Selected aspects of amount relatives: The Romanian-English connection

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ABSTRACT

The inter-related goals of this paper are: (i) To contribute to a better understanding of the semantic and morphological properties of amount relatives in Romanian, (ii) to compare and contrast these constructions with their English counterparts, and (iii) to bring into bolder relief than has so far been done in the literature the fact that amount relatives in general are compatible not only with an amount denotation of the complex DPs that contain them, but with an entity denotation as well.

1 Background on entity-denoting amount relatives

Ever since Carlson's (1977) seminal article, it is has been widely assumed that the grammars of natural languages allow 'amount relative constructions', that is to say, complex DPs containing a relative clause in which abstraction targets an amount/degree variable. There has, however, been some disagreement among researchers concerning which constructions fit this characterization.

One type of construction concerning which there seems to have been no such disagreement is illustrated by the data in (1), where the 'gap' of relativization is in a context of cardinality and the bracketed complex DP denotes an amount/degree.

(1) a. [The 15 kgs. [that you hand-luggage weighs __]] might prevent you from
    boarding the plane.
 b. [The 6 hours [that this movie lasts __]] exceed the normal duration of a movie.
 c. [The 80 kms. [that the road runs for __ between points A and B]]
    exceed the distance I can run in one day.

A different type of construction, concerning which there has been some disagreement, is illustrated by (2).

(2) [The three students [{(that / *who} there are _ in the office]] arrived an hour ago.

In this case, the bracketed DP denotes (human) entities, not degrees, and the gap is not in a context of cardinality. Nonetheless, Carlson and a number of subsequent scholars were led to the conclusion that data like (2) include an amount relative on the basis of the following considerations:

[A] While the gap is not in a context of cardinality, it is in a context that *may include*, in addition to an entity variable, a degree variable that provides the measure of the former, as can be gathered from the fact that both versions of (3) are acceptable.

(3) There are *(that many) horses* in the field.

[B] The entity variable is unavailable for abstraction, being pre-empted by narrow-scope existential quantification. This unavailability is reflected in the fact that the relativizer *who*, which is typed for abstracting over human entities, is excluded here.

[C] The acceptable version of (2) uses a syntactic Null Operator, which is compatible with abstraction over a wide variety of variables, including variables of the type of degrees.

[D] Abstraction over degrees in comparative clauses, as well as in relative clauses like those in (1), undergoes a process of Maximalization that maps the abstract to the singleton that contains just its maximal member, if there is one, and is undefined otherwise. Maximalization has a number of consequences (see below for details), which are detectable in data like (2).

[E] The points [A]-[D were already noted by Carlson. Grosu & Landman (1998, 2016) built on Carlson's observations an analysis that accounts for the denotation of the complex DP. Pared down to its essentials, the analysis says the following: Since the individual variable is pre-empted by existential quantification, it needs to be 'disclosed.' The free degree variable yields an excellent disclosure mechanism by virtue of the fact that it has entity-modifying status. This mechanism amounts to pairing the degree variable with an entity variable, such that each value of the degree variable provides the measure of the entity-sum it modifies. Abstraction applies to a variable over such ordered pairs, and Maximalization maps the abstract to the singleton that contains the unique maximal pair consisting of a unique maximal degree and a corresponding unique maximal entity (if there is such a pair, the operation being undefined otherwise). Since the maximal degree is implicit in the unique maximal entity, no information is lost by 'extracting' the entity member of the pair (by an operation called 'SUBSTANCE') and by having the complex DP denote that maximal entity.

McNally (2008) challenged Grosu & Landman's analysis sketched in [E] above on both empirical and conceptual grounds, noting that Null Operators are also compatible with abstraction over kinds, and proposing a partial analysis of such data that relies on kinds, while also expressing doubts that entity-denoting complex DPs in general can be built on amount relatives. Her objections and counter-proposals were examined in detail in Grosu & Landman (2016, section 5.3), who argued – convincingly, in our view – that her empirical objections to the analysis in [E] are without force, and that her own counter-proposals face a number of empirical difficulties. We also do not see that there is any serious basis for her conceptual objection. While it is not in general possible to unambiguously recover an entity from a measure value, in the particular case under consideration, where the denotation of the CP is a singleton whose member is a pair consisting of an entity and its measure, it is a straightforward matter to recover the entity from the measure. In Grosu & Landman (2016, section 5.1 and 5.2), additional analyses of data like (2) were critically examined and argued to be inferior to the one proposed by these authors. Our own view is that until and unless a superior alternative that does not appeal to degrees is proposed, Grosu & Landman's analysis stands, with the implication that entity-denoting amount relative constructions do exist.

In addition to the construction just discussed, there exists at least one other type of complex DP that includes an incontrovertible amount relative and may denote entities. Thus, as pointed out in Grosu (2000b, section 2.3), complex DPs of the kind shown in (1), whose gap lies in a context of cardinality, can denote entities in appropriate matrix contexts, as illustrated in (4).

(4)   a. [The 40 kilos that you weigh __ in excess of your dietician's recommendations]
           form ugly bulges on your body.
       b. [The 5 hours that I waited __ for the train] were the most unpleasant in my life.
       c. [The 80 kilometers that the road stretches __ between points X and Y] are
           full of potholes.

Note than in contrast to the data in (1a-c), where the complex DPs denote an **amount** of something, in particular, and amount of weight, time, and spatial length respectively, the complex DPs in (4) denote **entities** possessing a particular measure, in particular, specific portions of 'your' body, a specific time stretch (say, from 2 to 7 pm on May 2, 2015), and a specific portion of road. The only attempt at an analysis of such data that we know of is due to Kotek (2013, section 4), who proposes to view this state of affairs as an instance of 'shifted reference', a phenomenon independently attested elsewhere, e.g., in data like (5). This proposal seems to us reasonable, and we will assume it for the purposes of this paper.

