Arguments in Spanish Are Not Uniformly DPs

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1. Introduction

Spanish patterns like Italian and many other Romance languages in that unmodified nouns can only occur as determinerless, or bare, arguments in postverbal position (Suñer 1982, Contreras 1986, Longobardi 1994, Chierchia 1998).

(1) a. Quedaba pan.
remained.IPFV bread
'Bread remained.'

b. *Pan quedaba.
bread remained.IPFV

(2) a. Aparecieron patos.
appeared ducks
'Ducks appeared.'

b. *Patos aparecieron.
ducks appeared

If one is to maintain the claim that such bare nouns are DPs, it is necessary to posit a phonologically null determiner and defend the conditions under which it is licensed (Longobardi 1994).

(3) a. Quedaba ∅ pan.

b. Aparecieron ∅ patos.

The widely accepted view is that this silent determiner is subject to lexical government, meaning that it must be c-commanded by a lexical head like V or P (Contreras 1986, Longobardi 1994). Two aspects of Spanish complicate this account, neither of which has been addressed in the literature on bare nouns: proper names do not undergo N-to-D movement, and the plural form of the indefinite article (*unos/unas* 'some') seems to be exempt from Chierchia's (1998) Blocking Principle.

In this paper, I pursue a different analysis of bare nouns in Spanish, one where the position of the verb establishes the domain of existential closure (Benedicto 1998). Moreover, following Borer (2005a), I argue that mass versus plural denotation corresponds to the absence or presence of NumP, respectively. Finally, I show that an indefinite determiner is needed to derive exclusively singular readings of nouns, whereas definite determiners result in a systematic ambiguity between mass and count interpretation. For example, *un pato* 'a duck' can only denote an atomic individual, but *el pato* 'the duck' could denote either an atomic individual or a totality of duck "stuff". I attribute the ambiguity of *el pato* to the lack of NumP in its structure and to the semantics of maximality, which is a component of definiteness.

2. No N-to-D movement in Spanish

The notion of lexical government offers a principled account of determinerless arguments in Italian because it can be demonstrated that proper names, which are generated in N, raise to D (Longobardi 1994). For this reason, the ability of proper names to appear as bare preverbal arguments does not weaken the claim that null D is restricted to lexically governed positions. In (4), the possessive determiner *mio* 'my' serves as a diagnostic for the relative height of *Gianni* in each noun phrase (Longobardi 1994: 623).

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(4) a. Il mio Gianni ha finalmente telefonato.
the my Gianni has finally called
'My Gianni finally called up.'

b. *Mio Gianni ha finalmente telefonato.
my Gianni has finally called

c. Gianni mio ha finalmente telefonato.
Gianni my has finally called
'My Gianni finally called up.'

The contrast between the grammaticality of (4a) and the ungrammaticality of (4b) indicates that *mio* cannot be used in the absence of the definite article. Still, (4c) is possible, where *Gianni* precedes *mio* and permits the same nonrestrictive reading of the proper name that (4a) does. Longobardi argues that *Gianni* has raised from N to D in (4c) and that proper names always do so when D is available since they are referential expressions. This movement provides D with phonological material and identifies a reason that proper names can occur as bare preverbal arguments in Italian but nouns cannot.

The issue is that it is not possible to replicate any of Longobardi's (1994) examples in Spanish, undermining the claim that N-to-D raising of proper names is a Romance-wide phenomenon. Granted, one cannot use possessive determiners as a diagnostic because the definite article and prenominal possessive determiners are mutually exclusive in Spanish.

(5) a. mi Juanito
my Juanito

b. *el mi Juanito
the my Juanito

c. *el mío Juanito
the my Juanito

Nonetheless, as illustrated in (6)–(8), none of the other Italian examples are reproducible in Spanish.

(6) a. Vino el viejo Camacho.
came the old Camacho
'Old Camacho came.'

b. *Vino Camacho viejo.
came.3SG Camacho old

(7) a. La antigua Roma fue importante.
the ancient Rome was important
'Ancient Rome was important.'

b. *Roma antigua fue importante.
Rome ancient was important

(8) a. El pasado jueves fue terrible.
the last Thursday was terrible
'Last Thursday was terrible.'

b. *Jueves pasado fue terrible.
Thursday last was terrible

It is important to mention that the adjectives in (6–8a) all have nonrestrictive readings as prenominal modifiers, so they do not fundamentally alter the semantics of these proper names. In contrast, the adjective *solo/sola* 'only, alone' does have a restrictive reading in prenominal position.

