

are ‘adjectival’, higher cardinals are ‘nominal’. To capture this difference in syntactic behavior, Corbett (1978) proposes two *universals* explaining the cross-linguistic distribution of cardinals: (i) simple cardinals are either adjectival or nominal and (ii) if they vary in behavior, the higher are always nominal.

In Romanian, the first type of syntactic structure is one in which the cardinal projection occupies the specifier position. This relates to cardinals from 1 to 19 (see (2)):

(2) *zece cărți* ‘ten books’ [NP [CardP *zece*] *cărți*]]

In the second type of syntactic structure, the cardinal heads a recursive nominal projection. This is the case of cardinals from 19 onwards:

(3) *douăzeci de cărți* ‘twenty books’ [CardP *douăzeci* [PP *de* [NP *cărți*]]]

In both syntactic structures, approximation is realized by means of one of the strategies enumerated in the abstract; as section 3 will show, the most frequent strategies are those where the specifier of the cardinal contains lexical material (an adverbial phrase or an indefinite pronoun).

1.2. Approximation

1.2.1. Expression of imprecision

According to Zafiu (2002), expressing vagueness and imprecision involves characteristic linguistic means, such as specialized linguistic marks and imprecision operators. Referentially, vagueness can intervene in three categories of processes: identification, quantification and determination. Of the three categories, we are interested in two: quantification and determination:

a) quantification represents the isolation of quantity in a gradual or multiple entity:

(4) *It's a pretty big cat.*

Imprecision in quantifying over multitudes is done with the help of: (i) indefinite adjectives (*unii* ‘some’, *câțiva* ‘a few’, *anumiți* ‘certain’, *mulți* ‘many’, *puțini* ‘few’) and indefinite pronouns with partitive role; (ii) other adjectives with similar interpretation (*diverși* ‘different’); (iii) fixed expressions (*o mână de...* ‘a handful of...’, *o mulțime de...* ‘a crowd of...’, *o groază de...* ‘a lot of...’).

In Old Romanian, highly frequent are pronominal elements and pseudo-partitive constructions, where N1 is a collective noun with a functional role (see also Ușurelu & Tănase-Dogaru 2015).

- (5) a. **mulți** de câți crezut-au (*Codicele Bratul*: 204)
many of how-many believed-have
'many of those who believed'
b. **multime de turci** (Miron Costin, *Viața lumii*: 323)
multitude of Turks
'a crowd of Turks'

b) determination relates to placing elements on a pre-established scale of units of measure:

- (6) *This weighs about 3 kg.* (Zafiu 2002: 366)

In this case, imprecision is expressed by means of a vague operator and a numerical expression. These operators are: adverbs (*cam, circa, aproximativ, aproape, spre* 'about/approximately'), prepositions (*pe, pe la, prin* 'about'), coordinated structures (*între... și...* 'between... and...') and juxtaposed numerals (*doi-trei* 'two-three') (Zafiu 2002: 368–369).

As shown in section 3, Old Romanian uses both adverbial/prepositional operators and strategies of juxtaposition and coordination:

- (7) a. **ca 30000** (*de oșteni*) (Miron Costin, *Letopisețul*: 49)
about 30000 (of soldiers)
b. **la 8000 de oameni** (Miron Costin, *Letopisețul*: 192)
about 8000 of people
c. **500–600 de pungi de bani** (Miron Costin, *Letopisețul*: 122)
500–600 of bags of coins
d. **doi sau trei** (*Liturgierul lui Coresi*: 133)
two or three

1.2.2. Quantitative non-numeric approximation

According to Krieb-Stoian (2011), in Romanian there are four types of approximation, one of which is represented by imprecision/indefiniteness. A particular type of imprecision is represented by quantitative non-numeric approximation. Old Romanian features quantifiers of the type: *un întuneric de oameni* 'a darkness of people', *un buluc de turci* 'a throng of Turks', *o drâmbă de oști* 'a crowd of armies', *o samă de stupi* 'a number of beehives', *o palmă de loc de sămănat* 'a palm of place of sowing', *o funie de moșie* 'a rope of estate', *o mână de oameni* 'a handful of people', etc. (Krieb-Stoian 2011: 181–187).