(5)　　a. The ham sandwich wants his money back.
　　　　b. The book that I constructed in my mind four years ago weighs five pounds.

　　In the remainder of this paper, we will examine certain data from Romanian which have 'unexpected' properties, at least, from the perspective of what is known about English. We introduce the basic Romanian facts in section 2, and discuss the unexpected data in section 3. Section 4 briefly compares the morphological relativizing mechanisms of the two languages, and section 5 summarizes the results of the paper.

2　Basic Romanian data with overt relative pronouns typed for degrees

　　We begin by pointing out that English and Romanian have different inventories of relativizers, which are not related in one-to-one fashion insofar as distribution is concerned (we return to this point in more detail in section 4). Thus, while English has, in addition to overt wh-pronouns typed for specific purposes, a general purpose Null Operator, which can serve as abstractor over variables that range over individuals, properties, kinds, and degrees, Romanian makes virtually no use of Null Operators[1], and employs instead c-pronouns, which, like the wh-pronouns of English, are morphologically drawn from the interrogative paradigm. In addition to the pronoun *care,* which is construed as 'which' in interrogatives and has a much wider use in relatives, being applicable under all the circumstances where English uses *who* and *which* and some of the circumstances where it uses Null Operators, Romanian also uses a pronoun specifically typed for abstraction over degrees. This item appears both in the uninflected form *cât* 'how much/long/far, etc.', and in one of the inflected forms *cât* 'how-much.MSG', *câtă* 'how-much.FSG', *câţi* 'how-many.MPL', *câte* 'how-many.FPL'.
　　The uninflected form is the preferred one (and for some speakers, the only possible one) in constructions comparable to (1) and (4), as illustrated in (6)[2].

(6)　a. [Cele patruzeci de kilograme cât　　　/ ??câte　　　cântăreşti　tu __ în plus
　　　　　the　forty　　of kilos　　how-much how-many weigh.2SG you　in excess
　　　　　de recomandaţiile　　　dieteticienilor]　　{sunt suficiente pentru a fi clasificat
　　　　　of recommendations-the dieteticians-the.GEN are sufficient for　　to be classified

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[1] For a possible use of a Null Operator in certain marginal or obsolescent relatives, see Grosu (1994, section 8.3). These constructions are not relevant to what follows, and will not be further discussed in this paper.
[2]As far as our own intuitions, as well as those of most native speakers we have consulted, are concerned, *care* is completely excluded in all the sub-cases of (6). At the same time, there appears to be some idiolectal variation in this respect. Thus, one anonymous reviewer of an earlier version of this paper reports that in (6a), but not in (6b,c), (s)he allows the use of *care* (preceded by the Accusative marker *pe*). For completeness, we note that Heim (1987) signals some idiolectal variation in English data like (2), some speakers allowing the use of *who*.

ca obez / arată destul de urât pe tine}.
as obese look pretty   ugly on you
'The 40 kilos that you weigh in excess of dieteticians' recommendations {suffice
for classifying you as obese / look pretty ugly on you}.'

b. [Cele cinci ore   cât   / ?? câte   am   aşteptat __să   vină   trenul] {au
the five hours how-much / how-many have.1 waited   SBJV comes train-the have
depăşit   durata   normală a   unui film / au   fost cele mai neplăcute din
exceeded duration-the normal GEN a   film / have been the most unpleasant of
viaţa   mea}.
life-the my
'The 5 hours that I waited for the train {exceeded the normal duration of a film / were
the most unpleasant in my life}'

c. [Cei şaizeci de kilometri cât   / ??câţi   se   întinde şoseaua __ între
the sixty of kilometers how-much how-many REFL stretches road-the   between
Bucureşti şi Ploieşti {sunt o distanţă mai   mare decât poţi   alerga tu într-o
Bucharest and Ploieşti are a distance more big   than can.2SG run   you in a
singură zi   / erau pe vremuri plini de hârtoape}.
single day were   once full of potholes
'The 60 kilometers that the road stretches between Bucharest and Ploieşti {are a
bigger distance than you can run in one day / were once full of potholes}.'

The inflected forms are used when the 'phrasal head' of the complex DP includes an 'ordinary' noun, as in (7).

(7) a. [Cei   zece soldaţi *câţi* /   **cât*   (_) sunt (_) pe baricadă] au   sosit
the.MPL ten   soldiers *how-many how-much*   are   on barricade have arrived
acum o   oră.
now one hour
'The ten soldiers that (there) are on the barricade arrived an hour ago.'

b. [Cei nouă cai   *câţi* /   **cât*   a cumpărat __ Ion] sunt din Arabia.
the nine   horses how-many how-much has bought   Ion are from Arabia
'The nine horses that Ion bought are from Arabia.'

The data in (7) are interesting for a number of reasons. First, observe that the bracketed complex DPs denote entities. Second, observe that the gaps are all in positions normally filled by nominal expressions. Thus, the leftmost gap in (7a) is in subject position, and the gap in (7b) is in direct object position; these positions are normally filled by DPs. The rightmost gap in (7a) is in post-copular position, and may be interpreted in the same way as a gap in the English existential context *there BE __ XP*. These facts point to the conclusion that the denotation of all the gaps in (7) must also include an entity variable. Third, note that the relativizer indicates that abstraction has applied to a degree variable. This points to the conclusion that the gaps need to include a degree variable as well, most plausibly, one modifying (i.e., providing the measure of) the entity variable. Fourth, while the view of the gap that emerges from the preceding considerations is strikingly similar to Grosu & Landman's view of the gap in English data like (2), the motivation for assuming such a gap is different in the two situations. In English, the assumption of a degree variable that gets targeted by abstraction was motivated by the unavailability of a free entity variable, in Romanian, the presence of a degree variable is an incontrovertible consequence of the degree status of the relativizer, and must be assumed independently of the availability or unavailability of a free entity variable. Thus, while pre-emption of the entity variable by

Existential Closure presumably takes place in the version of (7a) with a post-copular gap, there is no reason to make such an assumption for the version of (7a) with a pre-copular gap, or for (7b).