(9) a. La sola María asistió.
the only María attended
'The only María attended.'

b. María sola asistió.
María alone attended
'María alone attended.'

In (9a), *María* is interpreted a property-denoting expression in that it can be paraphrased as 'person named 'María'", while in (9b), *María* is a canonical occurrence of a proper name. Given that the sentences in (9) have different readings, they do not serve as evidence of N-to-D movement.

To reconcile these data with the view that all arguments are DPs in Spanish, one must posit that determinerless names occur with a null D, including those in preverbal position.

(10) ∅ Juan saludó a ∅ María.
Juan greeted DOM María
'Juan greeted María.'

The fact that the silent determiner that precedes *Juan* in (10) is not c-commanded by V undermines the explanatory power of lexical government, motivating a reconsideration of bare nouns in Spanish.

3. The plural indefinite article

Chierchia's (1998) Blocking Principle states that a language cannot use a covert type shifter in place of a semantically equivalent overt determiner, such as $\exists$ rather than the indefinite article. Unlike Italian, Spanish has a plural form of the indefinite article (*unos/unas* 'some'), yet plural nouns can still have existential readings in the absence of this article.[1] In fact, the only possible interpretation of bare nouns in Spanish is existential.

(11) Nadan patos en el lago.
swim ducks in the lake
'Ducks are swimming in the lake.'

That is, (11) does not allow for a generic reading like 'ducks swim in the lake' despite the present tense verb. There seem to be two paths forward: either stipulate that the plural indefinite article in Spanish is not subject to the Blocking Principle or identify a reason that *unos patos* 'some ducks' does not block *patos* 'ducks' as a postverbal argument. Such a reason is found in the different semantic behavior of determinerless plural nouns and quantified plural nouns.

As in English, bare plural nouns in Spanish can only take narrow scope with respect to quantifiers (Dobrovie-Sorin & Laca 2003, McNally 2004). As a result, the sole reading of (12) is that in (13), for which it is not necessarily the case that every individual saw the same ducks.[2]

(12) Todo el mundo vio patos.
all the world saw ducks
'Everyone saw ducks.'

(13) $\forall x_e \,.\, [\texttt{Person}(x) \rightarrow \exists y_e \,.\, [\texttt{*Duck}(y) \wedge \texttt{Saw}(x, y)]]$

If, however, *patos* 'ducks' is replaced by *unos patos* 'some ducks', the interpretation in (15b) becomes available, according to which every individual saw the same ducks.

(14) Todo el mundo vio unos patos.
all the world saw some ducks
'Everyone saw some ducks.'

(15) a. $\forall x_e \,.\, [\texttt{Person}(x) \rightarrow \exists y_e \,.\, [\texttt{*Duck}(y) \wedge \texttt{Saw}(x, y)]]$
b. $\exists y_e \,.\, [\texttt{*Duck}(y) \wedge \forall x_e \,.\, [\texttt{Person}(x) \wedge \texttt{Saw}(x, y)]]$

The fact that (12) has but a single reading suggests that $\exists$ is not present in the structure of the bare noun *patos* at logical form. Otherwise, one would predict that *patos*, which can only be interpreted existentially, could undergo quantifier raising just as *unos patos* can. In the next section, I argue that $\exists$ is inserted into the logical form of (12) as part of existential closure, an external operation that ultimately explains why bare plural nouns do not violate the Blocking Principle and cannot take wide scope in relation to quantifiers.

4. Bare postverbal nouns and existential closure

Much work on a variety of languages argues that verbs can existentially bind variables that are introduced by determinerless nouns (Benedicto 1998, Van Geenhoven 1998, Dobrovie-Sorin & Laca 2003, Chung & Ladusaw 2004, McNally 2004, Borer 2005b, Dobrovie-Sorin et al. 2006). In particular, I adopt Benedicto's (1998) view that existential closure is delimited by the c-command domain of the verb. As shown in (16), the contrast in grammaticality between the declarative and interrogative versions of the same sentence warrants a flexible approach to existential closure in Spanish.

[1] Italian resorts to the partitive construction *dei/degli/delle* 'some', which decomposes into the preposition *di* 'of' and the plural form of the definite article *i/gli/le* 'the'.

