Main point: Bare plurals are known to give rise to a narrow scope existential reading in episodic contexts. An influential analysis derives this reading via an operation of Derived Kind Predication (DKP) - that is, from kinds. Romanian bare plurals however have this reading despite the fact that they may not denote kinds. How is this reading then derived in Romanian?

1 Carlson (1977): Bare plurals as kinds

1.1 Three uses of English bare plurals

As a kind:

(1) a. Horses are widespread.
    b. *Cai sunt larg-răspândiți.

(2) a. Horses are on the verge of extinction.
    b. *Cai sunt pe cale de dispariție.

(3) a. Horses are indigenous to eastern Chile.
b. *Cai sunt nativi regiunii de est din Chile.

**As a generic (∀ / most):**

(4) a. Horses are mammals/creatures/material objects.
    b. *Cai sunt mamifere/creaturi/obiecte materiale.

(5) a. Horses are smart/larger than mules/good pets.
    b. *Cai sunt inteligenți/mai mari decât catări/animale folositoare.

**As an existential (∃):**

(6) a. Doctors tried to save the dying boy.
    b. (i) OK/*/OK/* Doctori au încercat să-l salveze pe băiatul muribund. 
       doctors have tried to-him save PE boy.the dying
    (ii) ??/??/??/* Au încercat doctori să îl salveze pe băiatul muribund. 
         have tried doctors to him save PE boy.the dying
    (iii) ??/*/*/* Au încercat să îl salveze pe băiatul muribund doctori. 
         have tried to him save PE boy.the dying doctors

(7) a. Knute threw rotten peaches at the library.
    b. Knute a aruncat cu piersici stricate în bibliotecă.

(8) a. Mice will come out of that wall if you pound on it.
    b. (i) ?Șoareci vor ieși din zid dacă băți în el.
       (ii) Dacă băți în zid, vor ieși din el șoareci.

The English bare plural can be used to denote kinds, generically, and existentially. At first blush, the Romanian bare plural cannot be used to denote kinds or generically and, while it may appear with an existential meaning, there appears to be some sort of a subject-object asymmetry, with bare plural subjects being less easily tolerated than bare plural objects.

**1.2 The indefinite plural**

Is the null determiner Ø the plural counterpart of a?

(9) a. A mammal bears live young.
    b. Un mamifer naște pui vii.

(10) a. Mammals bear live young.

(11) a. (i) Gerry is an animal.
    (ii) Gerry and Muncie are animals.
b. (i) *Gerry e un animal.
   (ii) Gerry and Muncie sunt animale.

It already seems clear from Romanian that bare plurals are not simply the plural counterpart of the singular indefinite. But let’s carry on.

1.2.1 Anticipated semantics

(12) a. (i) A dog chased Marvin down the street.
       Un câine l-a fugărit pe Marvin de-a lungul străzii.
       (∃sg x)(dog(x) ∧ chased M. down the street(x))

   (ii) Dogs chased Marvin down the street.
       Câini l-au fugărit pe Marvin de-a lungul străzii.¹
       (∃pl x)(dog(x) ∧ chased M. down the street(x)).

1.2.2 Opacity phenomena

(13) a. Minnie wishes to talk with a young psychiatrist.
       Minnie doreşte să vorbească cu un psihiatru tânăr.
       ∃ > ∀, ∀ > ∃

b. Minnie wishes to talk with young psychiatrists.
       Minnie doreşte să vorbească cu psihiatri tineri.
       *∃ > ∀, ∀ > ∃

c. Minnie wishes to talk with sm² / many / all / twelve / a few / most / etc. young psychiatrists.
       Minnie doreşte să vorbească cu nişte / mulţi / *toţi (‘all’) / disprezece / câţiva / *cei mai mulţi dintre psihiatri tineri.
       ∃ > ∀, ∀ > ∃

In Romanian toţi ‘all’ requires the presence of the definite article on the noun: toţi psihiatrii tineri ‘all psychiatrists.the young’.

Cei mai mulţi dintre ‘most’ combined with a modified noun requires that the noun be definite (if the noun had not been modified, a bare plural would have been fine also).

1.2.3 Narrow scope phenomena

(14) a. A cat is in this room and a cat is not in this room.
       În camera asta e o pisică şi în camera asta nu e o pisică.

