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Discreteness and the case of the Spanish "neuter" demonstratives

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1. Introduction

Spanish is normally characterized as a two-gender language which, as is well known, has developed from Latin with a three-gender-system (cf. Penny 2002). However, its pronominal system with the "determiner" lo, opposed to masculine el and feminine la, and especially with the personal pronouns ello (< illud) and lo (< illud) as well as the demonstrative pronouns esto (< illud), eso (< ipsum) and aquello (*accu illud) looks like a "resurrection" of the Latin three-gender system with a genuine neuter form (cf. e.g. Ambadiang 1999). Yet, there are several arguments in the literature against such an interpretation: In contrast to Latin (cf. illud=neut."that", ist-ud=neut."this"), there are no clear morphological endings for neuter forms in Spanish. It is commonly assumed that the adjective in eso es bonito inflects according to the masculine pattern (cf. Hall 1968, Ojeda 1984, Hare 1994). Furthermore, the gender of pronouns is normally controlled by the noun which they "substitute". Yet, in standard Spanish there are no nouns with neuter gender (cf. Bosque 1999). And, in contrast to other determiners and pronouns as well as to the Latin neuters, the so-called Spanish "neuter" forms do not allow plural forms (cf. Hare 1994): compare el útil - los útiles with lo útil - los útiles, el peor - los peores etc.

In particular this last point seems to indicate semantic factors as determining the morphosyntax of the so-called "neuter", as, from a morphophonological point of view, there is no good reason why -o should not be combined with -s. And indeed, there are several works which describe the phenomenon at issue using denotational properties of the respective referents of the pronominal "neuter" forms. The semantic features normally associated with the Spanish "neuter", e.g. [-animate], [-countable] and above all [+abstract] and [+propositional] (cf. Ojeda 1984, 1993, Penny 2002, Hare 1994, Bosque 1999), are ranked very low in the animacy scale of Silverstein (1976).

In our talk, we want to present an analysis for the Latin demonstratives iste and ille, which also holds for hic and ille, and for the Spanish demonstratives which originate from these. We want to show that there is no actual "neuter" gender in Spanish, we will reveal the reason for its non-existence and explain why the so called Spanish "neuters" do not admit plural forms. In a first step, we will elaborate a feature geometry which enables us to understand which semantic features are associated with the different gender and number forms showing that the semantic features mentioned above are not able to capture the semantic difference between "neuter" and feminine / masculine. This semantic analysis will be completed by a detailed morphophonological one.

The paper is structured as follows: In section 2 we will shortly present the feature geometry for personal pronouns proposed by Harley & Ritter (1999, 2002a and b) and reveal

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1 This paper is the revised version of our talk given at the third NEREUS-workshop Definiteness, Specificity and Animacy in Ibero-Romance Languages at the Universidad de Alcalá in October 2006, which was partially based on a talk presented before at the Congreso Internacional de Historia de la Lengua Española in Mérida, México, in September 2006. We want to thank the audience of both congresses for helpful comments. Usual disclaimers apply.
the main problematic aspects of their analysis. In the following section (cf. 3), we will elaborate our proposal concerning the "individuation node" in the geometry. Arguing that already the Latin neuter can be associated with the feature \(\text{[non-discrete]}\) (vs. \(\text{[discrete]}\) for Marantz 1993ss.) (cf. 3.1), which shows that there are no specific endings for the neuter in the present a morphophonological analysis in the framework of Distributed Morphology (Halle but that it has something to do with the feature geometry. After revealing the main problem of the geometry elaborated so far, we will uncover the changes which have taken place from Late Latin to Modern Spanish, discuss the role of the feature \(\text{[discrete]}\) in Modern Spanish (cf. 3.3.1) and present our morphophonological analysis of Spanish "neuter" demonstratives (cf. 3.3.2). The main hypothesis and the results of our analysis are summarised in section 4.

2. Review of the feature geometry proposed by Harley & Ritter (1999, 2000a and b)

In several works on the semantic features of personal pronouns in different languages, Harley & Ritter (1999ss.) have elaborated the following feature geometry:

(1) Feature geometry for personal pronouns (Harley & Ritter 1999, 2002:486)

In this geometry, all features depend from the root node [referring expression], which is subdivided into two parts: The left part is discourse dependent and specifies firstly whether the referent participates in the discourse \(\langle 1^\text{st} \text{ and } 2^\text{nd} \text{ person}\rangle\) or not \(\langle 3^\text{rd} \text{ person}\rangle\), and secondly, in case the referent participates, whether the discourse role is speaker or addressee. The right part of the geometry is discourse independent and contains features which fix the characteristics of the intended referent. "Individuation" indicates the selection of an individual or a limited group of individuals out of a set of possible referents. The features dependent on [individuation] - [group], [minimal] and [augmented] - are used to represent number systems. The [class]-node encodes gender and other class information, and, according to Harley & Ritter (1999, 2002a and b), the features dependent on [class] or [classification] distinguish mainly between animate or inanimate / neuter objects. The feature [animate] is further subdivided into [feminine] and [masculine] and accounts for the distinction between these two genders. Thus, as the right part of the geometry shows, the authors consider the features [animate] and [inanimate] as basic for the gender distinction.

Yet, we will not accept this last subdivision. It is not possible, neither for Latin nor for Spanish, to assume that an animate referent is always feminine or masculine, since there are abundant counter examples like those in (2):

(2) (a) inanimate and feminine:
lat. *silva* 'forest'; *turris* 'tower'; sp. *casa* 'house', *silla* 'chair'

(b) inanimate and masculine:
lat. *labor* 'work', *dolor* 'pain'; sp. *libro* 'book', *dedo* 'finger'...