[2] The star operator (*) in (13) represents algebraic closure (Link 1983, Landman 1989, Champollion & Krifka 2016). For instance, if the extension of Duck is the set $\{a, b, c\}$, $*\texttt{Duck}$ generates $\{a, b, c, a \oplus b, a \oplus c, b \oplus c, a \oplus b \oplus c\}$, or the complete join semilattice in (29). This operator is used as a descriptive tool for the time being.

(16) a. *Patos nadaban en el lago.
ducks swam.IPFV in the lake
'Ducks were swimming in the lake.'

b. ¿Nadaban patos en el lago?
swam.IPFV ducks in the lake
'Were ducks swimming in the lake?'

The difference between these examples is that the verb c-commands the subject in (16b) but not in (16a).

I argue that existential closure is a last-resort operation at logical form that shifts a verb to a compatible type when the first argument in its c-command domain is a property-denoting expression. Not only does this restriction account for the unavailability of bare preverbal subjects in Spanish, but it also correctly predicts that indirect objects cannot occur bare either (Lois 1987, Masullo 1992, Brugè & Brugger 1996).

(17) Juan les daba comida a *(unos) patos.
Juan 3PL.DAT gave.IPFV food to some ducks
'Juan was giving food to some ducks.'

In contrast, McNally's (2004: 122) rule in (18) does not preclude bare preverbal subjects or indirect objects because it does not limit existential closure to a single argument within the c-command domain of the verb.

(18) For all n-ary predicates P ($n > 1$), and for all i, $1 \leq i \leq n$, if P's i-th argument is of type e, then P's i-th argument can also be of type $\langle s, \langle e, t\rangle\rangle$.

It is important to acknowledge that McNally is concerned with modified as well unmodified nouns. As shown in (19), it is possible for modified nouns to appear as determinerless preverbal subjects.

(19) Patos grandes nadaban en el lago.
ducks large swam.IPFV in the lake
'Large ducks were swimming in the lake.'

However, the modifier plays a fundamental role in licensing the noun (Suñer 1982, Brugè & Brugger 1996, Dobrovie-Sorin & Laca 2003, Dayal 2004). Therefore, it is necessary to examine unmodified nouns separately when developing a theory of bare arguments in Spanish.

Since intransitive, transitive, and ditransitive verbs are of distinct semantic types, three versions of existential closure (EC) are needed. The operation defined in (20a) raises the type of intransitive verbs to $\langle\langle e, t\rangle, t\rangle$, that in (20b) raises the type of transitive verbs to $\langle\langle e, t\rangle, \langle e, t\rangle\rangle$, and that in (20c) raises the type of ditransitive verbs to $\langle\langle e, t\rangle, \langle e, \langle e, t\rangle\rangle\rangle$.

(20) a. $\text{EC}_1 := \lambda P_{\langle e,t\rangle} . \lambda Q_{\langle e,t\rangle} . \exists x_e . [P(x) \wedge Q(x)]$
b. $\text{EC}_2 := \lambda P_{\langle e,\langle e,t\rangle\rangle} . \lambda Q_{\langle e,t\rangle} . \lambda x_e . \exists y_e . [P(y)(x) \wedge Q(y)]$
c. $\text{EC}_3 := \lambda P_{\langle e,\langle e,\langle e,t\rangle\rangle\rangle} . \lambda Q_{\langle e,t\rangle} . \lambda z_e . \lambda x_e . \exists y_e . [P(y)(z)(x) \wedge Q(y)]$

In all cases, existential closure rescues an otherwise uninterpretable structure. To illustrate the proposal using an transitive verb, consider the logical form of *María vio patos* 'María saw ducks' in (21), where functional application cannot take place between *vio* 'saw' and *patos* 'ducks' because neither expression belongs to the domain of the other.

(21) ⟦María vio patos⟧
$= ⟦\text{vio}⟧(⟦\text{patos}⟧)(⟦\text{María}⟧)$
$= [\lambda y_e . \lambda x_e . \texttt{Saw}(x, y)](\lambda z_e . *\texttt{Ducks}(z))(m)$

In (22), EC_2 raises the verb to type $\langle\langle e, t\rangle, \langle e, t\rangle\rangle$ so that it can combine with its bare direct object.