   (i) ∃x(cat(x) ∧ in this room(x)) ∧ ∃x(cat(x) ∧ ¬in this room(x))

   (ii) ∃x(cat(x) ∧ in this room(x)) ∧ ¬∃x(cat(x) ∧ in this room(x)) ⊥

¹The acceptability of this sentence may vary with speakers, but we could see above that the problem generally has to do with word order. So I will assume that this sentence works as a replica of the English sentence.

²Unstressed variant of some.
b. Cats are in this room and cats aren’t in this room.

În camera asta sunt pisici și în camera asta nu sunt pisici.

So far we’ve seen the bare plural have a subset of the meanings of the indefinite. But in some cases the plural has a reading that the indefinite does not have:

### 1.2.4 Differentiated scope phenomena

(15) a. A dog was everywhere.  
Un câine era peste tot.

b. Dogs were everywhere.  
Câini erau peste tot.

(16) a. An accident happened today at 3, 4:30, and 6.  
∃ > ∀ (moments in time)

b. Accidents happened today at 3, 4:30, and 6.  
∀ (moments in time) > ∃

(17) a. Kent killed a mouse until Raidman arrived.  
Kent a omorât un șoarece până ce a sosit Raidman.

b. Kent killed mice until Raidman arrived.  
∀ (moments in time) > ∃

c. Kent killed several / lots of / those / many / all / most / twenty / few / sm / etc. mice till Raidman arrived.  
∃ > ∀ (moments in time)

Kent a omorât câțiva / mulți / acei / mulții / *toți / cei mai mulții dintre / douăzeci de / puțini / niște / etc. șoareci până ce a sosit Raidman.

The Ø ‘indefinite plural’ is semantically not the parallel of the singular form a. They do overlap a great deal, but their meanings vary in more than just presence or absence of plurality.

Carlson notes that the bare plural interestingly patterns with proper names in the ‘so-called’ construction; not so in Romanian, though, where the plural noun requires the definite article:

(18) a. (i) Slim is so-called because of his slender build.

(ii) Slim e așa-numit din cauza construției lui suple.

b. (i) Cardinals are so-called because of their color.

(ii) Cardinali*(i) sunt așa-numiți din cauza culorii lor.

c. *Those cardinals / all cardinals / most cardinals / no cardinals / the cardinals / etc. are so-called because of their color.

d. *Acei cardinali / toți cardinali* (i) / cei mai mulți cardinali / niciun cardinal (SG) / etc. sunt așa-numiți din cauza culorii lor.

Based on the English data, Carlson concludes that bare plurals are names of kinds, where kinds are understood as abstract individuals.

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3Note: This is different from There was a dog everywhere - Peste tot era un câine, which does have the ∀ > ∃ reading.
1.3 Generics and the ‘indefinite plural’

We have to disentangle genericity from bare plurals. Bare plurals can go into the restriction of a Gn operator, just like names and other things. Generic statements about bare plurals are handled in exactly the same way as for other things.

(19) a. (i) Bossie eats hay.
    (ii) Bossie mănâncă fân.

b. (i) Cows eat hay.
    (ii) Vaci*(le) mănâncă fân.

\{Bossie, Cows\} Gn eat hay.

Carlson (1977:448): “...one might hypothesize roughly that the predicates selecting the ‘indefinite plural’ are predicking something of an individual for a short period of time, while the predicates selecting the generic leave the implication that what is predicated of the individual is of a more permanent nature.”

Carlson (1977:449): Being ‘intelligent’ is a property of Jake, but being ‘sick’ (physically) is a property not of Jake but of one of his realizations.

(20) a. ‘be intelligent’: I
    b. ‘be sick’: \(^\lambda x. \exists y[R(y, x) & \text{sick}(y)]\) \(\text{R} = \text{realization}\)

Similarly for the progressive.

(Carlson 1977:451): “the source of the existential quantifier is not the determiner of \(\emptyset \text{NP}\), but rather what is being predicated of it at the time.” ⇒ narrowest scope.

There are also some predicates that can exclusively take kinds:

(21) a. *Fred / *All goats / Goats / This kind of animal \{are/is\} widespread.
    b. *Fred / Toate capre*(le) / *Capre / Acest fel de animal \{sunt/este\} larg-răspândit.

Carlson’s generalization may work for English, but it’s not obvious for Romanian as Romanian seems to require the definite article in many cases where in English the bare plural would be fine.

Next: Chierchia (1998) expands and revises Carlson’s insight. Derived Kind Predication as the source for the narrowest scope existential readings of bare plurals.

