The *'s= is* Hypothesis
Is and *'s* are allomorphs of one and the same morpheme that can be merged DP internally and clause internally

In Pattern 2 and Pattern 5, *'s* is placed at what we may call, following Fodor (1998) a "choice point", i.e. a point in which it can be attached either into the currently parsed DP (and in this case it is interpreted as Genitive), or projecting IP (and in this case it is interpreted as the third person singular of BE in the present tense).

The two possible interpretations follow directly from two distinct parsing principles:[4]

(2) Late Closure (Frazier and Fodor 1978)
When possible attach incoming material into the constituent currently being parsed

(3) Minimal Attachment (Frazier and Fodor 1978)
Attach incoming material into the phrase marker being constructed using the fewest nodes consistent with the well-formedness rules of the language under analysis

Following (2), *'s* is interpreted as a genitive, following (3) *'s* is interpreted as the third person singular of BE in the present tense.

A similar problem does not arise for Pattern 3. With *Is* in the Comp layer, when subjects encounter *'s*, I° is filled by the copy of the moved *is*, and *'s* can only be interpreted as a genitive.

[4] On the universality of these parsing principles, see Fodor (1998).

In assuming (1), subjects do nothing less than try to set the Merge properties of *'s*, i.e. assuming Rizzi's (2011) typology of parameters, they try to set a Merge parameter of this specific element of the functional lexicon. But is this setting so weird or does it bring to light a real property of *'s*?

Interestingly, traces of The *'s = is* Hypothesis can be found in the relevant literature, and the next Section is dedicated to them.

3. On the 's = is *Hypothesis*

3.1 den Dikken (1998a and 1998b, 1999)

According to den Dikken (1998a and 1998b, 1999)[5], what underlies all possessive constructions is a structure in which the possessum is the subject of a dative small clause whose head takes the possessor as its complement:

(4) $[_{SC}$ POSSESSUM $[_{PP}$ P_{dat} POSSESSOR]]

In prenominal possessive constructions the (dative/possessor) predicate undergoes movement to an A-specifier position just outside the small clause. The target of this movement (which is a Predicate Inversion process) is a functional projection FP outside the dative small clause. In (5a) and (5b) (adapted from den Dikken 1998a) the base and the derived structure are respectively shown:

(5) a. $[_{DP}$ D $[_{AgrP}$ Agr $[_{FP}$ Spec $[_{F'}$F $[_{SC}$ POSSESSUM $[_{PP}$ P_{dat} POSSESSOR]]]]]]
b. $[_{DP}$ D $[_{AgrP'}$ Agr $[_{FP}$ $[_{PP}$ t_k POSSESSOR$]_i$ $[_{F'}$F + P_k $[_{SC}$ POSSESSUM t_i]]]]]]

The derivation in (5) is assimilated to the one occurring in English Double Object Constructions, as (6b), assumed to be syntactically derived from the prepositional dative constructions (6a) via an instance of Predicate Inversion targeting the dative PP:[6]

(6) a. Imogen gave the book to Brian
b. Imogen gave Brian the book

[5] But see den Dikken (2006 and 2014) for a partially different view.

[6] On the evidence of the fact that it can trigger Locative Inversion, the dative PP is analyzed as a small – clause predicate:
(i) a. To Brian was given the book
b. To Imogen was sent a postcard
c. To Amnesty International was donated the bulk of his estate

In prenominal possessive constructions (as well as in English Double Object Constructions), the dative preposition has a null allomorph $P_{\varnothing}$ which incorporates into P°, making its PP the closest goal for an outside probe. The outside probe, in turn, overtly attracts the PP yielding inversion of subject and predicate.

The author is prompted by the need to account for the dative morphology on Hungarian dative possessor constructions as (7) (where does the dative morphology come from?), at the same time giving a similar, movement derivation (*contra* Szabolcsi 1983 and 1994), of Hungarian nominative possessor constructions as (8):

(7) Mari-nak a kalap-ja
Mari-DAT the hat-POSS.3sg

(8) a Mari kalap-ja
the MariNOM hat-POSS.3sg

den Dikken also wants to account for some complex anti-agreement facts found in Hungarian possessive constructions, as in (10) and (11):

(9) a. a nö mond-ja. . .
the woman say-3sg
'The woman says. . .'

b. a nök mond-jak. . .
the women say-3pl
'The women say. . .'

(10) a. a nö kalap-ja
the woman hat-3sg
'The woman's hat'

b. a nök kalap-ja
the women hat-3sg
'The women's hat'

(11) a. a(z) (ö) kalap-ja
the (he/she) hat-3sg
'His/her hat'

b. a(z) (ö) kalap-juk
the (he/she) hat-3pl
'Their hat'

In Hungarian possessive constructions (but not in clauses, see 9) we can observe an asymmetry: while with pronominal possessors the agreement relationship between the possessor and the possessum shows up on the possessum (11b), with non-pronominal possessors there is anti-agreement in number

(10).[7] This parallels, according to den Dikken (1998) the situation found in Welsh VSO clauses described by Rouveret (1991). Rouveret's account for these anti-agreement facts is the following: in VSO clauses the subject does not raise as high as AgrSP, so the necessary spec/head configuration is not met, and agreement is not realized. Agreement with pronouns is realized as follows: since pronouns are not DPs, but NumPs, their head raises to AgrS and agreement is thus realized. From this den Dikken concludes that Hungarian (nominative) possessive constructions are like Welsh VSO clauses. The difference between clauses and possessive constructions in Hungarian is accounted for assuming that Agr in possessive constructions, contrary to Agr in clauses, has no EPP feature, so its AgrP has no spec. Full nominal possessors in Hungarian raise either to Spec,FP (nominative possessors) or directly to spec,DP (dative possessors). In the case of pronominal possessors, Num-to Agr raising results in agreement, the pronoun itself staying in Spec,FP.