(22) $\text{EC}_2(\lambda y_e . \lambda x_e . \texttt{Saw}(x, y))(\lambda z_e . *\texttt{Ducks}(z))(m)$
$= [\lambda P_{\langle e,\langle e,t\rangle\rangle} . \lambda Q_{\langle e,t\rangle} . \lambda x_e . \exists y_e . [P(y)(x) \wedge Q(y)]](\lambda y_e . \lambda x_e . \texttt{Saw}(x, y))(\lambda z_e . *\texttt{Ducks}(z))(m)$
$= [\lambda Q_{\langle e,t\rangle} . \lambda x_e . \exists y_e . [\texttt{Saw}(x, y) \wedge Q(y)]](\lambda z_e . *\texttt{Ducks}(z))(m)$
$= [\lambda x_e . \exists y_e . [\texttt{Saw}(x, y) \wedge *\texttt{Ducks}(y)]](m)$
$= \exists y_e . [\texttt{Saw}(m, y) \wedge *\texttt{Ducks}(y)]$

This computation also shows how ∃ is introduced by existential closure rather than within the noun phrase, capturing the inability of bare nouns to undergo quantifier raising even though they have obligatory existential readings. The next step is to address the possible interpretations of determinerless nouns in relation to mass versus count denotation.

5. The interpretation of NP and NumP

In Spanish, postverbal arguments of the kind-selecting predicate *extinguirse* 'to become extinct' must be preceded by the definite article, indicating that bare nouns cannot refer to kinds in this language (Masullo 1992, Dobrovie-Sorin & Laca 2003, McNally 2004, Borik & Espinal 2015).

(23) a. En el futuro podría extinguirse *(el) trigo.
in the future could become.extinct the wheat
'In the future, wheat could become extinct.'

b. En el futuro podrían extinguirse *(los) patos.
in the future could become.extinct the ducks
'In the future, ducks could become extinct.'

I adopt Carlson's (1977) distinction between individuals (x) and kinds (k) within the domain of entities as well as Espinal (2010) and Borik & Espinal's (2015) claim that NPs denote properties of kinds in Spanish.

(24) a. $\text{NP}_{\langle e,t\rangle}$

trigo

b. $[\![\text{trigo}]\!] = \lambda k_e \,.\, \texttt{Wheat}(k)$

However, following Borer (2005a), I maintain that mass versus count interpretation is due to syntactic structure and that determinerless NP arguments have mass readings.

I now briefly adress the construction in (25), where a verb of possession allows for a number-neutral interpretation of a determinerless uninflected, or nonpluralized, noun.

(25) Juan tiene pato en la nevera.
Juan has duck in the refrigerator
'Juan has duck/a duck/ducks in the refrigerator.'

According to one prominent analysis of this phenomenon, the object *pato* 'duck' is a modifier of the verb *tener* 'to have' rather than a canonical argument, forming a complex predicate that can be roughly paraphrased as 'to duck-have' (Dobrovie-Sorin et al. 2006, Espinal 2010, Espinal & McNally 2011). Novel evidence for this view is the ambiguous interpretation of modifiers in English compounds. For example, in *duck treats*, where *duck* modifies *treats*, *duck* can have a mass reading ('treats made of duck') or a count reading ('treats for ducks'). Given that bare uninflected nouns only exhibit flexible semantics as direct objects of verbs of possession, the number-neutral reading of *pato* in *tener pato* 'to duck-have' does not undermine the generalization that bare NPs are interpreted as mass in Spanish.

Next, I discuss object mass nouns, which behave syntactically like prototypical mass nouns but are judged by quantity rather than by volume, as Barner & Snedeker (2005) have demonstrated experimentally with English-speaking participants. For instance, although *trigo* 'wheat' and *correo* 'mail' both appear as bare uninflected nouns in (26), speakers would evaluate the truth conditions of (26a) based on the volume of wheat that each person saw but those of (26b) based on the quantity of mail that each person saw.

(26) a. María vio más trigo que Juan.
María saw more wheat than Juan
'María saw more wheat than Juan.'

b. María vio más correo que Juan.
María saw more mail than Juan
'María saw more mail than Juan.'