Though it is true that in Latin, inanimate referents, apart from some cases of metonymy like lat. *scorbutum* 'prostitute' and *mancipium* 'slave', are normally neuter (cf. Hoffmann/Sanz 1997:6-12). Nevertheless, the few examples in (2) clearly show that the division proposed by Harley & Ritter (1999) cannot be valid for a language like Latin or Spanish.

As Fernández Ordóñez (in print) notes "\[l\]a distinción semántica pertinente en indoeuropeo era animado (masculino y femenino) frente a inanimado (neutro)" (Fernández Ordóñez in print:2, fn. 2) and "\[e]n el paso del indoeuropeo al latín y a las lenguas romances el género evolucionó de estar basado en criterios semánticos a estar basado cada vez más en criterios formales" (Fernández Ordóñez in print:2). That is, the Indo-European system, which was originally based on denotational properties of the noun, began to change into a system based on its morphophonological properties (cf. Corbett 1991 for a classification of the two mentioned gender assignment systems). With respect to this development, we would like to point out that "\[d\]esde un punto de vista tipológico, la pérdida de categorías gramaticales se produce siempre antes en el nombre que en el pronombre, y viceversa, la emergencia de categorías nuevas tiene lugar antes en el pronombre que en el nombre" (Fernández Ordóñez in print:27). This can be easily illustrated for case distinctions in the transition from Latin to the Romance languages, completely lost now in the noun, but partly maintained in the pronominal systems of the modern Romance languages (cf. Fernández Ordóñez in print:27).

We assume that the change in the gender system is another illustration for this process: In the case of Modern Spanish nouns, the "gender" assignment system is based nearly exclusively on morphophonological properties, and this is the reason why the endings -\(\text{a}, \text{o}\) and -\(\text{e}\) are often analysed as class markers or even as theme vowels without any gender information (cf. Harris 1991, 1992, Oltz Massuet 1999 and others). Yet, in the case of Spanish pronouns, the original system, based on semantics, was altered, but not lost. That is, in the transition from Indo-European to Latin and to the Modern Romance languages, the pronominal gender changed in such a way that it cannot be associated any longer with the features [animate] (feminine and masculine) vs. [inanimate] (neuter), but with a different semantic opposition (see below). We claim that this change did not end up completely, at least not for pronominal, in a gender system based on pure morphophonological grounds.

All together, the feature geometry proposed by Harley & Ritter (1999), which pretends to be universal, has its weak point clearly in the [class]-node and its subdivision. It cannot, for example, explain pronominal systems with more than three genders, as in Bantu languages (cf. Corbett 1991). Thus, the authors themselves admit that:

\[\text{[...]}\text{gender (or class) features vary more widely in the world's languages thus either person or number. [..]}\text{ It may turn out that some systems involve an open-ended set of lexically}\]

\[2\text{ 'The appropriate semantic distinction in Indo-European was animate (masculine and feminine) opposed to inanimate (neutre).}\]

\[3\text{ 'In the evolution from Indo-European to Latin and to the Romance languages gender changed gradually from semantically based systems to form-based systems.'}\]

\[4\text{ 'From a typological point of view, the loss of grammatical categories always takes place first in the noun, then in the pronoun, and vice versa, the emergence of new categories will be carried out first in the noun, then in the pronoun.'}\]
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determined classes while others involve a closed set of grammatically determined classes. The former would of course be beyond the scope of our geometry. Consequently, we leave the problem of identifying the dependents of the Class node open for future research. (Harley & Ritter 2002:514)

Without claiming that the feature geometry we will elaborate (in its details - it is still universal, we think, in its principled structure) analysis of the changes that took place in the right part of the geometry from Indo-European to Latin and from Latin to Modern Spanish.

3. Individuation → discreteness

We will start again with the original proposal of Harley & Ritter (2002a and b) (cf. (3a)) which according to the above quotation of Fernández Ordóñez reflects the (Proto)Indo-European situation:

(3) (Proto)Indo-European (cf. Harley & Ritter 2002)

A basic idea of feature geometries is that the value of each possible combination is defined contrastively. That is, there is no need to fully specify each combination in order to obtain a certain value, so that we can reduce the geometry in (3a) as illustrated in (3b). If the feature [feminine] is absent in the geometry (3b) (cf. the combination in (4b)), the obtained interpretation will automatically be [masculine], while the absence of the feature [animate] (cf. (4c)) will result, per default, in [inanimate/neuter]. The possible feature combinations of the geometry (3b) are summarized in (4):

(4) (a) feminine plural  (b) masculine plural  (c) neuter plural

As we have mentioned before, we do not accept the proposal of Harley & Ritter (1999a) with respect to the [class] node for Latin, since feminine and masculine cannot be clearly associated with the feature [animate]. But if we keep on assuming a semantic based gender system for Latin (at least for pronouns), we have to ask ourselves which feature could be responsible for the distinction between feminine/masculine on the one side and neuter on the other. In the next section we will argue that the relevant semantic features are [discrete] (for feminine/masculine) vs. [non-discrete] (for neuter).

