Chapter 1
Quantification in Standard Russian

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1.1 Introduction: Elements of Russian grammar

1.1.1 Grammatical relations

Russian is among the most conservative modern Indo-European languages when it comes to grammatical structure. I refer the reader to the reference grammar [Tim04] for a detailed discussion; below I will mention just several features of immediate relevance for quantifier structures. Russian grammar traditionally lists six cases with the following major functions:

- **nominative** is the case of subjects and predicate nouns;
- **genitive** marks possessors in noun phrases;
- **dative** is the case of indirect objects;
- **accusative** marks direct objects and time intervals;
- instruments and passive subjects, and sometimes nominal predicates, are marked with **instrumental**;
- nouns in **prepositional** case are always governed by certain prepositions; historically this is locative case that lost independent uses.

(The name *prepositional case* might be misleading; any nominal case except nominative and not just prepositional can be assigned by a preposition.)

While syntactic roles of NPs are coded by case, they do not constrain word order, which is relatively free and is reserved for expressing information structure, if anything. In what follows, I will gloss case only where the syntactic roles of NPs may be otherwise unclear. Examples of NPs in isolation are given in nominative case, unless marked otherwise.

1.1.2 Paucal Forms

In general, numerals, like adjectives, agree with head nouns[1]:

(1) tremja   šarami;   trjom   šaram;   trëx   šarov
     three.INSTR balls.INSTR three.DAT balls.INSTR three.GEN balls.GEN
      'with three balls; to three balls; of three balls'

However, when the NP with a numeral is in nominative or accusative, the head noun does not show nominative or accusative case marking. Instead, the noun assumes one of two forms depending on the numeral; these are called 'smaller' and 'greater' paucal forms. The former combines with numerals that end in 2, 3, or 4; the latter with numerals ending in bigger simple numerals. The smaller paucal form usually equals genitive singular, the greater paucal form genitive plural, but a handful of words show a contrast, cf. the suppletive genitive plural form *ljudej* and greater paucal *čelovek* 'people'; genitive singular *rjáda* and smaller paucal *rjadá* 'rows'. Even in cases of contrast like these, there is considerable variation with regard to the usage of a dedicated paucal form vs. conventional genitive [Tim04]. I will mark paucal forms in glosses only when morphology is in focus of the discussion, and may gloss them as genitive when the forms are the same.

1.1.3 Partitive case

Russian is sometimes analyzed as having a special case called Partitive, or Second Genitive. Normally, it has exactly the same form as ordinary Genitive, except for some masculine mass nouns (not including abstract nouns) which have a special form for it. The special Partitive form has the ending *-u* (vs. Genitive *-a*) and is homophonous with Dative. For many speakers, the ordinary Genitive form can be substituted for the special Partitive form in any context. Uses of Partitive include:

- use as direct object, meaning 'unspecified quantity of X;'
- combinations with quantifiers;
- use as Genitive of Negation, including the subject of negative existential statements (see [PB07] for references and discussion of Genitive of Negation in Russian).

  Examples:

(2) a. Ja nalila sebe   čaj=u.
        I   poured self.DAT tea-PART
        'I poured myself some tea.' (NCRL[2])

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[1] I am using the standard scholarly transliteration system for Cyrillic, as accepted e.g. by the *Slavic and East European Journal*.

[2] National Corpus of Russian Language, `http://www.ruscorpora.ru/`

    b. Ko mne obraščaetsja celaja kuča narod=u.
       to me address   whole heap people-PART
       'A whole lot of people address me.' (NCRL)
    c. No tot ne dal im   xod=u.
       but that not gave them movement-PART
       'But he didn't set them [the documents about corruption] in motion.' (NCRL)

1.1.4 On numeral morphology

Traditional Russian grammar distinguishes three orders of numerals: cardinal, ordinal, and collective. Cardinal numerals are the basic kind, used in combination with nouns (except *pluralia tantum*) as in *dva stula* 'two chairs'. Ordinal numerals like *vtoroj* 'second', *pjatnadcatyj* 'fifteenth' pattern with adjectives morphologically as well as syntactically. When deriving an ordinal from a complex numeral, only the last word of the numeral assumes adjectival morphology, and preceding numeral components have invariable nominative form. For an illustration, consider the dative singular feminine form of ordinal numerals:

(3) sot=oj;   sto   pjatidesjat=oj; sto   pjat′desjat četver=t=oj
    100-DatSgF 100.Nom 50-DatSgF   100.Nom 50.Nom 4-Adj-DatSgF

    To the one hundredth; to the 150$^{\text{th}}$; to the 154$^{\text{th}}$

Ordinal numerals are basis for proportional quantifiers of the patterns "cardinal numeral + ordinal numeral*Feminine*" (*odna pjataja* 'one fifth', *tri dvadcat′ vtoryx* 'three twenty thirds'), as well as "*každyj* + ordinal numeral" (*každyj pjatyj* 'every fifth').

Collective numerals like *dvoe* 'two', *pjatero* 'five' have several uses. They compete with ordinary numerals when combining with nouns denoting people or young animals: *dva studenta / dvoe studentov* 'two students', *pjat′ / pjatero teljat* 'five calfs'. Collective numerals are also used with *pluralia tantum* like *vorota* 'gate', which lack the smaller paucal form, cf. **dva /* ^{OK}*dvoe vorot* 'two gates', and with (plural) personal pronouns **pjat′ /* ^{OK}*pjatero nas* 'five us' (see [Mel85, 376ff] for lexical restrictions and further discussion).

Finally, collective numerals are freely used on their own without a noun, while cardinal numerals require a noun, unless used as predicates or in elliptical contexts. The following example illustrates the contrast:

(4) V komnatu zašli   dvoe /   *dva.
    in room   entered two.COLL two.CARD
    'Two people entered the room.'

Here the variant with cardinal *dva* is not acceptable unless a clearly elliptical context is provided, e.g. 'hundreds of policemen surrounded the crime scene but **just two entered the room**.'

Adverbs derived from collective numerals come in three types: *v-...-om* produces 'in a group of *x*': *vdvoëm* 'in a group of two', *vpjaterom* 'in a group of five' (see examples below under quantifier float rubric). Adverbs in *v-...-o* modify predicates of quantity change: *uveličit' vdvoe* 'to increase (something) twofold', *sokratit'sja vpjatero* 'to shrink fivefold'. Adverbs in *na-...-o* combine with verbs of division: *razbit' nadvoe* 'to break in two', *delit' natroe* 'divide in three'. The last type is very unproductive, represented only by *nadvoe* 'in two', *natroe* 'in three', *napopolam* 'in halves', and *nacelo* 'in equal integer parts'.

1.1.5 Selection of D-quantifiers

The selection properties of D-quantifiers in Russian are very elaborate. The morphosyntax of numerals is probably the most complicated part of Russian grammar along with aspect / Aktionsart; for a careful discussion see [Tim04, Mel85, Cor78]. Simplifying slightly, the following types of D-quantifiers can be distinguished based on their selection properties:

A. Ones that select for (singular) mass nouns.

i. Agreeing with the noun in case and gender, e.g. *ves'* 'all the': *vsë [*NomSgn*] moloko [*NomSgn*]* 'all (the) milk'.

ii. Selecting for the genitive (partitive) case. a. quantifiers used only in (homophonous) nominative and accusative: *skol'ko* 'how much,'[3] *malo* 'little,' *(ne)dostatočno* '(in)sufficiently much,' e.g. *skol'ko* [Nom] *čaju* [Part] 'how much tea', but **skol'ki* [Dat] *čaju* [Part] 'to how much tea' b. measure phrases and proportional quantifiers which are used in any case (essentially these are nouns syntactically): *dva litra* 'two liters', *gorst'* 'a handful', *polovina* 'half,' *dve treti* 'two thirds of', cf. *polovina* [Nom] čaju [Part] 'half of the tea', polovine [Dat] čaju [Part] 'to half of the tea'. Partitive case proper, unlike genitive *čaju*, sounds less natural with proportional quantifiers like *polovina* than with other mass noun quantifiers, yet it is well attested in usage.