As Grimm & Levin (2017) remark, object mass nouns do not correspond to natural kinds. What counts as mail does not depend on any identifiable set of physical properties but rather on transportation by a postal

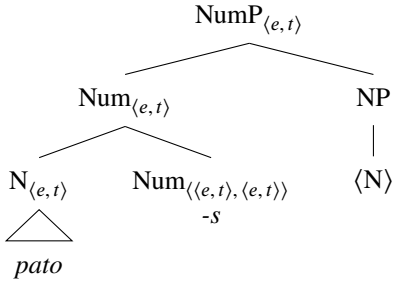
service, which relates to encyclopedic knowledge. In the absence of such knowledge, as with a nonce word, a bare uninflected noun is interpreted as mass in Spanish.

Turning to plural denotation, I consider Num, a head that is typically realized by the suffix *-s* in Spanish, to convert properties of kinds into properties of their instantiations (Déprez 2005, Espinal 2010, Borik & Espinal 2015). The definition of Num in (27) contains Carlson's (1977) realization formula $\textsc{r}(x, k)$, which expresses that individual x is a realization of kind k.

(27) $\text{Num} := \lambda P_{\langle e,t\rangle} \,.\, \lambda x_e \,.\, \exists k_e \,.\, [P(k) \wedge \textsc{r}(x, k)]$

The key difference between this proposal and previous work that associates Carlson's realization operator with number is that I do not distinguish between singular and plural denotation at the level of NumP in Spanish. Instead, building on Borer's (2005a) work, I contend that singularity requires structure above NumP, hence there is no need for features like [−PL] and [+PL] on Num. When Num applies to the NP *pato*, as in (28a), it returns a function that maps every individual x to the truth value 1 if and only if there is a kind k that has the property `Duck` and x is a realization of k, as in (28b).

(28) a.

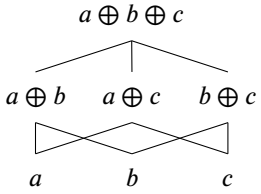


b. $[\![\text{-s}]\!]([\![\text{pato}]\!]) = \lambda x_e \,.\, \exists k_e \,.\, [\texttt{Duck}(k) \wedge \textsc{r}(x, k)]$

The structure in (28a) assumes that N raises to Num prior to logical form and that NumP inherits the semantic type of the complex head.

The denotation of *patos* 'ducks' as a determinerless NumP argument can be represented using a complete join semilattice like that in (29), which consists of the atoms *a*, *b*, and *c* and their sums (Link 1983, Krifka 1989, Landman 1989, Sauerland 2003, Champollion & Krifka 2016).

(29)



The semantic behavior of bare plural nouns in the downward-entailing contexts in (30) and the intensional and modal contexts in (31) supports the inclusion of atoms in the denotation of NumP (Krifka 1989, Schwarzschild 1996, Sauerland 2003, Zweig 2009, Grimm 2013, Scontras 2022).

(30) a. No hay patos en el lago.
not has ducks in the lake
'There are no ducks in the lake.'

b. ¿Viste patos en el lago?
saw.2SG ducks in the lake
'Did you see ducks in the lake?'

(31) a. María busca patos.
María looks.for ducks
'María is looking for ducks.'

b. Juan debe encontrar patos.
Juan must find ducks
'Juan must find ducks.'

Note that (30a) is only true if there is not one duck in the lake and that the addressee of (30b) would reply affirmatively if they saw even a single duck. Similarly, it is not the case that the individuals in (31) are merely seeking pluralities of ducks. All of these readings are captured by an inclusive approach to plurality, where NumP denotes atoms as well as their sums.

6. Indefiniteness and singularity

The only way to derive exclusively singular readings in Spanish is to use the numeral *un/una* 'one' or one of the indefinite determiners in (32).[3]

(32) a. cada pato
every duck

b. todo pato
every duck

c. un pato
a duck

d. algún pato
some duck

e. ningún pato
no duck

f. cuál pato
which duck

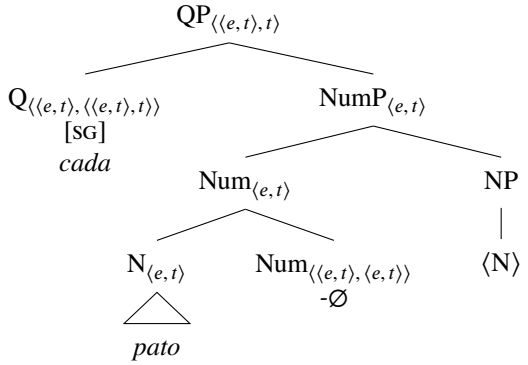
Because *pato* 'duck' can only be interpreted as an atomic individual in (32), I claim that these indefinite determiners presuppose singularity. Following Scontras (2022: 1173), this presupposition can be formalized as $\forall x_e \in P[\mu(x) = 1]$, which is equivalent to $\forall x_e \in P[|x| = 1]$. The following lexical entries for *cada* 'every', *un/una* 'a' as the indefinite article, and *ningún/ninguna* 'no' illustrate the proposal.