In shifting to English, the claim is made that in English the same anti-agreement facts are observed, hence the same underlying derivation is to be assumed for English *'s*-Genitive ("Saxon Genitive" in den Dikken) constructions.

In English Saxon genitival constructions we observe the same full DPs/pronouns asymmetry in anti-agreement found in Hungarian possessive constructions, with the same difference between possessive constructions and full clauses:

(12) a. the man's ill
b. the men are ill

(13) a. he's ill
b. they're ill

(14) a. the man's illness
b. the men's illness

(15) a. he's (→his) illness
b. they're (→their) illness

While Hungarian does not spell-out F in possessive nominal constructions,

(16) English overtly signals the presence of the complex F-node by realizing it in the form of the 'genitival marker', now to be viewed as an incarnation of the copula. (den Dikken 1998a: 103)

The "genitival marker" is a copular element on a par with the copula seen in sentences. The English facts also confirm the idea that possessors end up to the left of the noun phrase that they possess as a result of a syntactic movement operation of the Predicate Inversion type.

[7] As (11b) shows, however, the pronoun itself is not in the plural form. This anti-agreement fact is accounted for by den Dikken assuming that –k raises to Agr creating the formative –juk thus severing the pronoun of –k–.

(17) Predicate Inversion is contingent on the presence of FP; and in English we can actually see the presence of FP in the obligatory emergence of a copular element (the 'Saxon genitival marker') in the prenominal possessor construction. (*Ibidem*: 103)

den Dikken's proposal is thus perfectly in line with the hypothesis that the experimental subjects examined in Di Domenico (2013a, 2013b, and forthcoming) make, namely The *'s* = *is* Hypothesis.

His analysis of possessive constructions, furthermore, establishes an interesting relation between post- nominal and pre-nominal possessive constructions which can help explaining some L2 elicited production data collected by Bennati and Di Domenico (2008). In the frame of a study meant to elicit English *'s* Genitive Constructions by native speakers of Italian, Bennati and Di Domenico (2008) collected data as the ones below:[8]

(18) Q. Which bag does Jane want?
A1. The bag is Mary
A2. Bag Mary Poppins
A3. Is bag a Mary Poppins

(19) Q. Which flowers does Katrina want?
A. Flowers the Brom

(20) Q. Where are the belts?
A. The belt is Katrina is on the table; the belt is Brom is on the bed

In these productions we can observe some facts which appear significant in the light of den Dikken's analysis of possessive constructions:
a. *is* is used in the place of *'s* (as in 20 and possibly in 18A1 and 18A3)
b. In all examples the possessor is seen to the right of the possessum, though *of* is not present.[9]

[8] Bennati and Di Domenico (2008) studied the acquisition of English *'s* genitive constructions by native speakers of Italian attending Scuola Media (10-14) through an elicitation task with no L1 linguistic material
The main findings of this study suggest that:
a) there is a stage in which possessor movement only is observed
(i) *Mary bag*
b) then *'s* is inserted, but in many cases the output is
(ii) *The Alison's cat*
c) *of* constructions are attested
(iii) *The bag of Mary*
In Di Domenico and Bennati (2008) productions like (18), (19) and (20) were put under the rubric 'Non target productions' or 'Attempts of *of*- Constructions'.

[9] We will come back to (19) in Section 4 (footnote 20).

As for (18A3), furthermore, we can observe a "base generated" possessive construction à la den Dikken, *a* being the dative preposition in Italian. Finally, den Dikken's analysis of post-nominal possessive constructions with respect to pre-nominal ones suggests that the widespread use of "*of* Constructions" (see footnote 8) may not just be due to transfer from the subjects' L1.

den Dikken's analysis, however, has been questioned by Bernstein and Tortora (2005). Their precise analysis and their elegant arguments led den Dikken (2006) to make one step backwards. The author says indeed:

(21) Bernstein and Tortora (2005) have confronted this approach to 'Saxon Genitives' with some nontrivial questions that should lead one to rethink parts of the original analysis. I will leave the specifics of the analysis of the myriad surface manifestations of possessive constructions for a future occasion.
(den Dikken 2006: 309, fn. 99)

Therefore, I think it is worth examining Bernstein and Tortora's nontrivial questions.

3.2 Bernstein and Tortora (2005)

The authors suggest that, at least for English, the word-final marker on possessive pronouns should not be assimilated to the word-final possessive marker of full DPs (Bernstein and Tortora 2005: 1225): only the former corresponds to the copula.