   For the sake of clarity, we wish to point out that Romanian lacks an overt dummy like the English *there* in existential constructions, such constructions being explicitly identifiable only by the post-copular placement of an indefinite nominal. A consequence of this state of affairs is that when the post-copular position is occupied by a gap, the outcome is superficially indistinguishable from a minimally different construction with a pre-copular gap, as can be seen in (7a). To obtain an unambiguous Romanian construction with the crucial properties of the English construction in (2) (i.e., an entity-denoting DP with the gap in a position where the entity variable is bound by narrow-scope existential quantification), it is necessary to appeal to a different existential construction, based on the verb *avea* 'have', and exhibiting an overt expression in subject position. This is done in (8).

(8)   [Cei 5000 de admiratori *câți*   are __ actriţa]   le   fac   să   moară de
       the 5000 of admirers   how-many has   actress-the CL.ACC make SBJV die.3 of
       invidie pe colegele   ei.
       envy   ACC colleagues-the her
       'The 5000 admirers the actress has are making her colleagues die of envy.'

   That (8) is a genuine counterpart of (2a) with respect to the properties indicated in the preceding paragraph can be demonstrated by exploiting a consequence of negation in existential constructions. Thus, observe that (9a) and (9b) differ semantically in the following way (in both languages): The natural interpretation of (9a) is that two specific children are in some location other than the room, while (9b) says that the room is empty of children.

(9) a. *Doi copii*   nu sunt în cameră.
        two children not are   in room
        '*Two children* are not in the room.'
    b. Nu sunt *doi copii*   în cameră.
        not are two children in room
        'There aren't *two children* in the room.'

If we form English relatives with the gap in the positions of the italicized expressions in (9a-b), as in (10a-b), we get a coherent result in (10a), and an incoherent one in (10b), that is, one which purports to say that the non-existent children in the room are having breakfast.

(10) a. [The two children who __ are not in the room] are having breakfast.
      b.#[The two children that there aren't __ in the room] are having breakfast.

If (8) includes an existential construction, we expect negation of the existential verb to result in incoherence comparable to that in (10b), and this expectation is fulfiled, as shown in (11).

(11) #[Cei 5000 de admiratori *câți*   n-a   avut actriţa]   au   votat pentru
        the 5,000 of admirers   how-many not-has had actress-the have voted for
       alta.
        another-one(F)
      '#The 5,000 admirers that the actress didn't have voted for another one.'

Having established that the data in (7) exhibit gaps construable in a way that is strikingly similar to the construal proposed by Grosu & Landman for the gap in (2), a natural question is whether the Grosu & Landman analysis of data like (2) also constitutes the optimal analysis for Romanian data like (7). We believe that this question should be answered in the affirmative, and will provide explicit justification for this view in section 3.

In the remainder of this section, we confine ourselves to two remarks concerning relative clauses with overt degree pronouns.

A first remark is that these pronouns permit the formation of certain types of relative constructions in Romanian that have no English counterparts, in particular, free relatives like those in (12).

(12) a. [Câţi   (studenţi) s-au   prezentat] au luat examenul.
          how-many students REFL-have presented have taken exam-the
          'All {those / the students} who showed up passed the exam.'
      b. Voi   bea [cât   (vin) bea   şi Ion].
          will.1.Sg drink how-much wine drinks and Ion
          'I will drink as much (wine) as Ion does.'

We note that the free relative in (12a) is entity-denoting, like the externally-headed ones in (7), and that the free relative in (12b) is degree-denoting, like the pragmatically preferred reading of the bracketed DP in (13) (due to Heim 1987), the other reading of this DP being unavailable for (12b).

(13) We will need an eternity to drink [the champagne they spilled that night].

A second remark is that constructions like those in (7), while are apparently relatively rare cross-linguistically, are nonetheless not an exclusive peculiarity of Romanian. As far as we know, it is found in at least one other language, Ancient Greek, as shown by the examples in (14a-b), which replicate two of the *how-many* types we found in Romanian, in particular, externally-headed and free relatives respectively (note that both sub-cases of (14) are etity-denoting).

(14) a. καὶ ἐξέστησαν   οἱ   ἐκ περιτομῆς πιστοὶ ὅσοι   συνῆλθον
          and were-astonished the.MPL of circumcision believers how-many came-together
          τῷ   Πέτρῳ,   (*Acts of the Apostles*, 10.45)
          the.DAT Peter.DAT
          'and all the circumcised believers that had come with Peter were astonished'
      b. οἱ ἀπόστολοι διηγήσαντο αὐτῷ ὅσα   ἐποίησαν (Luke 9.10)
          the apostles told   him   how-many.NPL.ACC did.3PL
          'The apostles told him all the things they had done.'

3 Maximality in the amount relatives of English and Romanian

Grosu & Landman (1998, 2016), building on observations made by Carlson (1977), proposed that two properties of English amount relative constructions are traceable to the operation of Maximalization within CP. These are: [i] Two amount relatives not separated by comma intonation may neither 'stack' nor coordinate with proper intersective import, and [ii] the complex DP immediately containing the relative is felicitous with definite or universal, but not with existential, import. According to Grosu & Landman (2016), [i] is a consequence of the fact that the intersection of two singletons is either trivial or null. As for [ii], its

proposed motivation can most easily be understood by considering how definite/universal versus existential quantification operate on a set formed by the intersection of NP with CP. For concreteness, consider (15).

(15) [DP {The / all the / some} [NP boys who sleep]] will get up soon.

The bracketed complex NP denotes the set of entities that are boys and sleep. The complex DP in the version with *the* denotes the maximal sum of entities in that set, in the version with *all the,* it exhaustively enumerates the members of that set, and in the version with *some*, it picks out of that set at least one member, leaving open the possibility that the member(s) thus picked out do(es) not exhaust the membership of the set. Now, consider (16).