(33) a. $[\![\text{cada}]\!] = \lambda P_{\langle e,t\rangle} . \lambda Q_{\langle e,t\rangle} : \forall x_e \in P[|x| = 1] . \forall x_e . [P(x) \rightarrow Q(x)]$
b. $[\![\text{un/una}]\!] = \lambda P_{\langle e,t\rangle} . \lambda Q_{\langle e,t\rangle} : \forall x_e \in P[|x| = 1] . \exists x_e . [P(x) \wedge Q(x)]$
c. $[\![\text{ningún/ninguna}]\!] = \lambda P_{\langle e,t\rangle} . \lambda Q_{\langle e,t\rangle} : \forall x_e \in P[|x| = 1] . \neg\exists x_e . [P(x) \wedge Q(x)]$

I argue that this presupposition corresponds to a privative [SG] feature on the heads that host these morphemes, such as Numeral and Q.

To account for the lack of plural morphology on indefinite noun phrases like those in (32), I propose that heads with a [SG] feature condition the null realization of Num. For example, consider the structure and logical form of *cada pato* 'every duck' in (34).[4]

(34) a.



b. $[\![\text{cada}]\!]([\![\text{pato-}\varnothing]\!]) = \lambda Q_{\langle e,t\rangle} . \forall x_e . [\exists k_e . [\texttt{Duck}(k) \wedge \textsc{r}(x,k)] \rightarrow Q(x)]$

There are, in fact, many languages in which indefinite determiners are in complementary distribution with plural marking, such as Basque, Hungarian, Quechua, Turkish, and a number of Western Iranian languages (Ortmann 2000, Borer 2005a). The data in (35) indicate the relevant contrasts in Hungarian (Ortmann 2000: 251–252).

[3] In section 7, I show that definite uninflected nouns like *el pato* 'the duck' are ambiguous between mass and singular interpretation, which I attribute to the semantics of definite determiners.

[4] I assume that Q and Num belong to the same cycle in (34a), thereby enabling contextual allomorphy (Embick 2010). Another option would be to posit fusion of Q and Num, either by having Num raise to Q in the syntax or by having Q lower to Num during a postsyntactic morphological operation (Embick & Noyer 2001). However, both of these approaches face challenges. First, Num-to-Q movement would raise the possibility that Q applies to Num before Num applies to NP at logical form. Second, Q-to-Num lowering seems incompatible with N-to-Num raising, which should be maintained since it ostensibly takes place in all other noun phrases.

(35) a. hajó-k
ship-PL
'ships'

b. öt hajó
five ship
'five ships'

c. sok hajó
many ship
'many ships'

It seems that the mere presence of Numeral or Q in the structure is sufficient to condition the null realization of Num in Hungarian, whereas contextual allomorphy is limited to cases where the Numeral or Q head has a [SG] feature in Spanish.

7. Definiteness and maximality

A major difference between definite and indefinite determiners is that there are no definite determiners that exhibit sensitivity to mass versus count denotation, as revealed by (36) and (37).

(36) a. el pan
the bread

b. este pan
this bread

c. mi pan
my bread

(37) a. el pato
the duck

b. este pato
this duck

c. mi pato
my duck

This observation extends to pronouns, supporting the notion that they are a type of definite determiner (Postal 1966, Elbourne 2005). The sentences in (38) show that the pronoun *lo* 'it' is equally compatible with *el pan* 'the bread' and *el pato* 'the duck' as its antecedent.

(38) a. María sacó [el pan] de la nevera y [lo] comió.
María took.out the bread from the refrigerator and it ate
'María took out the bread from the refrigerator and ate it.'

b. María sacó [el pato] de la nevera y [lo] comió.
María took.out the duck from the refrigerator and it ate
'María took out the duck from the refrigerator and ate it.'