The *'s* of *Mary's* book or of *a book of Mary's* is not a copula, but rather a (singular) number marker (Kayne 1989 and 1993) akin to that found in the verbal domain (*she eats*). Plural possessive DPs (*the kids' mother*) are marked with a null plural morpheme as in the verbal domain (*she eats* vs. *they eat* ∅).

Possessive pronouns are morphologically complex, consisting of a nominative pronoun and the endings *-s* or *-r* which correspond to the copular forms *is* and *are*. The agreement between pronoun and copula is triggered in a spec-head configuration in a DP-internal agreement projection, FP.

Pronouns are NumPs. The copula is the head of an FP projection. The NumP pronoun moves from the complement position to the spec position of the FP and then up to the spec of DP, as shown in (22):

(22) The internal structure of possessive pronouns
[DP D [FP F [NumP
-s/-r they/he
↑_____↑_____|

The *'s* of *Mary's book* or of *a book of Mary's* occupies an Agr head (as for Kayne 1993), whose spec is occupied by the full DP possessor (*Mary*), as shown in (23). The complement of this Agr head is, for Bernstein and Tortora

(2005), an FP projection whose spec may be occupied by possessive pronouns (i.e. by the entire structure in 20):[10]

(23) [DP D [AgrP Agr [FP [F [QP/NP
(of) Mary 's their/his friends

The authors argue in favour of a distinction between Full DPs and pronominal possessives on the basis of two main arguments: First because there is a tighter relation between the *s* of *his* and the *s* of *Mary's*, second on the basis of coordination facts (as shown in 24 and 25 below, taken from Bernstein and Tortora 2005: 1230) that suggest that the syntax of full DPs and pronominal possessives must be distinguished:

(24) a. Jack and Jill's house
b. *we and their house (cf. our and their house)

(25) ?* my and Jack's house (cf. * Jack's and my house)

The authors however mention that colloquial English has a strategy to allow coordination of a pronoun and a DP, as in (26):

(26) me and Jack's house

For some reason, the authors acknowledge, "a 'default' accusative may be used as a strategy for coordination of pronouns and DPs" (Bernstein and Tortora 2005: 1230).

Furthermore, Bernstein and Tortora (2005) argue that den Dikken's analysis crucially relies on the exclusive consideration of irregular plurals (*the children; the women;* or *the men* as in 12b above). In regular plurals, as is well known, *'s* cannot appear, as (27) shows:

[10] A problem is however the characterization of partitive genitives that involve a possessive pronoun, such as:
(i) A friend of theirs
According to Bernstein and Tortora (2005) in this case the pronoun raises to the spec of the Agr projection picking up the *'s* sitting in its head. See Bernstein and Tortora (2005: 1233-1235) for three proposals on the trigger of this movement. A further problem raised by (i) is that if *'s* is a singular number marker (as claimed by Bernstein and Tortora, following Kayne 1989 and 1993), then it should not follow a plural pronoun. At the end of their paper (Bernstein and Tortora 2005: 1240) the authors propose that the *'s* of *theirs* should not be interpreted as a singular agreement marker but rather as default agreement. In 4.3 I will propose a different account for the *-s* in possessive forms like *theirs*, *yours,* which appear in partitive genitives and other predicative environments.

(27) a. * the kids's mother

The authors argue that this is in favour of their treatment of *'s* as the equivalent of the *-s* found in the verbal domain, which appears in the singular form only, while in the plural a '∅' morpheme is found:

(28) a. she knows
b. they know ∅

The same '∅- *-s*' alternation found in the verbal domain is repeated in the nominal domain with full DP possessors:

(29) a. the boy's mother
b. the kids' ∅ mother

The absence of *'s* after regular plural possessors, they argue, cannot be due to phonological or morphological reasons.[11] Bernstein and Tortora (2005) found indeed that for many speakers (30b) is worse than (30a):

(30) a. the kid from New York's mother
b. ?* the kids from New York's mother

In (30b) the plural marker is separated from the possessive marker by other material, so the fact that it is felt deviant cannot be explained on phonological or morphological grounds, but is instead consistent with a characterization of *'s* as a singular number marker.

But the fact that irregular plurals can be marked with *'s*, as shown in (31) below remains a problem for Bernstein and Tortora's (2005) analysis:

(31) the children's

As the authors acknowledge:

(32) Of course the question still remains as to why *'s* is compatible with irregular plurals.
(Bernstein and Tortora 2005: 1236, fn. 35)

[11] As already noted by Zwicky (1987), there are cases where a double *s* is permissible:
(i) Terence's mother
Zwicky (1987) proposes therefore the constraint in (ii):
(ii) A double *s* is permissible if the first [s] does not correspond to a morpheme
Aronoff and Fuhrhop (2002) propose instead a "monosuffix constraint" that bars more than one inflectional suffix in English.