2 Chierchia (1998): Kinds and Derived Kind Predication (DKP)

The domain of individuals forms a complete join semilattice, ordered by \(\leq = \text{subgroup or part-of relation}\). Includes ordinary singular individuals but also plural ones.

Singular common nouns such as dog are characteristic functions true of individual dogs. Plural
common nouns are true of pluralities (sets) of dogs. Pluralization is a function PL that applies to sets of atoms (or, rather, characteristic functions thereof) and turns them into the corresponding sets of pluralities.

(22) a. \[ \text{[dog]} = \text{DOG}, = \lambda w . \lambda x . (\text{DOG}(w)(x)) \]
b. \[ \text{[PL]}(\text{DOG}) = \text{DOGS}, = \lambda w . \lambda x . (\neg \text{DOG}(w)(x)) \land \forall y [y \leq x \land \text{AT}(y) \rightarrow \text{DOG}(w)(y)] \]

(23) a. \[ \text{[the dogs]} = \iota \text{DOGS} = \text{the largest plurality of dogs} \]
b. \[ \text{[the dog]} = \iota \text{DOG} = \text{the only dog, if there is one} \]

(24) Typeshifting operations:

Down, \( \cap \): \( \langle s, \langle e, t \rangle \rangle \Rightarrow \langle s, e \rangle \)
P \Rightarrow \lambda w . \iota P(w), if \( w \in K \)

Up, \( \cup \): \( \langle s, e \rangle \Rightarrow \langle s, \langle e, t \rangle \rangle \)
d \Rightarrow \lambda w . \lambda x . (x \leq d(w))

(25) a. (i) \( ^\cap \text{DOG} \) = undefined
(ii) \( ^\cap \text{DOGS} = d, = \lambda w . [\iota \text{DOGS}(w)] \) (the dog-kind)

(26) \[ \text{[Dodos are extinct]} = \text{EXTINCT}(\cap \text{DODOS}) \]

(27) \[ \text{[Dogs are barking]} = \ast \text{BARKING}(\cap \text{DOGS}) \]

(28) Sort-adjustment operation - Derived Kind Predication (DKP):

If \( P \) applies to ordinary individuals and \( k \) denotes a kind, then \( P(k) = \exists x [\cup \cap \text{DOGS}(x) \land P(x)] \).

(29) \[ \text{[Dogs are barking]} = \lambda w . \text{BARKING}(w)(\cap \text{DOGS}) \leftrightarrow \exists x [\cup \cap \text{DOGS}(x) \land \text{BARKING}(x)] \]

DKP makes the right predictions for sentences where Carlson’s account would have predicted just the object-oriented (as opposed to kind-oriented) reading:

(30) Dogs are biting themselves.

a. \[ \lambda x_k . [\text{BITE}(x_k)(x_k)](\cap \text{dogs}) = \text{BITE(DOGS)}(\text{DOGS}) \] (DKP after \( \lambda \)-conversion)
b. \[ \lambda x_o . [\text{BITE}(x_o)(x_o)](\cap \text{DOGS}) = \exists y [\cup \cap \text{DOGS}(y) \land \text{BITE}(y)(y)] \] (DKP before \( \lambda \)-conversion)

Carlson predicts this to have only an existential reading, with the predicate applying to realizations of the dog-kind (each dog is biting itself). However, this sentence clearly also has a kind-oriented reading (dogs are biting dogs).

(31) Other claims:

a. The Nominal Mapping Parameter: languages can choose how the denotation of their NPs is set and this determines some of their major typological characteristics. English

\[ \text{no atom is larger than any other one, so this is true when it has only one object in its extension.} \]
b. Avoid Structure: Apply SHIFT at the earliest level.

3 Back to Romanian bare plurals

The problem is that Romanian bare plurals never seem to denote kinds. A similar issue was raised for Italian.

3.1 Caveat about bare plural subjects

Chierchia (1998:384) notes that, at least in Italian, bare plurals in subject position, both pre- and postverbally, are generally ungrammatical - if they are not heavy. In Romanian bare plural subjects are tolerated, at least postverbally (speaker variation - some like it better preverbally):

b. (i) ?/OK Studenți au telefonat. 
   students have called
c. (ii) OK/? Au telefonat studenți.  
   have called  students
c. Students have telephoned.