I consider all definite determiners, including pronouns, to have a maximality operator as part of their semantic value, as has long been argued for the definite article (Sharvy 1980, Link 1983, Krifka 1989, Chierchia 1998). The fact that the definite article can be used together with postnominal demonstratives and possessive determiners in Spanish provides evidence for this claim.

(39) a. el pan este
the bread this

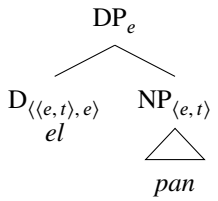
b. el pato mío
the duck my

In (40), I have minimally adapted Heim's (2011: 998) definition of the maximality operator (MAX) and semantic value of the definite article.

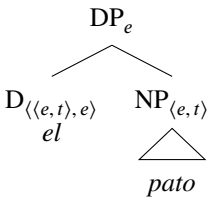
(40) a. $\text{MAX}(P) := \lambda x_e \,.\, [P(x) \wedge \neg\exists y_e \,.\, [P(y) \wedge x < y]]$
b. $[\![\text{the}]\!] = \lambda P_{\langle e,t\rangle} : \exists x_e \,.\, \forall y_e \,.\, [\text{MAX}(P)(y) \leftrightarrow x = y] \,.\, \iota x_e \,.\, [\text{MAX}(P)(x)]$

When MAX applies to a property-denoting expression P, the result is a function that maps every individual x to the truth value 1 if and only if x has property P and there is no individual y such that y has property P and x is a proper part of y. As for the definite article, it checks that there exists a unique maximal individual that has property P by means of the presupposition in (40b) and then returns that individual.

It is essential to keep in mind that maximal entities are individuals but are not necessarily atomic. For instance, *el pato* 'the duck' in (38b) could refer to a whole duck, but it could also refer to a totality of duck substance, which is a de facto individual by virtue of constituting a maximal entity. Because definite uninflected nouns do not have obligatory count readings, I argue that they uniformly lack NumP. According to this view, *el pan* 'the bread' in (41a) and *el pato* in (42a) have the same structure.

(41) a. 

b. $[\![\text{el pan}]\!] = \iota x_e \,.\, [\textsc{max}(\texttt{Bread})(x)]$

(42) a. 

b. $[\![\text{el pato}]\!] = \iota x_e \,.\, [\textsc{max}(\texttt{Duck})(x)]$

This proposal extends Borik & Espinal's (2015) argument that NumP does not project in kind-referring definite uninflected nouns to definite uninflected nouns in general. Furthermore, since the ability of a definite determiner to return a sum is contingent upon NumP projecting, the structure in (41b) correctly predicts that *el pato* cannot refer to more than one atomic duck.

Lastly, to distinguish between reference to individuals and reference to kinds in Spanish, I follow Borik & Espinal (2015) in separating Chierchia's (1998) $\cap$ operator into the semantically equivalent $\hat{}\iota$, or the intensionalized version of ι. However, I do not subscribe to their view that the intensionalization of ι is limited to cases where it is triggered by a mismatch between a kind-selecting predicate and an individual-denoting argument. For example, *el pato* 'the duck' in (43a) could refer to an individual duck or to the kind, hence the use of parentheses around the cap operator (^) in (43b).

(43) a. El pato tiene una dieta variada.
the duck has a diet varied
'The duck has a varied diet.'

b. $[\![\text{el pato}]\!] = (\hat{})\iota x_e \,.\, [\textsc{max}(\texttt{Duck})(x)]$

In short, I argue that definite uninflected nouns are ambiguous in terms of mass versus count interpretation as well as reference to individuals versus kinds. The lack of NumP in their structure captures the first type of ambiguity, and the possibility of intensionalizing ι captures the second.

8. Conclusion

This paper accounts for the distribution and interpretation of unmodified bare nouns in Spanish by implementing a flexible domain of existential closure and a structure-driven approach to the mass-count distinction. The principal claim is that determinerless nouns are limited to postverbal position because verbs can only existentially bind variables that are introduced by nouns within their c-command domain. Bare NPs are interpreted as mass, bare NumPs are interpreted as count, and singularity requires an indefinite determiner that presupposes a cardinality of one. Finally, definite uninflected nouns are ambiguous between mass and count readings due to the semantics of maximality. When definite determiners combine directly with an NP, they establish a de facto individual that does not necessarily denote an atom. Future work will explore whether the proposed analysis can be extended to Italian and to other Romance languages that allow for bare nouns.

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