3.1 Individuation in Latin: feature geometry and morphophonological analysis

According to Hofmann/Szantyr (1972:9) the Latin neuter denotes in many cases an unstructured mass or something not well contoured or delineated: "Das Neutrum [bezeichnet] eine ungegliederte Masse [... und dessen Plural [war] [...] ursprünglich [...] eine singularisiche Kollektivbildung [...]" (Hofmann/Szantyr 1972:9). The neuter caseus refers, for example, to a 'mass of cheese' while the masculine form caseus denotes 'a piece of cheese' (the opposition between feminine oliva ‘olive’ and neuter oleum ‘oil’ is similar). Thus, we can assume that, in Latin, the neuter is associated with something non-discrete. This seems to hold as well for demonstratives. At least, in the examples in (5), illud refers to matter of facts or quotations, or in other words, to something non-discrete:

(5) (a) Illud excruciat: discessus ab omnibus bonis (Cicero Tusc. 1.83; Menge 2000:104) ‘This torments him: (he had) to say goodbye to all goods.’
(b) Ne illud quidem intelligent ita necesse fuisse (Cicero Brut. 289; Menge 2000:104) ‘They do not even understand this, which is so necessary.’
(c) Hoc illud est, quod quaeasisti (Stowasser 1979:216; OLD, s.v. ille) ‘This is what you had asked for before.’
(d) Venio nunc ad illud tuum: non deiscit (Cicero, Cæc. 64; OLD, s.v. ille) ‘I come now to your words (to what you have said): I have not forgotten them’

For this reason, we assume that in Latin the right part of the geometry has to be illustrated as in (6) where the three Latin genders are associated directly or indirectly with the opposition between [discrete] vs. [non-discrete]:

4 ‘The neuter denotes an unstructured mass and its plural was originally a collective form in the singular’.

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5 Since there is neither a dual nor a paucal neither in Latin nor in Spanish, we have omitted the features [minimal] and [augmented].
As mentioned at the beginning of this talk, the feature geometry is divided into two parts: one discourse dependent and another discourse independent. For Latin, we assume that each part is encoded in a different syntactic functional category. In the case of the demonstratives, the features which localize the intended referent, that is, the left part of the geometry which we cannot discuss for reasons space here in detail (cf. Pomino & Stark in prep.), are encoded in the functional category D° (determiner). The right part of the geometry is encoded in a different functional category which, leaving aside syntactic details, we will name for convenience F° (for functional category). In the framework of Distributed Morphology, as D° and F° are functional categories, these two categories are not specified phonologically (cf. Embick & Noyer 2004). The phonological material is inserted post-syntactically via correspondence rules. We will come back to these rules. Let us for the moment consider the segmentation in (7a) and (7b):

\[\text{(7a) } \text{iste}\]

<table>
<thead>
<tr>
<th>ist-</th>
<th>-c</th>
<th>ist-</th>
<th>-a</th>
<th>ist-</th>
<th>-ud</th>
<th>ist-</th>
<th>-e</th>
<th>ist-</th>
<th>-ae</th>
<th>ist-</th>
<th>-a</th>
</tr>
</thead>
<tbody>
<tr>
<td>ist-s</td>
<td>ist-</td>
<td>ist-</td>
<td>-ae</td>
<td>ist-</td>
<td>-a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ist-</td>
<td>-um</td>
<td>ist-</td>
<td>-am</td>
<td>ist-</td>
<td>-ud</td>
<td>ist-</td>
<td>-e</td>
<td>ist-</td>
<td>-a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ist-</td>
<td>-o</td>
<td>ist-</td>
<td>-e</td>
<td>ist-</td>
<td>-a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[\text{(7b) } \text{ille}\]

<table>
<thead>
<tr>
<th>ill-</th>
<th>-c</th>
<th>ill-</th>
<th>-a</th>
<th>ill-</th>
<th>-ud</th>
<th>ill-</th>
<th>-e</th>
<th>ill-</th>
<th>-ae</th>
<th>ill-</th>
<th>-a</th>
</tr>
</thead>
<tbody>
<tr>
<td>ill-s</td>
<td>ill-</td>
<td>ill-</td>
<td>-ae</td>
<td>ill-</td>
<td>-a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ill-</td>
<td>-um</td>
<td>ill-</td>
<td>-am</td>
<td>ill-</td>
<td>-ud</td>
<td>ill-</td>
<td>- e</td>
<td>ill-</td>
<td>-a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ill-</td>
<td>-o</td>
<td>ill-</td>
<td>-e</td>
<td>ill-</td>
<td>-a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Furthermore, if we consider the particle *ipse*, we can state that there is no specific neuter ending at all, for in this case the neuter singular in nominative and accusative case is *ipse* (vs. *ipsum*), just like the masculine singular accusative.

In Distributed Morphology there are at least two possibilities to explain cases of syncretism: Underspecification of Vocabulary Items and Impoverishment (i.e. feature deletion). But, let us first consider how the phonological realisation of the syntactic nodes, the so called Vocabulary Insertion, works. We will first concentrate on the singular forms of the nominative, i.e. on the endings -a, -e and -ud. In (9), where F° is specified with the features [individualization, class, discrete, feminine], the phonological realisation of F° must be -a, because it is the Vocabulary Item which matches the greatest number of features specified in F°. The Vocabulary Items -c and -ud are theoretically possible, as they do not ask for features which are not specified in F°, but, as they are less specific, that is, as they match less features than -a, they cannot be inserted.⁸

\[\text{(8) Endings for } \text{iste and ille}\]

\[\text{(-c, -e, -a, -ae, -a, -ud)}\]

If we separate the part which in our analysis is the phonological realisation of the category D° from the rest, we see that the realisation of the right part of the geometry is identical for *iste* and *ille*. Now the forms in (7) show several cases of syncretism, or, in other words, most of the endings are syncretic forms, see the table in (8) where the cells of the syncretic endings are highlighted.⁹ Somehow surprising is the fact that, with the exception of -ud, the neuter forms have no proper endings:

\[\text{(9) Neuter singular}\]

<table>
<thead>
<tr>
<th>-a</th>
<th>-e</th>
<th>-a</th>
</tr>
</thead>
<tbody>
<tr>
<td>-a</td>
<td>-a</td>
<td>-a</td>
</tr>
</tbody>
</table>

⁸ Assuming that vowel length is a distinctive feature, the nominative and ablative forms in the feminine singular are not a case of syncretism. For reasons of space we will not enter here into the discussion of whether the Latin endings should be segmented further, for example into theme vowel + number/case.