3.3 My Analysis

I do agree with Bernstein and Tortora's (2005) observation that the word-final marker on possessive pronouns should not be assimilated to the word-final possessive marker of full DPs, departing from den Dikken (1998a). The very same observation, however, leads to the conclusion that *'s* cannot be assimilated to the verbal marker *-s* either. Like *is*, and unlike *-s*, we can consider *'s* an independent functional formative, an f-morph, in Borer's (2005) terminology. Borer (2005) distinguishes f-morphs (free, independent functional morphemes, such as *the*, *will*) from (phonologically abstract) head features (e.g. <pst> for past tense), the latter requiring head movement, the former blocking it. In a footnote, she adds a third category, bound f-morphs (to which possibly, in my opinion, *-s* belongs) characterized as follows:

(33) It is extremely plausible that f-morphs come in two varieties (morphologically bound and morphologically free, following traditional morphological terminology) and that the absence of (head-, my note) movement is the property of the latter.

(Borer 2005: 32, fn. 3)

Within this typology of morphemes, we can consider *'s* a clear f-morph. That it is independent, is confirmed by the fact that it follows so called "Group Genitives":

(34) Peter and John's book

Furthermore, it triggers Possessor Movement (as *is* may trigger Predicate Inversion) i.e. XP movement, and not head movement. These facts lead to the conclusion that *'s* can be assimilated to *is* but not to the verbal marker *-s*.

These same facts also lead us to the conclusion that *'s* is not the same thing as the suffixal element in possessive pronouns, which, as underlined by Bernstein and Tortora (2005), has a singular (*-s*) and a plural (*-re*) form. But from this point on, my story goes differently from the one given by Bernstein and Tortora (2005).

Let's start from the consideration that in inflectional languages (such as English), as is well known, there is not a one-to-one relation between inflectional morphemes and phi-features: namely a single inflectional morpheme is the spell-out of a conglomerate of features. Thus, the third person singular copula *is* is specified for, at least, two features: number and person.

A copula is included both in English possessive pronouns (in the forms *-s/-r,* marked for person and number, singular and plural respectively) and in possessive full DPs (in the unique form *'s* unmarked for number, but marked for person, namely third).

Crucially, in possessive full DPs, and not in possessive pronouns, the copula is inserted derivationally. Possessive pronouns are taken from the lexicon as they are, i.e. with an incorporated copula.[12] This is my way to account for the "tighter" relation in pronouns between *-s* and the base noted by Bernstein and Tortora (2005). The (lexically incorporated) copula in personal pronouns is specified for person as well as for number (and it consequently comes in two distinct forms), the (derivationally inserted) copula in full DPs is specified for person only. What triggers possessor movement with pronominal possessors is an F^0 with a null spell-out. This is in turn related to the fact that pronouns are (intrinsically) marked for person (Benveniste 1966; Bianchi 2006).

One important consequence of the view that the content of *'s* is third person, is that there is no anti-agreement with full DPs. Here I depart again from den Dikken, and I am aware that this undermines one of his original arguments in favour of his treatment of possessive constructions and of the idea that *'s* is a copula. This argument, however, was not the only one (see 3.1 above).

Anti-agreement postulations, in my opinion, are problematic in general, because what we really observe is a number non-agreement (which can be accounted for assuming that number is not specified) but a person agreement is maintained.

If I am on the right track, that fact that we have:

(35) your, their

but not:

(36) *the children'r

is predicted and The *'s = is* Hypothesis can be maintained.[13]

As for the examples in (27) and (28) (i.e. the fact that a possessive pronoun cannot be coordinated with a DP within a possessive DP) I argue that this impossibility is due to the fact that a double specification of the same element (a person feature in my analysis) is present. The fact that a non-possessive pronoun is instead compatible (as 29 shows) supports this conclusion.

Finally, a problem for my analysis remains (30b), since one is forced to agree with Bernstein and Tortora (2005) in assuming that the reason for its deviance cannot be purely phonological or morphological. I will come back to this issue in 4.3 noting for the moment that although the reason cannot be phonological or morphological, this does not necessarily mean that the reason is incompatibility between a plural and a singular marker (as predicted by their

[12] We intend these considerations in synchronic terms only.

[13] On (35) and (36) see Bernstein and Tortora (2005: 1226).

analysis of *'s* as a singular number marker). As we have seen (see footnote 10 above), there is no such an incompatibility in cases like (37):

(37) A friend of theirs

4. Denotation and the -s Morpheme

4.1 On why 's = is *and a Person Feature is in 's Genitive Constructions*

In the previous Section we have provided arguments in favour of The *'s = is* Hypothesis, further arguing that the content of *'s* is a (third) person feature. Pursuing this view, an initial consideration suggests that the content of *is* is (third) person, too. This causes no problems, a person feature being part of subject-verb agreement as generally accepted. Why, then, a person feature in *'s* Genitive constructions?

Speculating on Benveniste's Generalization (38), Di Domenico (1994 and 1997) assumes the principle in (39):

(38) Le verbe est, avec le pronom, la seule espèce de mots qui soit soumise à la catégorie de la personne.
(Benveniste 1966: 225)

(39) The Denotation Principle
Every lexically expressed argument (be it a noun phrase or a sentence) must be denoted. The expression of denotation is the person feature.
(Di Domenico 1994: 5; 1997: 145)

A person feature is always expressed in pronominal DPs and in tensed sentences.[14]

In non-pronominal DPs, the determiner (or raising to D for proper names, as in Longobardi 1994) performs this role: making the nominal expression argumental (Longobardi 1994) or referential (Rizzi 1986: 543: "An NP is referential only if it has the specification of person (and number)") or, in Higginbotham's (1983 and 1985) terms, discharging its theta role.