(16) [DP {The / all the / #some} [NP books that there are __ on the desk]] must be removed.

In view of the fact that the relative CP denotes a singleton (by assumption), its combination with the head noun *books* yields, as the denotation of the complex NP, the singleton whose unique member is the maximal sum of books on the desk. The interpretation of the determiners is the same as for (15). Note, however, that the definite and universal determiners **preserve** the effects of maximalization in the meaning of the complex DP, while existential quantification fails to do so. To see this, note that Maximalization yields a unique sum as the member of the singleton, and definiteness picks out precisely this unique member, while universal quantification achieves a comparable effect by exhaustively enumerates its parts. In contrast, existential quantification may in principle operate in one of the following two ways: [a] It may 'target' the parts of the sum which forms the member of the singleton, asserting the existence of at least one of them. Such a *modus operandi* renders maximalization vacuous, since exactly the same effect could have been achieved without maximalization, in particular, by allowing quantification to target the members of a non-singleton. On the assumption that vacuous resort to an operation, in particular, one which is an inherent property of the construction, should be blocked, we may assume that this strategy is unavailable[3]. [b] An alternative *modus operandi*, which preserves the effects of Maximalization, may be for existential quantification to assert the existence of the singleton's unique member. Use of this strategy implicates, contrary to fact, that the complex NP's member might fail to be unique, thereby giving rise to a pragmatic clash. Heim (1991) observes that such situations are infelicitous in general, and enunciates a principle she calls '*Maximize Presupposition*', which is violated by existential quantification when definiteness is possible. An independent illustration (from Kotek 2013, section 5) is: in contexts where the word *sun* purports to refer exclusively to 'our' sun, we get contrasts in felicity like *{the / #a} sun is shining*. Grosu & Landman trace the infelicity of the version of (16) with *some* to [b]. We have added [a] for completeness, and will return to the implications of both principles further below.

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[3] Existential quantification over the parts of a sum can in principle be achieved by an explicit partitive construction, such as:

  [i] Some of [the books that there are __ on the desk must be removed].

  This construction is unproblematic, because the complex NP is targeted by the definite article. What is disallowed is for existential quantification to target the complex NP *directly*.

  Grosu & Landman (2016, section 2.3.1), echoing a remark in Carlson (1977), observe that data like the version of (16) with *some* can be significantly improved by emphatically stressing this item, and by correlatively interpreting this example as a 'truncated' version of an explicit partitive, in particular, of (i). We assume that the version of (16) at issue has, under such circumstances, the same semantics as (i), so that here, too, existential quantification does not *directly* target the complex NP. For similar facts in Romanian, see footnote 9.

The phenomenon described in [ii] is also detectable with respect to English constructions like (1). Thus, all the sub-cases of (1) become infelicitous if the initial *the* is suppressed.

We now proceed to illustrate the effect described in (i). Thus, consider (17)-(18), which illustrate this effect in relation to English constructions like (1)-(2) respectively.

(17) The 15 kilos that your hand luggage weighs #(and) that my hand luggage weighs will
     prevent both of us from boarding the plane.'
(18) a. [All the tourists *who* were on the island at noon (and) who had been at the volcano
     in the morning] returned home late.'
   b. [All the tourists that *there* were on the island at noon #(and) that *there* had been at
     the volcano in the morning] returned home late.'

Thus, the reduced version of (17), in which the iterated clauses purport to be construed intersectively, is infelicitous, and the full version cannot mean, e.g., that the luggage of one of us exceeds 15 kilos, and that the intersection of these weights, i.e., 15 kilos, will prevent both of us from boarding the plane. Rather, the only construal available for the full version is one based on union, in particular, one which says that the luggage of each of us weighs 15 kilos and that this weight will individually prevent each of us from boarding the plane.

In (18), it is instructive to compare the (a) and (b) subcases, in which the relatives are of the restrictive and amount type respectively. Thus, assume for both subcases the following context: The individuals a, b and c were on the island at noon and the individuals b, c and d had been at the volcano in the morning. In the reduced version of (18a), if there is no comma between the relatives, both clauses are restrictive, and their construal is necessarily intersective, so that the complex DP denotes the sum b⊔c. In the full version of (18a), this intersective construal is also available, along with one obtained by interpreting the two relatives in terms of union, in which case the complex DP denotes the sum a⊔b⊔c⊔d. In (18b), on the other hand, intersective construals are excluded, with the result that the full version unambiguously denotes a⊔b⊔c⊔d, and the reduced version is infelicitous.

Having illustrated [i]-[ii] with English data, we now proceed to consider them with respect to Romanian. Starting with [i], consider (19)-(20, the Romanian counterparts of (17)-(18).

(19) [Cele 15 kilograme cât   cântăreşte bagajul   tău de mână #(şi) cât
     the 15 kilos   how-many weighs   luggage-the your of hand (and) how-many
     cântăreşte bagajul   meu de mână] ne   vor   împiedica pe   amândoi să
     weighs   luggage-the my of hand us.ACC will.3PL prevent   ACC both   SBJV
     ne   urcăm   în avion.
     REFL go-up.1PL in plane
     'The 15 kilos that your hand luggage weighs #(and) that my hand luggage weighs will
     prevent both of us from boarding the plane.'
(20) a. [Toţi turiştii   *care*   au fost pe insulă la prânz (şi) *care*   fuseseră dimineaţa
      all   tourists-the *who* have been on island at noon (and) *who* had-been morning-the
     la vulcan] au   ajuns   târziu acasă.
     at volcano have arrived late   home
     '[All the tourists *who* were on the island at noon (and) who had been at the volcano
     in the morning] returned home late.'
    b. [Toţi turiştii   *câţi*   au fost pe insulă la prânz #(şi) *câţi*   fuseseră
      all   tourists-the *how-many* have been on island at noon (and) *how-many* had-been

dimineaţa   la vulcan] au   ajuns   târziu acasă.
morning- the at volcano have arrived late   home
'[All the tourists that *there* were on the island at noon #(and) that *there* had been at
the volcano in the morning] returned home late.'