Old Romanian features many such pseudo-partitive constructions where N1 is a functional noun (see Tănase-Dogaru & Uşurelu 2015).

- (8) *o seamă de oameni* (Șapte taine: 252)
a number of people

Of special interest is the cardinal *întunerec* ‘lit. darkness’ with the meaning of ‘ten thousand’, a loan translation of the Old Slavonic *tīma*, which is frequent in texts translated from Slavonic (Frîncu 1997): *cinci înturerece* ‘five ten-thousand’. According to Frîncu (1997), texts that are not translated from Slavonic and original texts do not feature this cardinal numeral. Since the 16th century onwards, the tendency has been to replace it with the numeral *mii* ‘thousands’, especially in southern texts: *mii de oameni* ‘thousands of people’ (Frîncu 1997: 130).

Our corpus registers the loan translation (8), with the form *untunearce*, which is taken as proof of the nominal features of higher cardinals, i.e. it features plural morphology:

- (9) *mii de untunearce sta înaintea lui* (Coresi, *Carte cu învățătură*: 38)
thousands of darknesses (ten-thousands) sat in-front-the his
‘thousands of thousands sat in front of him’

1.2.3. Expressions of imprecision

According to Stan (2009), there is a current syntactic pattern realized by combining the noun phrase with elements expressing quantity (indefinite, globalizing or partitive) and which can be, in their turn, accompanied by quantitative determination. The majority of nominal quantifiers are Old Romanian terms, having indefinite value: *grămadă* ‘crowd’, *mulțime* ‘multitude’, *număr* ‘number’, *seamă* ‘number’, *sumă* ‘sum’, etc. (Stan 2009: 406).

Our corpus registers the following quantifiers, all of which have a functional role in a pseudo-partitive structure of the type N1 of N2:

- (10) *grosime, samă, stol, mulțime, oardă, buluc, grămadză, drâmbă*
(roughly: multitude, throng, crowd)

Stan (2009) argues that Romanian uses a variety of means (morpho-syntactic, lexico-semantic, phonetic) to express approximation and imprecision: numerals containing the indefinite adjective *câteva* ‘a few’ (*câteva sute de cuvinte* ‘a few hundred word’); prepositions that contextually suggest quantity, which is expressed by the quantifier (*până în* ‘up to’, *peste* ‘above’, *spre* ‘towards’, *sub două hectare* ‘under two hectares’); juxtaposition or junction by disjunctive relators of numerals with related values (the noun is placed after the numerals or between them: *zece-cincisprezece oameni* ‘ten-fifteen people’, *o lună, două* ‘a month, two’); adverbs or adverbial phrases

(*aproape o tonă* ‘almost a ton’, *cam două zile* ‘about two days’, *cel mult/cel puțin doi oameni* ‘at most/at least two people’) (Stan 2009: 408).

Our corpus registers many examples where the approximation strategy is the adverbial and/or prepositional phrase; this strategy seems to be the most productive in Old Romanian.

- (11) a. **cătră** 70000 de oaste (Miron Costin, *Letopisețul*: 44)
towards 70000 of army
‘about 70000 of soldiers’
- b. **aproape de** 2000 de oameni (Miron Costin, *Letopisețul*: 196)
almost of 2000 of people
‘almost 2000 people’

Section 2 of the paper focuses on the five strategies listed in the introduction and it focuses on the syntactic analysis of the most frequent: the adverbial-prepositional strategy and the pseudo-partitive strategy.

2. Corpus

2.1. The adverbial-prepositional strategy

As mentioned in the conclusion of the previous section, the adverbial-prepositional strategy is one of the most frequently encountered in Old Romanian texts. Research in the domain of ‘vague language’ (Chanell 1994, Drave 2001) places this type of approximation in the category *number approximations*, by means of which a word or phrase is added to a number in order to signal vague reading (*about 10*).

The pragmatic function of approximation in such cases is, most probably, the expression of *intellectual doubt* (see Zafiu 2002), by means of which the speaker is trying to prove moderation and scientific prudence, aiming to be seen as credible.