Heaviness is claimed to improve things in Italian; in Romanian this doesn’t seem to be a factor:

(33) a. Studenti e colleghi hanno telefonato.
b. *Studenți și colegi au telefonat.
c. STUDENȚI ȘI COLEGI au telefonat, nu părînti.
d. Au telefonat studenți și colegi.

3.2 Bare plurals with kind-level predicates

Difficult to get in both Italian and Romanian. Chierchia (1998:385) notes that adjectives like ‘extinct’ require ‘well-established’ kinds and things seem to improve with more liberal kind-selecting predicates; not for Romanian though:

(34) (Examples follow Chierchia (1998):)

   a. (i) Qui, ragazze in minigonna sono rare.                 Gen
      (ii) Aici, fete în fuste mini sunt rare.  *Gen/?/Ex

   Gen
(iii) Here, girls in miniskirts are rare. Gen
b. (i) Dopo il disastro nucleare, purtroppo, cani con difetti con geniti sono molto comuni. Gen
(ii) *După dezastrul nuclear, din păcate, câini cu defecte congenitale sunt foarte comuni. *Gen / ??/*Ex
(iii) After the nuclear disaster, unfortunately, dogs with birth defects are very common. Gen
(i) Insegnanti davvero dediti nella scuola di oggi sono quasi estinti. Gen (harder for some)
(ii) *Profesorii cu adevărat dedicați sunt pe cale de dispariție în școala de azi.* Gen
(iii) Truly dedicated teachers are nearly extinct in today’s schools / school system. Gen

Also:

(35) (Examples follow Longobardi (2001):)
a. (i) *Elefanti di colore bianco sono estinti.* Gen
(ii) *Elefanți de culoare albă sunt pe cale de dispariție.* Gen
(iii) White-colored elephants have become extinct. Gen
b. (i) *Elefanti di colore bianco diventano sempre più grandi man mano che si va a nord.* Gen
(ii) *Elefanți de culoare albă devin din ce în ce mai mari cu cât mergi mai la nord.* Gen
(iii) White-colored elephants grow larger as one drives north. Gen
c. (i) *Elefanti di colore bianco sono così chiamati per la pigmentazione della loro pelle.* Gen
(ii) *Elefanți de culoarea albă se numesc așa din cauza pigmentației pielii lor.* Gen
(iii) White-colored elephants are so-called because of the pigmentation of their skin.

In object position, bare arguments are claimed to be fine with kind-level predicates (Chierchia 1998:384); in Romanian too, but my interpretation for the resulting sentence is exclusively existential:

(36) a. Leo stermina ratti.
   b. Leo extermină șobolani.
   c. Leo exterminates rats.

3.3 Bare plurals with stage-level predicates

Prediction: Existential readings in episodic contexts, universal reading in generic contexts.

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6RO doesn’t have a straightforward way to say ‘to be extinct’, so I replaced it with ‘to be on the verge of extinction’. Same thing for Russian, Chierchia (1998). See Dayal (2004:401 fn. 6) for a clarification.
Longobardi notes that the generic reading of a subject BN with S-level predicates is possible in Italian, but appears to depend on the presence of a DP-external operator of generality (e.g., habitual aspect, quantificational adverb, etc.). In Romanian this reading seems to be banned even in those cases.

(37)  

a. *Episodic sentences*
   (i) Elefanti di colore bianco hanno creato in passato grande curiositá. *Gen/Ex
   (ii) Elefanţi de culoarea alb˘a au st˘rnit în trecut mult interes. *Gen/??Ex
   (iii) White-colored elephants raised a lot of curiosity in the past. Gen/Ex

b. *Characterizing sentences*
   (i) Elefanti di colore bianco possono creare grande curiositá. Gen/?Ex
   (ii) Elefanţi de culoarea alb˘a pot st˘rnii mult interes. *Gen/?/??Ex
   (iii) White-colored elephants may raise a lot of curiosity. Gen/Ex

c. *Episodic sentences with a generalizing adverb*
   (i) Elefanti di colore bianco hanno creato sempre/spesso in passato grande curiositá. Gen/?Ex
   (ii) Elefanţi de culoarea alb˘a au st˘rnit întotdeauna/adesoari în trecut mult interes. *Gen/??/??Ex
   (iii) White-colored elephants always/often raised a lot of curiosity. Gen/Ex

3.4 *Bare plurals with individual-level predicates*

Chierchia (1998:385-6): With I-level predicates, bare arguments are generally bad even in lexically-governed positions (i.e., not only subjects, also objects):