The proposal entailed in (39) is that the person feature (correlated to the T feature, Guéron and Hoekstra 1992) in subject- verb agreement discharges the Eventive variable (in terms of Higginbotham 1983) of the sentence.[15]

[14] As noted by Guéron and Hoekstra (1992) this specification, together with the tense specification, is missing in small clauses. Small clauses are however embedded in tensed clauses (Di Domenico 1994). A small clause, as we have seen in 3.1, is also embedded in possessive constructions (den Dikken 1998a, 1998b, 1999, and 2006).

[15] A tensed verb contains a person specification which is one and only one for each event described in the sentence. The event plus its arguments constitutes the predicative

If so, I'd like to argue that the person/denotation feature in English *'s* Genitive Constructions is expressed by *'s=is*, which, coherently, is in complementary distribution with the determiner, in *'s* Genitive Constructions the possessum (i.e. the head noun) being determinerless.

4.2 The Latin and Romansh -s Ending as Denotation

Manzini and Savoia (2011a) analyze the Latin *-s* ending (in traditional terms, a case ending) as expressing denotation.[16] Their basic assumption is that the same structures and categories underlie both syntax and morphology. At the syntactic level, predicative elements (nouns and verbs) project argumental positions. At the morphological level, the lexical base expresses predicative content while the inflectional elements that combine with it fix the denotation of its arguments. The inflection of the verb is the verb-internal realization of the EPP argument of the sentence. The nominal class inflection assigned to an N position corresponds to the internal argument of the noun. In Romance, this is not sufficient (at least in the singular form of count nouns) and must be supported by syntactic level operators associated with the D position (i.e. determiners, as for Higginbotham 1985). In a case marking language like Latin, the case layer is specialized for the satisfaction of argument roles specified by the superordinate predicate.[17]

The authors assume that the Latin -s ending (traditionally indicating case) is associated with denotational operator properties, sharing with Chomsky (2008) and Pesetsky and Torrego (2007) the idea that case cannot be a primitive feature of grammar.

They observe that *-s* appears in different environments. Just limiting our attention to the (non- neuter) III class, *-s* occurs in the nominative singular, in the genitive singular, and in the nominative and accusative plural, as shown in (40) taken from Manzini and Savoia (2011a: 154):

(40) a. Canis currit
dog.SG.NOM runs
'The dog runs'

kernel of the sentence. Interestingly, as noted by Di Domenico (1997), Chomsky (1995) interprets the extensional clause of the Extended Projection Principle (EPP), i.e. the one that states that every sentence must have a subject, as checking of a D feature.

[16] See also Manzini and Savoia (2010 and 2011b).

[17] In languages without case functional categories such as Q, D etc. perform the same role, i.e. concur to the satisfaction of superordinate predicates.

b. canis cauda
dog.SG.GEN tail
'The dog's tail'

c. Canes currunt/ video
dogs.PL.NOM/ACC run/ I see
'The dogs run / I see the dogs'

The fact that *-s* shows up as a plural (as in 40c), leads the authors to postulate that the content of *-s* can be identified with Q, plurality being a quantificational property. This seems in contradiction with the occurrence of -s as a singular (40a and 40b). This apparent contradiction is solved as follows. Q elements have scope properties (Pesetsky 1985): the plural reading of a Q element like -s corresponds to a noun internal scope of quantification; the singular reading of -s corresponds to a scope wider than the noun.

As for the genitive (as 40b), Manzini and Savoia argue that it roughly corresponds to a quantificational inclusion relation: the scope of -s as a so-called genitive specification is the entire noun phrase: "the genitive argument is interpreted as 'including' the referent of the head noun" (Manzini and Savoia 2011a: 156).

In the singular nominative (as 40a), the scope of *-s* is sentential: agreement with the finite verb characterizes the nominative context, and the author's proposal is that quantificational specifications are required to satisfy this syntactic context, involving the EPP argument. *-s* as a Q morphology is specialized for the satisfaction of the syntactic EPP (= D) environment. In the last part of their paper, Manzini and Savoia (2011a) analyze the Romansh *-s* in the variety of Vella (Lumnesia Valley, Grisons).

Interestingly, in this variety, *-s* (that appears to be a nominative ending for the masculine singular) characterizes masculine singular adjectives and participles in predicative contexts, but not in attributive contexts:[18]

(41) a. kwai om ai kwərt-s
that man is short- M.SG
'That man is short'

b. in om kwərt
a man short
'A short man'

(adapted from Manzini and Savoia 2011a: 159-160)

[18] The *-s* inflection also realizes the plural both for nouns and adjectives in the masculine and in the feminine in this variety.