⁹ This is the fundamental idea of Halle’s Subset Principle (1997) defined in the following way: "The phonological exponent of a Vocabulary item is inserted into a morpheme in the terminal string if the item matches all or a subset of the grammatical features specified in the terminal morpheme. Insertion does not take place if the Vocabulary item contains features not present in the morpheme. Where several Vocabulary items meet the conditions for insertion, the item matching the greatest number of features specified in the terminal morpheme must be chosen" (Halle 1997:128).
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(9) Vocabulary Insertion: feminine singular nominative

<table>
<thead>
<tr>
<th>F₀</th>
<th>Vocabulary Item for the realisation of F₀ (nom)</th>
<th>Possible Vocabulary Items for the realisation of F₀</th>
<th>Best Vocabulary Item</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>/-a/ ⇒ F₀ / feminize</td>
<td>b. /-a/ ⇒ F₀ / discrete</td>
<td>a. /-a/ ⇒ F₀ / feminize</td>
</tr>
<tr>
<td></td>
<td>/-ud/ ⇒ elsewhere (default)</td>
<td>c. /-a/ ⇒ elsewhere (default)</td>
<td></td>
</tr>
</tbody>
</table>

Let us now consider Vocabulary Insertion in the case of the masculine and the neuter. In (10a) the realisation of F₀ is /-e/, because the Vocabulary Item /-a/ asks for a feature not specified in F₀, and because /-ud/ is, compared to /-e/, less specific. In (10b), /-ud/, the default is the only possible realisation of F₀, because the other Vocabulary Items, /-a/ and /-e/, both ask for features not present in F₀.

(10) (a) Vocabulary Insertion: masculine singular nominative

<table>
<thead>
<tr>
<th>F₀</th>
<th>Vocabulary Item for the realisation of F₀ (nom)</th>
<th>Possible Vocabulary Items for the realisation of F₀</th>
<th>Best Vocabulary Item</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>/-a/ ⇒ F₀ / feminize</td>
<td>b. /-a/ ⇒ F₀ / discrete</td>
<td>a. /-a/ ⇒ F₀ / feminize</td>
</tr>
<tr>
<td></td>
<td>/-ud/ ⇒ elsewhere (default)</td>
<td>c. /-a/ ⇒ elsewhere (default)</td>
<td></td>
</tr>
</tbody>
</table>

(b) Vocabulary Insertion: neuter singular nominative

<table>
<thead>
<tr>
<th>F₀</th>
<th>Vocabulary Item for the realisation of F₀ (nom)</th>
<th>Possible Vocabulary Items for the realisation of F₀</th>
<th>Best Vocabulary Item</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>/-a/ ⇒ F₀ / feminize</td>
<td>b. /-a/ ⇒ F₀ / discrete</td>
<td>a. /-a/ ⇒ F₀ / feminize</td>
</tr>
<tr>
<td></td>
<td>/-ud/ ⇒ elsewhere (default)</td>
<td>c. /-a/ ⇒ elsewhere (default)</td>
<td></td>
</tr>
</tbody>
</table>

We will continue our analysis with the remaining forms of the singular. As you can see from table (8), in the genitive and dative case, there is no gender distinction at all (cf. Leumann 1977:476 "sie sind ungeschlechtig"). Thus, we can assume that in these cases there is no [class]-node, i.e. no classification. Or, to be more precise, the [class]-node and the features depending from it are not relevant for Vocabulary Insertion, i.e. for the phonological realisation of F₀. This fact can be explained via the process of Impoverishment which deletes features, or in our case branches of the geometry at issue, before Vocabulary Insertion takes place.10

10 In our analysis we accept the idea that case features are not "atomic", but can be decomposed (cf. e.g. Halle 1997; Alexiadou & Müller 2005). With these features, which we cannot discuss for reasons of space, we get natural classes to which the Impoverishment rule in (11) applies: for example, according to Alexiadou & Müller (2005:8), dative and genitive case share (at least in Russian) in contrast to all the other cases (nominative, accusative, instrumental and locative) the features [+governed] and [+oblique]. Our Impoverishment rule would, thus, only apply, if these features are present.

11 The list of Vocabulary Items is ordered according to the markedness of the Items, with the more marked item on the top and the less marked at the bottom of the list.
With this list we can derive all singular forms of the demonstratives. In what follows we will focus on the plural forms. For convenience, we have repeated the endings of the demonstratives under (14):

(14) Endings for *iste* and *ille*

Let us start with the non-syncretic plural endings: /-ae/, /-a:rum/, /-o:s/ and /-a:s/. To guarantee these phonological realisations, we simply have to modify or better to complete the list of Vocabulary Items as shown in (15):

(15) Vocabulary Items for F0 (incomplete)¹²

(a) /-am/  => F0 / [feminine] (accusative)
(b) /-a/  => F0 / [feminine] (ablative)
(c) /-a/  => F0 / [feminine] (nominative)
(d) /-um/  => F0 / [discrete] (accusative)
(e) /-e/  => F0 / [discrete] (nominative)
(f) /-i:s/  => F0 / [individuation] (ablative)
(g) /-i/s/  => F0 / [individuation] (dative)
(h) /-i/  => F0 / [individuation] (dative)
(i) /-i/  => elsewhere (default)