The acceptability and interpretive facts are exactly the same as for (17)-(18), and we will thus
not repeat them here.

Concerning [ii], Romanian exhibits certain facts that are *prima facie* puzzling, and that
show up both in degree-denoting and in entity-denoting constructions, such as those in (6) and
(7) respectively. Thus, consider (21)-(22), and note that in addition to the full versions, the
reduced versions are also acceptable, in contrast to what we find in English constructions like
(1) and (2), which, as pointed out already, are infelicitous with existential force. As further
illustration of the contrast between Romanian and English, we provide the data in (23), where,
note, the Romanian examples contrast in felicity with the reduced versions of the translations.

(21) [(Cele) 15 kilograme *cât*   cântăreşte bagajul   tău de mână] te   vor
      the   15 kilos   how-much weighs   luggage-the your of hand you.ACC will.3PL
      împiedica să   te   urci   în avion.
      prevent   SBJV REFL go-up.2SG in plane
      'The 15 kilos that your hand luggage weighs will prevent you from boarding the plane.'

(22) [(Cei) nouă cai   *câţi*   a   cumpărat Ion] sunt din Arabia.
      the nine   horses how-many has bought   Ion are   from Arabia
      'The nine horses that Ion bought are from Arabia.'

(23) a. [Şaizeci de kilometri cât   se   întinde şoseaua între   Bucureşti şi
      sixty   of kilometers how-much REFL stretches road-the between Bucharest and
      Ploieşti] sunt o distanţă mai   mare decât poţi   alerga tu   într-o singură zi.
      Ploieşti are a distance more big   than can.2SG run   you in   a single   day
      '[*(The) 60 kilometers that the road runs for between Bucharest and Ploieşti] are
      a bigger distance than you can run in a single day.'
      b. [Şaizeci de kilometri cât   se   întinde şoseaua între   Bucureşti şi
      sixty   of kilometers how-much REFL stretches road-the between Bucharest and
      Ploieşti] erau pe vremuri plini de hârtoape.
      Ploieşti   were once   full of potholes
      '[*(The) 60 kilometers that the road runs for between Bucharest and Ploieşti]
      were once full of potholes.'

The fluent English translations we provided for (21)-(22) concern only the full versions.
What about the interpretation of the reduced versions? Data like (21) were tackled in Grosu
(2009) and Grosu & Kotek (2009), and data like (22), in Kotek (2013)[4]. For reasons indicated
in footnotes 6 and 7, we not find these earlier accounts fully satisfactory, and we thus propose
to re-examine the facts here, trying to make better sense of them.

One thing that needs to be made clear at the outset is that maximality is incontrovertibly
present in all the reduced versions of the Romanian data in (21)-(22). Thus, the bracketed
expression in (21) denotes the entire weight of 'your' hand-luggage, and the one in (22), the
total number of horses bought by Ion. As Kotek (2013) observes, the reduced version of (21)
contrasts in this respect with a minimally different example in which the relative is restrictive.
The distinction between amount and restrictive relatives without the definite article is brought

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[4] The full and reduced versions of (21) are in fact slightly modified versions of Kotek's (7a-b). We have removed
the accusative marker *pe* which she places before *câţi*, which causes ungrammaticality, at least in our speech.

out by the contrast in (24), where the fluent English translation of (24b) constitutes the closest, but still imperfect, approximation we could devise.

(24) a. [Nouă cai   pe care   i-a   cumpărat Ion] sunt din Arabia,
        nine horses ACC which CL.MPL.ACC-has bought   Ion are from Arabia
     ceilalţi   cai cumpăraţi de Ion sunt din   Libia.
     the-others horses bought by Ion are from Libia
     'Nine horses that Ion bought are from Arabia, the other horses he bought are
       from Lybia.'
   b. [Nouă cai   *câţi*   a cumpărat Ion] sunt din Arabia,
        nine horses how-many has bought   Ion are   from Arabia
     #ceilalţi   cai   cumpăraţi de Ion sunt din   Libia.
       the-others horses bought   by Ion are   from Libia
     'All nine horses that Ion bought are from Arabia, #the other horses he bought
       are from Lybia.'

Thus, in (24a) the nine horses referred to do not need to be all the horses bought by Ion, but in (24b), they do need to be.

    If the reduced versions of (21)-(23) are genuine indefinites (and we will argue below that they are), what makes them compatible with maximality? One tack that has been suggested to us, and that we view as problematic, is that the relative clauses might be construed as appositive, despite the absence of comma intonation. On this view, the reduced versions of (21) and (22) would have the essential import of the unambiguously appositive constructions in (25), which exist in English as well (as reflected in the fluent translations).

(25) a. 15 kg, (atâta)   cât   cântăreşte bagajul   tău de mână, te   vor
        15 kg (as-much) how-much weighs   luggage-the your of hand you.ACC will.3PL
        împiedica să   te   urci   în avion.
        prevent   SBJV REFL step-up.2SG in airplane
        '15 kgs, as many as your hand-luggage weighs, will prevent you from boarding the
         plane.'
   b. Nouă cai,   (atâţia) câţi   a cumpărat Ion, sunt din   Arabia.
        nine horses (as-many) how-many has bought   Ion are from Arabia
        'Nine horses, as many as Ion bought, are from Arabia.'

This approach provides *prima facie* legitimacy for indefiniteness, since the relative no longer contributes to the characterization of the set that existential quantification applies to, but also has an undesirable consequence. Thus, in incontrovertibly appositive constructions like (25), the only thing that is necessarily identical in the appositive and in its matrix is the cardinality/quantity. There is no necessary identity between entities, as illustrated in (26)[5].