(38)  
a. *Linguisti sono bravi. *Gen
b. *Lingvişti sunt deştepti. *Gen
c. Linguistics are clever. Gen

(39)  
a. *Leo odia gatti. *Gen
b. *Leo ur˘aste pisici. *Gen
c. Leo hates cats. Gen

He notes that modification can improve things (for both subjects and objects), provided it makes the NP heavy:

(40)  
a. (i) ??Leo odia gatti neri. ???Gen
   (ii) Leo ur˘aste pisici negre. *Gen/??Ex
   (iii) Leo hates black cats. Gen

(41)  
a. Leo ama quasi tutti gli animali ma odia gatti neri a pelo lungo. Gen
b. Leo iubeşte aproape toate animalele dar urăşe pisici negre cu părul lung. *Gen
c. Leo loves almost all animals but hates black long-haired cats. Gen

(42)  a. Leo odia gatti e canni. Gen
    b. (i) Leo urăște câini și pisici. *Gen
       (ii) Leo urăște și câini și pisici.

    Gen, but note the focus
    ‘Leo hates both cats and dogs.’

  c. Leo hates cats and dogs. Gen

My sense is that, in Romanian, the only thing that could improve these would be focus - be it in preverbal or postverbal position.

Longobardi notes further distinctions in Italian; in Romanian Gen is excluded in all cases:

(43)  a. (i) Stati di grandi dimensioni sono pericolosi. Gen
       (ii) *State de dimensiuni mari sunt periculoase. *Gen
       (iii) States of large size are dangerous.

  b. (i) ??Stati di grandi dimensioni sono prosperi. ??Gen
       (ii) *State de dimensiuni mari sunt prospere. *Gen
       (iii) States of large size are prosperous.

(44)  a. (i) Cani da guardia di grosse dimensioni sono più efficienti/aggressivi. Gen
       (ii) *Câini de pază de dimensiuni mai mari sunt mai eficienți/agresivi. *Gen
       (iii) Watchdogs of large size are more efficient/aggressive.

  b. (i) ??Cani da guardia di grosse dimensioni sono più pelosi/neri. ??Gen
       (ii) *Câini de pază de dimensiuni mari sunt mai părăși/negri. *Gen
       (iii) Watchdogs of large size are more hairy/black.

(45)  a. (i) Uccelli di zone paludose sono ghiotti di insetti. Gen
       (ii) *Păsări din zone mlaștinoase sunt lacome de insecte. *Gen
       (iii) Birds from marshy areas are greedy for insects.

  b. (i) ??Uccelli di zone paludose sono scuri/intelligenti. ??Gen
       (ii) *Păsări din zone mlaștinoase sunt închise la culoare/inteligente. *Gen
       (iii) Birds from marshy areas are dark/intelligent.

  Dobrovie-Sorin et al. (2006) similarly conclude that Romanian bare plurals are “not compatible with kind-level predicates, and they do not occur productively with generic interpretations when combined with individual-level or characterizing predicates,” so they argue that we cannot assume with Chierchia (1998) that they become existential via derivation from a kind. This led them to adopt a different account, similar in spirit to Carlson's original idea and also to the DKP, namely van Geenhoven (1996)'s semantic incorporation which basically postulates that some predicates can be represented in two ways:
Problem: Doesn’t distinguish between bare singulars and plurals, predicts they can both show up to equal extents (Chierchia 1998:365-66), contrary to fact - the singular is much more constrained and seems to depend on the lexical properties of the verb. Dobrovie-Sorin (2009) acknowledges this and abandons previous account.

4 Conclusion

The Romanian bare plural seems to behave exactly like the English bare plural with respect to the scope facts. DKP is a great way to derive the narrowest scope of bare plurals in a natural way. On the other hand, DKP involves the idea that bare plurals denote kinds, and in Romanian we have evidence that they never do.

There are clear differences between English and Romanian bare plurals with respect to their ability to denote kinds and appear in the restriction of the genericity operator. However, all cases where the Romanian bare plural failed but the English one worked can be fixed in Romanian by adding in the definite article. If we adjust the notion of kind that it involves, we might be able to maintain the DKP for Romanian too. Chierchia (1998) already hints at it, by pointing out that $\cap$ is merely an intensionalized version of the definite article. However, it is not obvious to me how this would work out exactly to derive the differences between English and Romanian. At the same time, it doesn’t seem like the differences are great enough to warrant a very different account.

Bibliography