Now let us turn to the more complicated cases of syncretism: Similar to the genitive and dative in the singular, there is no gender distinction in the dative and in the ablative in the plural. Thus, we need again the process of Impoverishment. If we compare (16) with (11), we see that they are nearly identical. The only difference is the context in which the rules apply: in the plural, i.e. when [group] is present, it is dative and ablative case, in the singular it is genitive and dative case:

(16) Impoverishment: dative y ablative (plural)

Another difference to the singular is that in the plural the resulting feature specification is realised by only one Vocabulary Item, /-i:s/ (cf. (17m)). The masculine/neuter syncretism in the genitive (/-o:rum/) is instead explained by Under specification, see the Vocabulary Item in (17). Leaving apart the neuter forms for the moment, there is another case of syncretism: the masculine plural ending in the nominative case, /-i:/, is identical to the dative ending in the singular. We have no hypothesis as to how to explain this case of syncretism, it may turn out that it has to do with case. The nominative masculine plural ending -i stems from Indo-European -oi (cf. Leuman 1977:476), whereas the dative singular -i originates from Indo-European -ei (cf. Leuman 1977:476). For the moment we will treat it as a case of homonymy, cf. the annotation (cf. (17h)).

(17) Vocabulary Items for F0 (incomplete)

(a) /-a:rum/  => F0 / [group, feminine] (genitive)
(b) /-a:st/  => F0 / [group, feminine] (accusative)
(c) /-a/  => F0 / [group, feminine] (nominative)
(d) /-am/  => F0 / [feminine] (accusative)
(e) /-a/  => F0 / [feminine] (ablative)
(f) /-i/  => F0 / [discrete] (nominative)
(g) /-o:s/  => F0 / [group, discrete] (dative)
(h) /-i/  => F0 / [group, discrete] (dative)
(i) /-i/  => F0 / [individuation] (dative)
(j) /-i:/  => F0 / [individuation] (dative)
(k) /-e/  => F0 / [discrete] (nominative)
(l) /-i:/  => F0 / [discrete] (nominative)
(m) /-i/s/  => F0 / [group] (dative/ablative)
(n) /-i/s/  => F0 / [individuation] (genitive)
(o) /-i/  => elsewhere (default)

We will now focus on the neuter plural forms in the nominative and accusative case, both realised by /-a/, which is also the realisation of the feminine singular in the nominative case. Let us recall the above quotation of Hofman/Szantyr (1972:9) where they state that the neuter plural was originally the form of a singular collective. According to Schön (1971:123), in early Indo-European, the ending -a was not yet embedded in the categories of gender, number and case. In her view, because of its original meaning, -a could become the ending for the feminine singular in opposition to the originally non-collective masculine and at the same time it could become the exponent of the still collective neuter plural in opposition to the additive masculine/feminine plural. Considering this fact, we can assume that, in the case of the neuter plural, /-a/ is just the realisation of the feature [group] which etymologically corresponds to the original Indo-European 'collective'. And as such, it has nothing to do with

¹² The first three Items are all specified for the same feature combination of F0, here the selection depends again on the case information.
gender, but only with number. Maintaining the idea that in the singular /-a/ is associated with
the feature [feminine] we than have another case of homonymy, cf. (18f):

(18) Vocabulary Items for 

(a) /-a:rum/ ⇒ F^o / [group, feminine] (genitive)
(b) /-a:s/ ⇒ F^o / [group, feminine] (accusative)
(c) /-ae/ ⇒ F^o / [group, feminine] (nominative)
(d) /-am/ ⇒ F^o / [feminine] (accusative)
(e) /-a:/ ⇒ F^o / [feminine] (ablative)
(f) /-a/ ⇒ F^o / [feminine] (nominative)
(g) /-o:s/ ⇒ F^o / [group, discrete] (accusative)
(h) /-i:/ ⇒ F^o / [group, discrete] (nominative)
(i) /-um/ ⇒ F^o / [discrete] (dative)
(j) /-e/ ⇒ F^o / [discrete] (nominative)
(k) /-o:rum/ ⇒ F^o / [individuation] (genitive)
(l) /-i:s/ ⇒ F^o / [group] (dative/ablative)
(m) /-i:us/ ⇒ F^o / [individuation] (genitive)
(n) /-ud/ ⇒ elsewhere (default)

3.2 Preliminary summary and discussion

Table (19) gives an overview of our analysis so far; it clearly shows that there are no specific
endings for the neuter in the Latin demonstrative pronouns ille and iste:

(19)

<table>
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</tbody>
</table>

In most cases where neuter is involved there is a complete gender syncretism (cf. (19m, o and p)). In two cases, we have a masculine / neuter syncretism (cf. (19k) and (19l)), and in one
case, the ending is associated only with number ([group]) (cf. (19n)). The only element which
could be associated with the "neuter" gender is /-ud/, which in our analysis is a mere default
realisation (cf. (19q)). The most intriguing fact for us is the absence of genuine neuter endings

in the plural (cf. (19f), (19m) and (19n)). We think that this is not a mere coincidence, but that
it has something to do with the feature geometry. In other words, we think that the cases of
morphological syncretism are a hint at a fundamental semantic change which, in our opinion,
reveals the reason for the well-documented changes in the gender system from (Proto)Indo-
European to the modern Romance languages. Please have a look at the Latin geometry
repeated in (20):

(20)

As symbolised by the lightning, this geometry has a weak point: the feature [group] is
logically incompatible with the feature [non-discrete]. That is, if neuter gets to be associated
with the feature [non-discrete], as we have assumed, the plural forms should not be possible.