(26) Zece cai,   câţi   a cumpărat Ion, mi-am   cumpărat şi   eu
     ten horses how-many has bought   Ion me.DAT-have.1 bought   also I
     'Ten horses, as many as Ion bought, I also bought myself'

In the absence of the comma intonation, identity between the entities described in the relative and those denoted by the matrix DP appears to be required (more precisely, the predicate of

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[5] In fact, even the kind of entity can differ, in which case, an overt distinct N must be used in the appositive; e.g., if we insert *mânji* 'colts' after *câţi* in (26) (preferably suppressing *şi* 'also', to improve overall coherence), we get an acceptable sentence. In contrast, if we perform this type of insertion in (24), we get an unacceptable result.

the relative also characterizes the external argument of the NP). Therefore, the following examples are odd:

(27) a. #O sută   cincizeci de kile cât   cântăreşte motocicleta   ta
        one hundred fifty   of kilos how-much weighs   motorcycle-the your
        îţi   vor   cauza un infarct.
        you.DAT will.3PL cause a   heart-attack
        '#150 kilos as the weight of your motorcycle can cause you a heart attack.'
     b. # Cinci studenţi câţi   stau acum cu   noi la cină   au   murit ieri.
        five   students how-many sit   now with us at dinner have died   yesterday
        '#Five students who are having dinner with us right now died yesterday.'

Thus, (27a) seems to imply that the fact that your motorcycle has a particular weight might give 'you' a heart attack, something that is hard to make sense of without creating a special context, and (27b) implies that the five students now having dinner with 'us' died one day earlier. In other words, not just the measure phrase in (27a), but the entity measured by it as well, affects the coherence of the matrix, and in (27b), not just the number of students, but their identity as well, plays a role in establishing the coherence of the matrix. The same observations hold for the examples (22)-(23) above. But if the relatives are, so to speak, an intrinsic semantic part of the complex DP, what avoids infelicity, given what was said in [a]-[b] in the paragraph immediately after example (16))?

   As a preamble to attempting an answer to this question, let us try to be precise concerning the way in which the definite and indefinite versions differ in meaning. For the examples (22) and (23b), which involve entity-denoting DPs that function as subjects of copular constructions, our intuition is that such data are not automatically felicitous in just any context. In particular, we find this example acceptable only if the assumed context includes not just the horses bought by Ion, but other horses as well, so that a natural continuation might be something like (28):

(28) … alţi cai,   de exemplu, cei   cumpăraţi de Maria, sunt din alte   locuri.
       other horses for example the-ones bought   by Maria are from other places
       '...other horses, for example, those bought by Maria, are from other places'

A similar observation applies to the example (23b), which we find felicitous just in case we conceive of the stretch of road between Bucharest and Ploieşti as a proper subpart of a longer stretch of road, say, the one between Bucharest and Braşov, which measures 175 kms. Crucially, however, the stretch between Bucharest and Ploieşti *must be included* in the larger stretch we have in mind, and similarly, in (22), the nine horses bought by John *have to be a part* of the larger set of horses that serves as assumed background. The *necessary assumption of a larger context* is, we submit, the crucial difference distinguishing the indefinite from the definite versions of (22) and (23b): the indefinite requires the existence of a more inclusive pragmatic context, which is not necessary for the felicity of the definite version. Furthermore, the *necessary inclusion* of the mentioned entities in the pragmatically assumed set distinguishes the indefinite versions of (22) and (23b) from incontrovertibly appositive constructions like (25b) and (26).

      For completeness, we note that a similar view can be argued for with respect to the reduced version of (21), even if things are a bit more delicate here. The semantic/pragmatic difference between the full and reduced versions of this example is hard to pin down, but not impossible. Taking as point of departure a brief suggestion made in Grosu (2009), we feel that in the reduced version, the specific weight attributed to the hand-luggage is most naturally

construed as a *contextual novelty*, while in the full version, this need not be so. One can see this by noting that if we assume a previous utterance by the addressee of (21) with the essential import of (29), the DP in the full version is perceived as an anaphoric reference to the previous discourse, and the one in the reduced version, as a re-assertion of what was previously said.

(29) Bagajul   meu de mână cântăreşte 15 kg.
        luggage-the my   of hand weighs 15 kg.
        'My hand luggage weighs 15 kg.'

If so, we may say that the utterer of the reduced version of (21) assumes a background with a plurality of possible weights that the luggage might have, while the utterer of the full version need not do so. A consequence of this state of affairs is that the reduced version of (21), but not the full version, is especially natural when the speaker wishes to present the specific weight of the luggage as a contextual novelty. We note, for completeness, that this 'novelty' effect is also detectable in some of the entity-denoting examples provided in this paper, for example, in (34b) below, which is naturally construable as asserting that the person referred to does not have much money, and nonetheless manages to live decently.[6]

What has just been said points to a certain family resemblance between partitive constructions, e.g., [i] of footnote 3, and Romanian indefinite amount relative constructions. In both cases, there is a larger set or sum, which constitutes the 'whole' out of which existential quantification picks out a proper subpart. But the parallelism should not be pushed too far. In 'standard' partitive constructions, the whole is denoted by a syntactic constituent, and is incontrovertibly represented in the semantics. In indefinite amount relatives, the whole is defined by the union of the set defined by the complex NP and a distinct pragmatically assumed background set, which is characterized just by the head of the complex NP (e.g., for (22), {horses bought by Ion}∪{horses}). This union set is, however, not 'homogeneous' in the way the whole is in incontrovertible partitives. To make the distinction clear, observe that in, e.g. *three of the boys and girls who attended the party received prizes,* the three prize winners can be any three individuals in the set consisting of the union of the boys and girls. But in the indefinite amount construction of Romanian, no such freedom exists. In the reduced version of (22), the nine horses denoted by the bracketed DP cannot be, e.g., four of the horses bought by Ion and five horses from the assumed background. Rather, they can only be all the horses bought by John and no others.