- (12) a. **cătră** 70.000 de oaste (Miron Costin, *Letopisețul*: 44)
towards 70.000 of army
‘about 70.000 of fighters’
- b. **mai multă de** 7000 de călări **și de** 3000 de pedestri n-au avut (Miron Costin, *Letopisețul*: 44)
more much of 7000 of riders and of 3000 of infantrymen not-have had ‘they did not have more than 7000 riders and 3000 infantrymen’
- c. **până în patru** dzile (Miron Costin, *Letopisețul*: 45)
until in four days
‘not more than four days’

- d. *ca 30.000 de oameni* (Miron Costin, *Letopisețul*: 106)
about 30.000 of people
'about 30.000 people'
- e. *ca de treizeci de ani* (Alexandria: 55)
about of thirty of years
'about thirty years of age'
- f. *aproape de doisprăzece coți* (Alexandria: 67)
almost of twelve meters
'about twelve meters'

These numeral constructions are called in Corver & Zwarts (2006) *prepositional numerals* and in Nouwen (2008) *modified numerals* and are analyzed as adnominal Prepositional Phrases. Thus, the constructions in (18) are not Prepositional Phrases but Noun Phrases with prepositional modifiers.

- (13) a. *John speaks around ten languages.* (English)
- b. *Au fost în jur de douăzeci de copii la petrecere.* (Romanian)
'There have been around twenty children at the party'

Corver & Zwarts (2006) analyze the phrase *around ten languages* as [*DP [PP around ten] languages*], i.e. the cardinal together with the prepositional sequence from a prepositional phrase inside the determiner phrase.

- (14) *cam trei oameni* 'about three people' [NP [PP cam trei] oameni]

A sub-type of this category of constructions is represented by sequences where an indefinite adjective (*vreo* 'some') takes the place of the adverbial phrase.

- (15) *vro 2.000 de oameni* (Miron Costin, *Letopisețul*: 69)
about 2.000 of people

The syntactic structure of these constructions is similar to that in (19), with the exception of the lexical material in the specifier of the noun phrase. Section 1 has shown that lower numerals (1–19) have an adjectival syntactic structure. Therefore, the adjectival cardinal will be placed in the specifier of the noun phrase, together with the indefinite modifier.

- (16) *vreo trei oameni* 'some/about trei people' [NP [AP vreo trei] oameni]

2.2. The pseudo-partitive strategy

As in the case of the adverbial-prepositional strategy, the pseudo-partitive strategy is highly frequent in Old Romanian texts. Chanell (1994) places this type of constructions in the category of vague language realized by means of vague non-numeric quantifiers, where the vagueness is indicated with the help of vague lexical elements (lexemes or phrases) to the exclusion of numbers.

In the examples in our corpus, N1 is either a semi-grammaticalized collective nouns (17 a, c) or a lexical noun with a metaphorical sense (17 e).

- (17) a. *împotriva grosimei tătarăşti* (Miron Costin, *Letopiseşul*: 44)
against thickness Tatar-like
'against the crowd of Tatars'
- b. *au orânduît o samă de oşti* (Miron Costin, *Letopiseşul*: 45)
have organized a number of armies
'they gathered a number of armies'
- c. *au strîns cătăva samă de oşti* (Miron Costin, *Letopiseşul*: 50)
have gathered some number of armies
'they have gathered some armies'
- d. *au lovit un stol de leşi* (Miron Costin, *Letopiseşul*: 79)
have hit a flock of Poles
'a flock/crowd of Poles have fought'
- e. *au vărsat un izvor de lacrăme* (Ilie Miniat, *Cazanii*: 334)
have shed a spring of tears
'they have shed a spring of tears'
- f. *doao cinure de oameni* (*Evanghelie învăţătoare*: 164)
two groups of people
'two groups of people'

While in contemporary Romanian, collective nouns like *mulţime*, *seamă*, *puzderie*, etc. have migrated to the functional end of the lexical-functional continuum, being unable to appear in the company of determiners, in Old Romanian, it was customary for collective nouns to be selected by determiners (*altă seamă de oşti* 'another number of armies').