This leads to a strange situation for a real neuter gender, like the one still attested in Latin. We
think that, in order to resolve the conflicting situation, the feature geometry was slightly
modified in an intermediate step. As a result of this change, we get two coexisting geometries:
one for the singular (cf. (21a)) and another one for the plural (cf. (21b)):

(21) (a) ...

(b) ...

The possible combinations of these geometries are given in (22):
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(22) (a) specific combinations of geometry (21a)

(b) specific combinations of geometry (21b)

In (22a) the difference between neuter and feminine / masculine lies in the presence or absence of the feature [discrete]. Yet, in the case of (22b), the neuter is a kind of non-classification, since the [class]-node is missing. The only thing which is explicitly expressed in this case is the feature [group], i.e. plural. This reflects quite well the original meaning, 'collective', of (Proto)Indo-European -a (cf. Schönh 1971:123). Please note that after this modification the Vocabulary Items we have elaborated in the previous section can still be inserted. That is, so far, no "re-specification" of the Vocabulary Items is necessary.

3.3 From Latin to Modern Spanish

3.3.1 The development of the feature geometry

Now let us return to the geometry illustrated in (21a), in order to better understand the further changes which have taken place from Late Latin to Modern Spanish. If we consider the opposition between [discrete] and [non-discrete], we have to state that this opposition is strictly speaking not a matter of classification, i.e. one of gender, but a specification of the operation of individuation. Individuation means to identify a potential, delimited referent; it is related to the universal operation of Apprehension defined by Seiler in the following way:

First of all, so it seems, one has to be able to express that something is a thing [= dimension of APPREHENSION]. Only then can it be named: The dimension of NAMING [...] Following that, it can be referenced: The dimension of DETERMINATION. (Seiler 1986:9)

APPRHENSION is the universal operational dimension with corresponding subdimensions which explicate the grasping and representation of concepts corresponding to objects or things by means of language. (Seiler 1986:145)

Individuation in this acceptation concerns thus mainly the difference of the denotation of the nominal or pronominal as "an undifferentiated concept or as an individual" (Lehmann 1991: 206), i.e. the opposition between [non-discrete] and [discrete]. The geometry must reflect this fact, that is the features [discrete] and [non-discrete] cannot depend from the [class]-node. As individuation features, they must take over the place of [individuation]. For this reason we assume that the feature [discrete] and its dependents replaces [individuation] (cf. (23)). This happened in the singular as well as in the plural:

(23) individuation → discrete

The resulting geometries are given in (24):

(24) (a)

(b)

Note that the geometry (24b) implicitly entails the one in (24a). That is, after the above mentioned change, the assumed coexistence of the two geometries, one for the singular and another for the plural, was lost. The resulting geometry (cf. (25)) is the one that holds for Modern Spanish:

(25) Modern Spanish

If the feature [feminine] in (25b) is absent (cf. (26b) and (26d)), the resulting interpretation will be 'masculine', and the absence of [discrete] (cf. (26e)) results in what mistakenly is called "neuter", i.e. in a non-discrete interpretation, in something where the referent is not well delineated.
Please note that the feature [group] depends from [discrete] and as such it can only be present if [discrete] is present. Thus, agreeing with Ojeda (1973:19), we can say that "plurality presupposes individuation". In our case, plurality presupposes the more specific case of individuation, i.e. [discrete(ness)]. Therefore, this feature geometry also explains why the so-called Spanish "neuters" do not allow plural forms.

Concluding so far, the so-called "neuter" is in Spanish a case of non-individuation. This is, as you can see from the following quotations, a quite common assumption (cf. also Mariner 1973):

"... discrete and number marking:

Alcanzame ese diccionario. A ver, aqui esta lo que quiere decir 'serendipity'.

Me parece mejor el que Carlos hizo."

Hegel's concept of el absoluto (cf. Lapresa 2000:177) further shows that not even the feature [+abstract] is relevant, because el absoluto is an abstract as lo absoluto. Here again, the difference lies in the feature [discrete]: el absoluto denotes a well-defined concept in Hegel's oeuvre, while lo absoluto is the undefined, undelineated 'absoluteness'.

Mariner (1978) lists several examples which clearly show that the semantic difference between el/la and lo lies in the presence or absence of the feature [discrete]. The following quotations make this explicit:

el absoluto

... los demonstrativos esto / eso / aquel no se oponen al resto de las formas de sus paradigmas por sus rasgos morfológicos de género, sino por un rasgo semántico que podría identificarse como la capacidad de denotar únicamente entidades inanimadas o no humanas, o quizá como la capacidad de denotar sólo lo no contable o no discreto, lo cual explicaría que estas formas carecen de plural y de un correlato indefinido, y que no puedan asociarse al interrogativo cuál, que requiere la individuación del referente [...]. En general, los llamados neutros no proporcionan criterios para la individualización del referente (salvo el rasgo de definidad), y el tipo de referencia y de capacidad anaférica que muestran es distinto del que caracteriza a las formas 'no neutras' (Leonetti 1999:834, §12.1.3)."

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3.3.2 Morphophonological analysis of the endings

Due to the reduction of the Latin five-case-system to a two-case-system, most of the Vocabulary items in (18) simply got lost. Compare (18) with (28):

... the demonstratives esto / eso / aquel no do contrast with the other forms of their paradigms on the basis of their morphological gender features, but on the basis of a semantic feature which could be identified as the capacity of denoting exclusively inanimate or non-human entities, or maybe as the capacity of denoting only the non-countable or the non-discrete. This would explain the fact that these forms have no plural and no corresponding indefinite forms, and that they cannot appear with the interrogative cuál, since it demands the individuation of the referent [...]. Generally the so-called neuters do not contribute specifically to the individuation of the referent (apart from being definite), and their reference type as well as their anaphoric force is distinct from the one of the 'non-neuter forms' (Leonetti 1999:834) "the so-called neuters do not contribute specifically to the individuation of the referent (apart from being definite), and their reference type as well as their anaphoric force is distinct from the one of the 'non-neuter forms'". All these aspects, definiteness, reference and anaphoricity use, are part of the feature bundle coded under D*, i.e. part of the right part of the feature geometry which we cannot treat here for reason of space.