To capture this state of affairs, we propose that the background set should not be imported into the semantics, and existential quantification should apply strictly to the singleton denoted by the complex NP. On this maximally conservative view, definite and indefinite amount constructions differ only in the choice of the determiner or quantificational operation. We submit that the Romanian indefinite constructions are licensed in the following way: Existential quantification asserts the existence of the singleton's unique member, thereby satisfying the requirement that maximality should not be vacuously appealed to (see point (a) in the paragraph that immediately follows example (16)). The expected pragmatic clash between maximality and the non-uniqueness typically associated with existential quantification (see point [b] after example (16)) is avoided by allowing (non-)uniqueness to be evaluated relative to the larger, pragmatically constructed set.

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[6] Grosu (2009) proposes an analysis of data like the reduced version of (21) which is built on the observation that the measure phrase denotes a unique value on a scale, and may thus be viewed as a proper name. The gist of the proposal is that the relevant construction is comparable to expressions like *John as a judge*.

We are suspicious of this approach, because proper names are definite, and if what we propose in the text is on the right track, the constructions at issue must be analyzed as genuine indefinites.

If this proposal is on the right track, then Romanian and English differ in the following way: Romanian permits (non-)uniqueness to be evaluated relative to a set constructed with pragmatic help, and English (as well as other languages that behave like it, in particular, French and Modern Hebrew; see Grosu 2009, section 3, for illustrations) does not. Is it possible to make (at least partial) sense of this distinction in terms of independent formal properties of the two sets of languages?

An obvious property that distinguishes Romanian from English, French and Hebrew is an overt relativizer *that is exclusively typed for degrees*. In view of the fact that subordinate clauses in which abstraction targets degrees are independently known to exhibit incontrovertible maximality effects, a prime example being comparatives and equatives (see, e.g., Rullmann 1995 and pertinent references therein), the degree relativizers of Romanian provide an explicit and unambiguous indication that Maximalization is operative within the relative clause. In view of the fact that maximalizing relatives are only a proper subtype of the larger class of externally-headed relatives, and on the assumption that overt clausal typing is in general a desirable state of affairs in the languages of the world (see, e.g., Cheng 1991), the degree relativizers of Romanian adequately satisfy this desideratum, and require no further 'confirmation' of maximalization.

In contrast, English and other languages without an overt unambiguous degree relativizer do not satisfy the desideratum at issue. In English, for example, the Null Operator and the relative complementizer *that* do not unambiguously mark a relative clause as being an amount relative, and thus, a maximalizing one. We conjecture that definite and universal determiners may provide an alternative typing technique, by signaling that maximalization has ultimately been achieved, and that indefinite (weak) determiners do not have this ability, and are thus dis-preferred for this reason.

If what we have suggested is anywhere on the right track, the following prediction emerges: Indefinite amount relatives are expected in languages that exhibit unambiguous degree relativizers **and** that allow such relativizers in non-appositive clauses, and are not expected in languages with amount relative clauses that are not explicitly typed for maximality in this (or some other) way. It goes without saying that this prediction needs to be cross-linguistically tested as widely as possible, and we hope that future research will address this task.

We conclude this section by noting that the approach to the amount relative constructions of Romanian and English that we have proposed keeps the syntax and semantics maximally simple and blames the distinction on the (un)availability of a pragmatic rescuing strategy, which might – if our conjecture is on the right track – be traceable to the (non-)existence of explicit maximality typing within the relative clause[7].

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[7] Kotek (2013, section 5) non-committedly suggests an alternative way of trying to make sense of the (im)possibility of indefinite amount relative constructions in Romanian and English. Specifically, she suggests that in view of the null status of the English relativizer, one might assume that there is no Maximalization operation within English amount relatives, and that maximality comes from the determiners, whose range is limited (for some unexplained reason) to those that preserve maximality into the quantification.

We find this alternative suggestion problematic for a number of reasons. First, it has no independent plausibility, since comparatives – as noted above in the text – exhibit clear maximality effects, although they use a null syntactic operator and there are no CP-external determiners that can serve as the source of maximality. Second, we do not see how maximality may be 'preserved into the quantification' when, by assumption, there is no CP-internal maximality to preserve. Third, we note that maximality was a crucial ingredient in Grosu & Landman's analysis of entity-denoting data like (16), in that it created a unique entity-degree pair, on which SUBSTANCE could straightforwardly operate. In the absence of maximalization, it becomes unclear whether an equally simple account of the desired entity-denotation for the complex DP is feasible (in any event, Kotek was silent on this point).

For all these reasons, we believe that our own conjecture provides a more promising basis for future cross-linguistic research.

4 The division of labour between relativizers in English and Romanian

In the preceding section, we have compared and contrasted (some of) the semantic properties of English and Romanian amount relatives. In this section, we undertake a comparable task with respect to the distribution of relativizers in the amount constructions of these two languages.

As observed by Carlson (1977) and as illustrated in more detail by Grosu & Landman (2016), all the varieties of amount relatives in English allow only null operators, non-appositive relatives that use the relativizers *who/which* being restrictive.

In Romanian, the picture is more complex. We can distinguish three types of situation, in particular: (i) only *cât* can be used, (ii) both *care* and items from the *cât* paradigm can be used, (iii) only *care* can be used. We provide illustrations of (i)-(iii) below, without aiming at an exhaustive enumeration of all relevant types of situation. We also note that these illustrations conform to the acceptability judgments of the authors, and that there may well be some cross-idiolectal variation in this respect, as already noted in footnote 2.

Situation (i) is found in data like (6), where the gap is in an adverbial or cardinality context.