In contexts like (41a), *-s* is interpreted as supplying the quantificational/definite closure for the argument slot that the adjectival base is associated with. As Manzini and Savoia argue:

(42) Embedding in a noun phrase puts predicative bases in the scope of the D (definite) or Q (quantificational) closure provided by the determiners and quantifiers of the noun phrase. In predicative contexts, however, such a closure is not provided at the syntactic level; the *-s* therefore supplies it at the morphological level.
(Manzini and Savoia 2011a: 161[19])

4.3 *Back to English*

Let's now go back to the main topic of this paper, i.e. The *'s= is* Hypothesis formulated for English. At the end of Section 3, I have characterized the content of *'s= is* as person. At the beginning of the present Section, I have further argued (following Di Domenico 1994 and 1997) that person expresses indeed denotation, thus accounting for the presence of a DP internal as well of a sentence internal person feature. If we understand denotation as a quantificational property with different scopes, along the lines of Manzini and Savoia (2011a), we can characterize the "arch-morpheme" *'s= is* as follows:

- "genitival" *'s* expresses a Q feature with noun phrase scope
- sentential *is* expresses a Q feature with sentential scope

However, we can go even one-step forward. The same analysis (*modulo* a different characterization in terms of the morphological differentiation postulated by Borer 2005, see 3.3) can be applied indeed to the *-s* of the verbal domain, understood as expressing a Q feature having, like for *is*, a sentential scope.

In addition, along the same lines, the *-s* indicating plural on nouns, can be characterized as expressing a Q feature with a scope internal to the noun.

This has the further advantage of explaining why plurals in English can be bare, if, as assumed by Manzini and Savoia (2011a), determiners in languages without case markers perform the same role of saturating the noun's argument.[20]

[19] The same distribution is observed by Manzini and Savoia (2011a) for morphemes with a different phonetic matrix, such as (–) le in the Urbino variety, which includes the Romance definiteness morpheme *l* and coincides with the definite determiner and with the object clitic: adjectives and participles in predicative (but not in attributive) contexts are marked with *–le*.

[20] The L2 production in (19), here repeated for convenience, is also relevant in this respect:
(i) Flowers the Brom
Here we see a determiner used in the place of *'s* (plus the absence of possessor movement).

Finally, the *-s* that appears in possessive forms like for instance *yours* in (43a), can be analyzed as the *-s* in predicative adjectives in the Romansh variety of Vella:

(43) a. That book is yours.
b. Your book.

The *-s* in (43a) (a predicative context) provides the Q closure for the argument slot that the (adjectival) possessive base is associated with. Along similar lines, we can analyze the *-s* of partitive genitives like (37), here repeated for convenience in (44a):

(44) a. A friend of theirs.
b. Their friend.

As in the Vella variety described by Manzini and Savoia (2011a), *-s* appears only in predicative contexts (like 43a and 44a).[21] In (43b) and (44b), the possessive form is embedded in a noun phrase containing the necessary Q closure, and in these environments a double *-s* (as appearing in predicative contexts) is not possible, as we have seen in (27) and (30b) here repeated for convenience:

(27) * the kids's mother

(30.b) ?* the kids from New York's mother

For these cases, in 3.3 I agreed with Bernstein and Tortora (2005), that a phonological as well as a morphological account are insufficient to rule out a double *-s*: the reason, however, is not a feature mismatch as they propose, but is to be found in the fact that these examples contain a double DP- internal denotation and therefore are ungrammatical, exactly as in (25), which is, as we noted, worse than (26):

(25) ?* my and Jack's house (cf. * Jack's and my house)

(26) me and Jack's house

Alternatively, this production can be seen as having a determiner in the place of *of*. See den Dikken (2006) for the idea that *of* is a nominal copula.

[21] A post-nominal possessive construction as (44a) is indeed a predicative context as we have seen in 3.1 (see in particular the structures in (4) and (5a).

If this line of reasoning is correct, then, it is possible to say that in English there is one and only one arch-morpheme *-s* (with its variants *is* and *'s* and the phonetic variants described by Pinker and Prince 1988) with different merge possibilities, whose specification is denotation, which is in turn a Q feature with different scopes:

- noun phrase scope (in *'s* Genitive Constructions and possessive pronouns in attributive contexts)
- sentential scope (as *is*, the verbal ending *-s*, or the *-s* in possessive pronouns in predicative contexts)
- noun internal scope (the plural of nouns)

This morpheme can in some specific cases (i.e. the copula paradigm, instantiated also in pronouns, or the verbal domain) alternate with other morphemes (such as *am* or *are,* or a ∅ morpheme in the verbal paradigm).

Variation may also depend on whether it is realized as a free or bound f-morph (or as a head morpheme) lexically or derivationally inserted.[22]

However, this entails no changes in its intrinsic value, which remains one and the same (even when it may alternate with a so-called "plural" form) and is not, as originally claimed by Kayne (1989) singular number, but rather denotation.

Whether the English *-s* (with its variants *is* and *'s*) has the same origin of the Latin "case" morpheme *-s*, or not, I am not able to tell (though it is perhaps an inquiry worth pursuing), but I assume it can be given an analysis along the same lines traced by Manzini and Savoia (2011a) for the latter.