"... los demonstrativos esto / eso / aquel no se oponen al resto de las formas de sus paradigmas por sus rasgos morfológicos de género, sino por un rasgo semántico que podría identificarse como la capacidad de denotar únicamente entidades inanimadas o no humanas, o quizá como la capacidad de denotar sólo lo no contable o no discreto, lo cual explicaría que estas formas carecen de plural y de un correlato indefinido, y que no puedan asociarse al interrogativo cuál, que requiere la individuación del referente [...]. En general, los llamados neutros no proporcionan criterios para la individualización del referente (salvo el rasgo de definidad), y el tipo de referencia y de capacidad anaférica que muestran es distinto del que caracteriza a las formas 'no neutras' (Leonetti 1999:834, §12.1.3)."

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15 According to Leonetti (1999:834) "the so-called neuters do not contribute specifically to the individuation of the referent (apart from being definite), and their reference type as well as their anaphoric force is distinct from the one of the 'non-neuter forms'". All these aspects, definiteness, reference and anaphoricity use, are part of the feature bundle coded under D*, i.e. part of the right part of the feature geometry which we cannot treat here for reason of space.
Furthermore, various phonological changes took place: final -m and -s got lost, final /a/ and /i:/ were lowered to /o/ and /e/ respectively and /a:/ and /o:/ were shortened to /a/ and /o/. Moreover, various phonological changes took place: final -m and -s got lost, final /a/ and /i:/ were lowered to /o/ and /e/ respectively and /a:/ and /o:/ were shortened to /a/ and /o/ respectively. These phonological changes gave rise to the Vocabulary Items in (29):

(29) Vocabulary Items for F\(^{\circ}\)

| (a) /-as/ ↔ F\(^{\circ}\)/ [group, feminine] | (b) /-ae/ ↔ F\(^{\circ}\)/ [group, feminine] | (c) /-am/ ↔ F\(^{\circ}\)/ [feminine] | (d) /-a/ ↔ F\(^{\circ}\)/ [feminine] | (e) /-ae/ ↔ F\(^{\circ}\)/ [group, discrete] | (f) /-a/ ↔ F\(^{\circ}\)/ [group, discrete] | (g) /-um/ ↔ F\(^{\circ}\)/ [discrete] | (h) /-e/ ↔ F\(^{\circ}\)/ [discrete] | (i) /-a/ ↔ elsewhere | (j) /-s/ ↔ elsewhere |
|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|
| (accusative)                            | (accusative)                            | (accusative)                            | (nominative)                            | (nominative/accusative)                | (nominative/accusative)                | (accusative)                            | (nominative)                            | (default)                               | (default)                               | (default)                               |

As you can see, in all cases where the Vocabulary Items ask for the feature [feminine] (cf. (29a-d)), the Vocabulary Item is /-a/ or, at least, contains /-a/.\(^{19}\) The common feature for /-a/-, cf. (29f) and (29h), is instead [discrete], while in all other cases the phonological realization is or contains /-a/. From the moment where /a/ was associated with the feature [group], it became a separate Vocabulary Item. This lead to another fundamental change of list (29), cf. (30):

(30) Vocabulary Items for F\(^{\circ}\)

| (a) /-a/ ↔ F\(^{\circ}\)/ [feminine] | (b) /-l/- ↔ F\(^{\circ}\)/ [group, feminine] | (c) /-l/- ↔ F\(^{\circ}\)/ [feminine] | (d) /-l/- ↔ F\(^{\circ}\)/ [feminine] | (e) /-l/- ↔ F\(^{\circ}\)/ [group, discrete] | (f) /-l/- ↔ F\(^{\circ}\)/ [group, discrete] | (g) /-l/- ↔ F\(^{\circ}\)/ [discrete] | (h) /-l/- ↔ F\(^{\circ}\)/ [discrete] | (i) /-l/- ↔ elsewhere | (j) /-l/- ↔ elsewhere |
|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|
| (accusative)                            | (nominative/accusative)                | (nominative)                            | (nominative)                            | (nominative)                            | (nominative)                            | (nominative)                            | (nominative)                            | (default)                               | (default)                               | (default)                               |

The Vocabulary Item /-l/- is now exclusively associated with [feminine], /-l/- with [discrete], at least in the non plural, /-s/ with [group] and /-l/- remains the default realisation. These elements are those found in Modern Spanish. Yet, we have to clarify several aspects of our analysis.

Let us assume, for the moment, that in Spanish the features of the geometry are encoded under the same syntactic categories as in Latin: the features which serve to localize the intended referent in D\(^{\circ}\) and the right side of the geometry in F\(^{\circ}\). Yet, this structure is somehow problematic for the Spanish plural forms, since we would have to insert two elements in only one syntactic node, e.g. /-a/ for [feminine] and /-s/ for [group]:

In other words, we have two Vocabulary Items, both of them fulfilling the requirements for insertion equally well. This leads to a situation where it is not possible to decide which of the two items must be inserted.