Situation (ii) is found when the gap is in an argument position:

(31) a. Ne   va trebui o veşnicie ca să   bem   [cei 80 de litri de vin {pe care
        us.DAT will need an eternity that SBJV drink.1PL the 80 of liters of wine ACC which
        i-au   / cât   au}   băut ei   aseară].
        CL-have.3PL / how-much have.3PL drunk they last-night
        'We will need an eternity to drink the 80 liters of wine they drank last night.'
     b. Ne   va trebui o veşnicie ca să   recrutăm   [milioanele de soldaţi
        us.DAT will need an eternity that SBJV recruit.1PL millions-the of soldiers
        {pe care le-au   / câţi   au}   recrutat chinezii   într-un
         ACC who CL-have.3PL / how-many have.3PL recruited Chinese-the in-a
         singur an].
         single year
        'We will need an eternity to recruit the millions of soldiers that the Chinese recruited
         in a single year.'

The data in (31) and their fluent English translations allow two types of construal: one which involves identity of entities (and of their measure) in the matrix and the relative, and one which involves only identity of measures; the former type of reading is here pragmatically implausible, but grammatically allowed.

Situation (iii) is illustrated in (32) and (33).

(32) a. Ne   va trebui o veşnicie ca să bem   [vinul   {pe care l-au   /
        us.DAT will need an eternity that SBJV drink.1PL wine-the ACC which CL-have.3PL /
        *cât   au}   băut ei   aseară].
        how-much have.3PL drunk they last-night
        'We will need an eternity to drink the 80 liters of wine they drank last night.'
     b[8]. Ne   va trebui o veşnicie ca să   recrutăm [soldaţii   {?pe care
        us.DAT will need an eternity   that SBJV recruit.1PL soldiers-the ACC which

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[8] We do not know why (26b) is slightly degraded with *care,* but whatever the reason, the version with *cât* seems to us distinctly worse.

i-au   / *câţi   au}   recrutat chinezii   într-un singur an].
CL-have.3PL / how-many have.3PL recruited Chinese-the in-a   single year
'We will need an eternity to recruit the millions of soldiers that the Chinese recruited
in a single year.'

(33)   A   arătat aproape curajul   {pe care l-a   /*cât   a} arătat
       has shown almost courage-the ACC which CL-has / how-much has shown
       tatăl   lui.
       father-the his
       'He showed almost the (amount of) courage that his father did.'

The constructions in (32) and (33) differ from those in (31) in that the external head contains no measure phrase. Those in (32) differ from those in (33) in that in (32), the versions with *care* allow both readings that involve identity of entities/substance (and of their amounts) and readings that involve only identity of amounts; in (33), only the latter reading is possible, for independent reasons (i.e., abstract nouns like *courage, progress,* etc., denote scales, and such scales are unique; that is to say, it makes little sense to distinguish substantively 'your'' courage from 'my' courage).

The exclusion of *cât/câţi* in (32)-(33) is due to an independent requirement on degree relatives: the matrix DP must contain a quantitative expression – see cardinals, copiously illustrated in the paper – and scalar quantitatives such as those in (34)[9] – or the universal *tot, toţi* 'all' (see (20) above):

(34) a. [Puţini-i câţi   au   răspuns   invitaţiei]   au   fost mulţumiţi.
          few-the how-many have responded invitation-the.DAT have been satisfied
          'The few people who responded to the invitation were satisfied.'
      b. [Cu puţini bani cât   are] reuşeşte să   ducă un trai decent.
          with few   money how-much has succeeds SBJV bear a living decent
          'With the little money (s)he earns (s)he manages to maintain a decent living style.'

In the absence of these elements, the examples range from marginal to completely ungrammatical. Thus, the use of *câţi* is totally ungrammatical, in our judgment, on the identity-of-amount readings. On the identity-of-entities/substance readings, acceptability is difficult to judge, given the pragmatic implausibility of these particular examples. If we consider pragmatically plausible examples, for instance, a variant of (20) in which *toţi* has been suppressed, we find it significantly degraded relative to (20) as it is, but not altogether impossible.

Furthermore, even if the above conditions are fulfilled, the use of *cât/câţi* instead of *care* in situation (ii) obeys felicity conditions that are not easy to describe. Intuitively, the quantity must be highly relevant for the situation, as it is, e.g., in (34).

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[9] Example (34b) was brought to our attention by one of the reviewers. Concerning data with scalar quantitatives, we note the (marginal) existence of a further reading, illustrated by

(i)   [PUŢINI câţi   au   încercat să   dezlege taina]   au   reuşit.
         few   how-many have tried   SBJV unravel mystery-the have succeeded
        'Few of those who tried to unravel the mystery succeeded.'

This example can only be construed as a partitive construction of the kind noted in footnote (3), in which the partitive preposition, normally realized as *din* or *dintre* in Romanian, is exceptionally covert. The constituent representing the 'whole' is realized by the amount-relative, which functions here as a free relative (see (12a-b)).

For completeness, we note that *cât/câţi-* clauses also occur in comparative constructions involving quantity, often associated with the correlative *atât/atâţi* 'as much/many', as illustrated in (25-(26).

5 Summary and results

This paper has achieved the following results:

[i] It has sought to eliminate doubts that entity-denoting amount constructions exist by bringing up and illustrating a variety of constructions in English and Romanian which fit this characterization.

[ii] It has proposed an account of the observation that Romanian, unlike English, allows indefinite amount relative constructions, both entity- and amount-denoting. In so doing, it has demonstrated that, in addition to two *prima facie* counterexamples to one of Carlson's diagnostics for amount – and more generally, for maximalizing – status, which were discussed in detail in Grosu & Landman (2016, sections 2.3.1 and 2.3.2), where they were argued to be *apparent* counterexamples only, there exists a third *prima facie* counterexample to that diagnostic, which, upon closer examination, turns out to be no more than an apparent one, too.

[iii] It has provided a contrastive description of the distribution of relativizers in English and Romanian amount constructions.

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