This furthermore strengthens the idea that what is expressed as "nominative case" in case- marking languages can be expressed by subject verb agreement in non - case - marking languages.

5. Conclusion

In this article I started from some English L2 data which suggest that the kids that were examined made what I have called The *'s= is* Hypothesis. I then found that this hypothesis has also been made by a linguist (namely den Dikken) but has been argued against by other linguists (namely Bernstein and Tortora), who claimed that *'s* is not the copula *is*, but is rather equivalent to the *-s* found in the verbal domain, i.e. a singular number morpheme (as in Kayne 1989).

[22] For pronouns I have argued in favour of a lexical insertion. As for the verbal domain, it is notoriously puzzling how the *-s* is picked up by the verb, English verbs not moving, and various proposals have been formulated. I will not choose among them nor attempt a new proposal here.

In Section 3.3 I developed some arguments in defence of The *'s= is* Hypothesis, which led me to the proposal that the content of *'s* is person and not person + number plus anti-agreement (as claimed by den Dikken). In Section 4 I explained the occurrence of a person feature in *'s* Genitive Constructions arguing that person expresses denotation, a necessary requirement of both DPs and sentences.

I then relied on Manzini and Savoia (2011a) (who analyze the Latin/Romansh "case" ending *-s*) who argue that denotation entails in turn a Q feature which can take a noun internal scope (marking "plurality") a DP scope (marking "genitive") or a sentential scope (marking "nominative"). I then applied this idea to the English *-s /'s/ is* morpheme which perfectly fits into it.

The conclusions are thus that The *'s= is* Hypothesis not only is maintained, but even extended: *'s* is *is* and *-s*, understood as variants of one and the same arch-morpheme, whose value is a Q feature, with different merge possibilities. The data from acquisition testify to the search of the merging possibilities of this morpheme by both L1 and L2 acquirers.[23]

References

Aronoff, Mark, and Nanna Fuhrhop. 2002. "Restricting Suffix Combinations in German and English: Closing Suffixes and the Monosuffix Constraint." *Natural Language and Linguistic Theory* 20: 451-490.

Bennati, Elisa, and Elisa Di Domenico. 2008. "Individual and Task-Related Differences in the L2 Acquisition of English *'s*- Genitive Constructions by Native Speakers of Italian". Poster Presented at the XVIII Colóquio de Gramática Generativa, Lisboa, April 17-19.

Benveniste, Émile. 1966. *Problèmes de linguistique générale*. Paris: Gallimard.

Bernstein, Judy, and Cristina Tortora. 2005. "Two Types of Possessive Forms in English". *Lingua* 115: 1221-1242.

Bianchi, Valentina. 2006. "On the Syntax of Personal Arguments." *Lingua* 116: 2023-2067.

Borer, Hagit. 2005. *In Name Only*: *Structuring Sense* 1. Oxford: Oxford UP.

Brown, Roger. 1973. *A First Language*: *The Early Stages.* Cambridge: Harvard UP.

Chomsky, Noam. 1965. *Aspects of the Theory of Syntax.* Cambridge: The MIT Press.

Chomsky, Noam. 1995. *The Minimalist Program.* Cambridge: The MIT Press.

Chomsky, Noam. 2008. "On Phases." In *Foundational Issues in Linguistic Theory. Essays in Honor of Jean-Roger Vergnaud*, ed. by Robert Freidin, Carlos P. Otero, and Maria Luisa Zubizarreta,133-166. Cambridge: The MIT Press.

den Dikken, Marcel. 1998a. "(Anti-)Agreement in DP." In *Linguistics in the Netherlands 1998*, ed. by Renée van Bezooijen, and René Kager, 95-107. Amsterdam-Philadelphia: Benjamins.

[23] As an anonymous reviewer interestingly suggests, Table 1. seems to indicate that the acquisition progression follows the merge possibilities from the innermost domain to the outermost domain: plural (N- internal), genitive (DP internal), third sg (sentence level).

den Dikken, Marcel. 1998b. "Predicate inversion in DP." In *Possessors, Predicates and Movement in the Determiner Phrase*, ed. by Artemis Alexiadou, and Chris Wilder, 177-214. Amsterdam-Philadelphia: Benjamins.

den Dikken, Marcel. 1999. "On the Structural Representation of Possession and Agreement. The Case of (Anti-)Agreement in Hungarian Possessed Nominal Phrases." In *Crossing Boundaries: Theoretic Advances in Central and Eastern European Languages*, ed. by István Kenesei, 137-178. Amsterdam: Benjamins.

den Dikken, Marcel. 2006. *Relators and Linkers. The Syntax of Predication.* Cambridge: The MIT Press.

den Dikken, Marcel. 2014. "On the Morphosyntax of (In)Alienably Possessed Noun Phrases." Talk Delivered at GLOW 37, Brussels, April 2014.

De Villiers, Jill, and Peter De Villiers. 1973. "A Cross-Sectional Study of the Development of Grammatical Morphemes in Child Speech." *Journal of Psycholinguistic Research* 2, 3: 267-279.

Di Domenico, Elisa. 1994. "The Denotation Principle." Ms. University of Geneva.

Di Domenico, Elisa. 1997. *Per una teoria del genere grammaticale*. Padova: Unipress.