Noyer (1992, 1997) describes a similar problem in his analysis of Afro-Asiatic and Australian languages; he proposes that in certain cases, insertion does not stop until all the features of a syntactic terminal element are satisfied. This process is called Fission. If, for example, a terminal element has the features [F1], [F2], [F3] and [F4] (cf. (32)), and the inserted Vocabulary Item satisfies the features [F1], [F2] and [F3], then, in a second cycle, another Vocabulary Item satisfying the feature [F4] can be inserted. For this, the feature [F4] is separated from the original feature configuration and obtains a separate slot:

For our Spanish examples, we could assume now that the feature [group] is affected by Fission. In all cases where [group] is present, this feature will be "fissioned" and obtains a separate slot to be realised phonologically. Under this assumption, we get the following picture:

\(^{19}\) We assume here an analogical spread of the feminine ending -a from the accusative to the nominative forms, being well aware of the fact that Latin final -ae normally resulted in -o.\(^{20}\) We leave the question if there is still a 'collective' /-a/ in Modern Spanish (e.g. in constructions like pasarsela bien, la que se va a liar etc.) for future research.
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The Vocabulary Items in (30) could now be inserted. But note that for the masculine singular we would derive the ungrammatical fonD.

*aquele, which, in order to delete the final /-e/, would be subject to a Readjustment Rule like the one in (34):

(34) Readjustment Rule

Yet, this analysis has a fundamental problem, namely, the specification of the Vocabulary Item (30b): In the framework we have adopted here, it is not possible to work with "negative" specifications like "non plural", since such features do not exist; and it is also not possible to specify the context of insertion with the feature [singular], since this feature is only obtained via contrast (i.e. via absence of the feature [group]). Therefore, our first implicit assumption, according to which the change where /-s/ was associated with the feature [group] lead to a fission rule, cannot be maintained.

Yet, there is another way to interpret the mentioned change: a "new" syntactic category could have emerged. In this case, the right part of the geometry would not be coded under one and the same syntactic category, but under two different ones, cf. (35):²¹

As you can see, in (35b), (35d) and (35e), the functional category F2° has no feature specification. For the logical form (LF), this category will thus be interpreted as the default, i.e. 'singular' or 'non plural'. For morphophonology, this means that the category F2° will not be realised phonologically. In DM, it is assumed that "[a] terminal node containing only features with unmarked values fuses […] with an adjacent node or may even be deleted" (cf. Oltra Massuet 1999, Arregi 2000). Thus, instead of Fission, we have to assume the opposite case, namely Fusion. If we apply the corresponding fusion rule to the structures in (35), we get the ones in (36):

²¹ It is very likely that the syntactic arrangement of the functional categories F1° and F2° is the other way round, i.e. \([D° \rightarrow F2° \rightarrow F1°]\) (cf. Stoeck in print, Picallo 2005). In this case, we would have to assume a postsyntactic "rearrangement rule", for example Local Dislocation (cf. Embick & Noyer 2001), which conducts to the correct alignment of the suffixes.
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Thus, the correspondence rules for Modern Spanish are not those in (30), but those in (38):

<table>
<thead>
<tr>
<th>Vocabulary Items for $F^o$</th>
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<tbody>
<tr>
<td>(a) $/-a/$ ↔ $F^o$ $/-a/$ (feminine)</td>
</tr>
<tr>
<td>(b) $/-e/$ ↔ $F^o$ $/-e/$ (discrete)</td>
</tr>
<tr>
<td>(c) $/-e/$ ↔ $F^o$ $/-e/$ (group)</td>
</tr>
<tr>
<td>(d) $/-o/$ ↔ elsewhere (default)</td>
</tr>
</tbody>
</table>

Independent of the fact whether $F^o$ and $F^a$ fuses or not, $/-a/$ is associated in all cases with the feature [feminine]. The Vocabulary Item $/-e/$ is instead only associated with the feature [discrete], if this feature is coded under the fused node $F^o/F^a$, in all other cases [discrete] is realised by default $/-o/$ as the other Vocabulary Items do not meet the condition for form.

4. Conclusion

We have shown that neither the Latin nor the Spanish gender-system is based upon the opposition animate vs. inanimate. Still assuming a semantically based gender system for Latin (at least for pronouns), we have proposed that the former Indo-European features animate / inanimate were replaced by the opposition discrete vs. non-discrete. This leads us to the geometry in (6) where the features [discrete] and [non-discrete] simply took over the original place of [animate] and [inanimate]. Now, under a morphological point of view, we have discovered that already in Latin demonstratives, there are no proper endings for neuter plural forms. We have related this fact to the logical incompatibility of the feature [group] with the feature [non-discrete], and have therefore proposed, as an intermediate step, two coexisting feature geometries for Latin: one for the singular and another one for the plural (cf. (21)). But the resulting geometries cannot explain a fundamental fact: the opposition between [discrete] and [non-discrete] is strictly speaking not a matter of classification, i.e. one of gender, but a specification of the operation of individuation. As an individuation feature, [discreteness] must take over the place of [individuation], leading to the Modern Spanish feature geometry illustrated in (25). If the feature [feminine] is absent in this geometry, the resulting interpretation will be ‘masculine’, and the absence of [discrete] results in what mistakenly is called “neuter”, i.e. in a non-discrete interpretation, in something where the referent is not well delineated. The impossibility of neuter plural forms in Modern Spanish demonstratives and personal pronouns is reflected in the geometry by the fact that the feature [group] depends on [discrete] and as such it can only be present if [discrete] is present. Thus, the distinction between feminine/masculine and the so-called “neuter” is a matter of individuation vs. non-individuation, and the corresponding morphophonological distinction is one between specific Vocabulary Items for individualized referents ($/-a/$ and $/-e/$) and the mere default $/-o/$.

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