This may be seen as an argument in favor of proposing that collective nouns in Old Romanian are semi-lexical elements and that they became fully functional after the 18th century (see also Tănase-Dogaru & Uşurelu 2015).

In the case of constructions involving collective nouns, approximation is realized by means of vague non-numeric quantifiers (Chanell 1994, Drave 2009), while the pragmatic function of vague language in this case is, more often than not, underlining the information presented.

2.3. The strategy of juxtaposition and/or coordination

Having been discussed in Zafiu (2002) and Stan (2009) in relation to contemporary Romanian, juxtaposition as a strategy in Old Romanian texts applies both to lower cardinals and higher cardinals, unlike contemporary Romanian, where juxtaposition is encountered only with lower cardinals, higher cardinals preferring the strategy of coordination.

- (18) a. *dacă are domnului cinci-şase boieri avuţi* (Miron Costin, *Letopiseşul*: 77)

- if has ruler-the five-six boyars wealthy
 ‘if the ruler has five or six wealthy rulers’
- b. **500–600 de pungi de bani** (Miron Costin, *Letopisețul*: 122)
 500–600 bags of money
 ‘500–600 bags of coins’
- c. **ieșise 5–6 la un loc** (Miron Costin, *Letopisețul*: 191)
 had-come out 5–6 at a place
 ‘they had come out in groups of five or six’
- d. **în toate casele să fie 2–3 oameni** (DÎR: 129)
 in all houses.the should be 2–3 people
 ‘there should 2–3 people in every house’
- e. **doi sau trei... făgăduși** (*Liturghierul lui Coresi*: 133)
 two or three... promised
 ‘you promised two or three’

Using this strategy presupposes a syntactic structure where the specifier of the cardinal contains a conjunction projection. With respect to juxtaposition, we will consider that the head of the Conjunction Phrase is empty, i.e. juxtaposition equals a conjunction without phonological matrix.

- (19) **doi sau trei oameni** ‘two or three people’ [NP[ConjPdoi(sau)trei] oameni]

2.4. The strategy of reduplication

When using this strategy, it is obvious that the function of vague language is emphasizing the information, which in our case is represented by quantity. This case is illustrative of the fact that, often, vague language can be more efficient than exact language, since vagueness carries more relevant contextual implications. According to Jucker et al. 2003, vague expressions convey the attitude of the speaker with respect to quantity itself and can express presuppositions about the speaker’s or the hearer’s beliefs (see Jucker et al. 2003: 1737).

- (20) a. **stau mii de milioane de îngeri și milioane de milioane de arhangheli** (Ilie Miniati, *Cazanii*: 316)
 sit thousands of millions of angels and millions of millions of archangels
 ‘thousands of millions of angles and millions of millions of archangels dwell’
- b. **mii de mii și milioane de milioane de ani** (Ilie Miniati, *Cazanii*: 332)
 thousands of thousands and millions of millions of years
- c. **mii de mii [de îngeri]** (Antim Ivireanul, *Didahii*: 4)
 thousands of thousands [of angels]

These constructions represent a form of syntactic reduplication, i.e. N1 of N2 where N2 represents the syntactic reduplication of N1. Travis (2000) analyzes constructions of the type *from flower to flower* as forms of syntactic reduplication, where the preposition contains a quantity feature that attracts reduplication. While, for English constructions, the quantity feature blocks the number projection in syntax, in Romanian, the quantity feature attracts reduplication without blocking the number projection.

3. Conclusions

The present paper has analyzed strategies of approximation with cardinal numerals in Old Romanian. Four main strategies have been identified:

- (i) adverbial/prepositional modifier + numeral constructions
- (ii) pseudo-partitive constructions with N1 collective semi-grammaticalized nouns
- (iii) juxtaposition/reduplication
- (iv) syntactic reduplication

In Old Romanian texts, the first two strategies are highly frequent; their syntactic structure implies the existence of a specifier whose lexical material is a (most often) prepositional phrase. The other two strategies, although relatively rarer, are also well-represented in Old Romanian texts; their syntactic structure implies either a Conjunction Phrase or a recursive nominal structure.

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