Di Domenico, Elisa. 2013a. "Setting the Elements of Syntactic Variation in L2A." *Glow Newsletter* 70: 62-63.

Di Domenico, Elisa. 2013b. "Setting Parameters in L2A: On the English *'s* Morpheme." In *Proceedings of the 12th Generative Approaches to Second Language Acquisition (GASLA 2013)*, ed. by Jennifer Cabrelli-Amaro *et al.*, 32-38. Somerville: Cascadilla Proceedings Project, <www.lingref.com>, document #2981 (09/2015).

Di Domenico, Elisa. Forthcoming. "What's *'s* ? Uno studio pilota." In *Atti del XLVI Congresso Internazionale della Società Italiana di Linguistica* (SLI 2012), ed. by Carla Bruno *et al.,* 577-588. Roma: Bulzoni.

Dulay, Heidi, and Marina Burt. 1974. "Natural Sequences in Child Second Language Acquisition." *Language Learning* 24, 1: 37-54.

Fodor, Janet. 1998. "Parsing To Learn." *Journal of Psycholinguistic Research* 27, 3: 339-374.

Frazier, Lyn, and Janet Fodor. 1978. "The Sausage Machine: A New Two-Stage Parsing Model." *Cognition* 6: 291-326.

Guéron, Jaqueline, and Teun Hoekstra. 1992. "Chaînes temporelles et phrases réduites." In *Structures de la phrase et théorie du liage*, ed. by Hans G. Obenauer, and Anne Zribi-Hertz, 69-92. Saint Denis: Presses Universitaires de Vincennes.

Higginbotham, James. 1983. "Logical Form, Binding and Nominals." *Linguistic Inquiry* 14: 395-420.

Higginbotham, James. 1985. "On Semantics." *Linguistic Inquiry* 16: 547-593.

Ionin, Tania, and Ken Wexler. 2002. "Why is 'is' Easier than '-s'? Acquisition of Tense/Agreement Morphology by Child Second Language Learners of English." *Second Language Research* 18, 2: 95-136.

Kayne, Richard. 1989. "Notes on English Agreement." *Central Institute of English and Foreign Languages Bulletin* 1: 41-67. Re-appeared as Chapter 10 of Kayne, Richard. 2000. *Parameters and Universals*. New York: Oxford UP.

Kayne, Richard. 1993. "Toward a Modular Theory of Auxiliary Selection." *Studia Linguistica* 47, 1: 3-31.

Longobardi, Giuseppe. 1994. "Reference and Proper Names: A Theory of N- Movement in Syntax and Logical Form." *Linguistic Inquiry* 25: 609-665.

Manzini, M. Rita, and Leonardo M. Savoia. 2010. "Case as Denotation: Variation in Romance." *Studi Italiani di Linguistica Teorica e Applicata* XXXIX, 3: 409-438.
Manzini, M. Rita, and Leonardo M. Savoia. 2011a. "(Definite) Denotation and Case in Romance: History and Variation." In *Romance Languages and Linguistic Theory 2009. Selected Papers from 'Going Romance' Nice 2009*, ed. by Janine Berns, Haike Jacobs, and Tobias Scheer, 149-165. Amsterdam: Benjamins.
Manzini, M. Rita, and Leonardo M. Savoia. 2011b. *Grammatical Categories.* Cambridge: Cambridge UP.
Pesetsky, David. 1985. "Morphology and Logical Form." *Linguistic Inquiry* 16: 193-246.
Pesetsky, David, and Esther Torrego. 2007. "The Syntax of Valuation and the Interpretability of Features." In *Phrasal and Clausal Architecture: Syntactic Derivation and Interpretation. In Honor of Joseph E. Emonds*, ed. by Samin Karimi, Vida Samiian, and Wendy K. Wilkins, 262-294. Amsterdam: Benjamins.
Pinker, Steven, and Alan Prince. 1988. "On Language and Connectionism: Analysis of a Parallel Distributed Processing Model of Language Acquisition." *Cognition* 28: 73-193.
Rizzi, Luigi. 1986. "Null Objects in Italian and the Theory of *pro.*" *Linguistic Inquiry* 17: 501-556.
Rizzi Luigi. 2011. "On the Elements of Syntactic Variation." In *StiL* 4, ed. by Vincenzo Moscati, and Emilio Servidio, 242-264. Cambridge: MITWPL.
Rouveret, Alain. 1991. "Functional Categories and Agreement." *The Linguistic Review* 8: 353-387.
Szabolcsi, Anna. 1983. "The Possessor that Ran Away from Home." *The Linguistic Review* 3: 89-102.
Szabolcsi, Anna. 1994. "The Noun Phrase." In *The Syntactic Structure of Hungarian*, ed. by Ferenc Kiefer, and Katalin È. Kiss, 179-274. New York: Academic Press.
Xanthos, Aris *et al*. 2011. "On the Role of Morphological Richness in the Early Development of Noun and Verb Inflection." *First Language* 31, 4: 461-474.
Zwicky, Arnold. 1987. "Suppressing the Zs." *Journal of Linguistics* 23: 133-148.