B. Quantifiers that select for count nouns.

i. Agreeing with the noun in case and gender. a. Selecting for singular: *každyj* 'every,' *odin* 'one,' *tridcat' odin* 'thirty one,' *n+1* (read as *èn pljus odin*), and all other numerals ending in *odin*, cf. *odno* [NomSgn] *jabloko* [NomSgn] 'one apple', *odnomu* [DatSgn] *jabloku* [DatSgn] 'to one apple'. b. Selecting for plural: *vse* 'all,' *(ne)mnogie* '(not) many,' e.g. *vse* [NomPl] *jabloki* [NomPl] 'all (the) apples', *vsem* [DatPl] *jablokam* [DatPl] 'to all (the) apples'.

ii. Selecting for the genitive plural form. a. quantifiers used only as a subject and direct object: *malo* 'few,' *(ne)dostatočno* '(in)sufficiently many,' *bol'še vsego* 'the most.' b. quantifiers used in any case (essentially they behave like nouns): *polovina* 'half,' *bol'šinstvo* 'most.'

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[3] *Skol'ko* is used in cases other than nominative and accusative only when combined with count nouns.

iii. Core numerals 5-20, tens, and hundreds, number variables like *n* (read *èn*) and *k* (read *ka*), and any complex numerals ending in these, as well as *skol'ko* 'how many' and *stol'ko* 'thus many' when in nominative, accusative, or genitive, select for the so called larger paucal form, usually identical to genitive plural but for some nouns identical to nominative singular: *(odin) kilometr* '(one) kilometer' (nominative singular) vs. *(sčët / pjat') kilometrov* '(the count of / five) kilometers' (large count / genitive plural) but *(odin / pjat') kilogramm* '(one / five) kilogram(s)' (large count / nominative sungular) vs. *(sčët) kilogrammov* '(the count of) kilograms' (genitive plural). The formal difference is most obvious in the case of the noun *čelovek* 'person' which has a suppletive plural: *(odin / pjat') čelovek* 'one person / five people' (large count / nominative sungular) vs. *(sčët) ljudej* '(the count of) people' (genitive plural). In other oblique cases such numerals do not select for the noun's case but agree with the noun in case: *(o) pjati šarax* '(about) five balls (prepositional),' *pjat'ju šarami* 'five balls (instrumental)' etc.

iv. Nouns denoting numbers select for large paucal form no matter what the case of the DP is: 'thousand people' is *tysjača čelovek* in nominative, *tysjači čelovek* in genitive, *tysjače čelovek* in dative etc. This group includes *nol' / nul'* 'zero,' *tysjača* 'thousand,' *million* 'million,' *milliard* 'billion,' *trillion* 'trillion,' etc. Hundreds (200 and up) also tend to behave like this, although in the literary norm they are attributed to the previous group.

v. Some numerals, when in nominative case, select for a special form of the noun, called the (small) paucal form, or paucal form[4] , which generally equals genitive singular, but sometimes has a different place of stress: *razmer šára* 'size of the ball' but *tri šará* 'three balls.' In oblique cases such numerals do not select for the noun's case but agree with the noun in case: *trëx šarov* 'three balls (genitive),' *tremja šarami* 'three balls (instrumental)' etc. In genitive, however, the large paucal form is often used instead of genitive plural: *(ot) trëx čelovek* '(from) three people(large paucal form)' along with *(ot) trëx ljudej* '(from) three people(genitive plural)'.

Three subgroups of this class can be further distinguished:

a. the clitic *pol* 'half' selects for a singular noun when in oblique cases: *polušaru* 'to half of a ball.' In accusative, DPs with *pol* are always the same as in nominative: *polšara* or *polženščiny* 'half of a woman' can be either nominative or accusative.

b. the numeral *poltora* 'one and a half of' selects for a plural noun when in oblique cases: *polutora šaram* 'to one and half of a ball.' The accusative form of DPs with *poltora* is always the same as nominative: *poltora šara* 'one and half balls' or *poltory ženščiny* 'one and half a woman' can be either nominative or accusative.

c. Numerals *dva* 'two,' *oba* 'both,' *tri* 'three,' *četyre* 'four,' and any complex numerals ending in these, select for a plural noun when in oblique cases: *dvum šaram* 'to one and half of a ball,' *uravnenie s n+2 (èn pljus dvumja) kornjami* 'equation with n+2 roots.' The accusative form of DPs with these numerals depends on the animacy of the noun. If the noun is inanimate, accusative is the same as in nomina-

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[4] This morphological form, traced back to the Old Russian nominative-accusative dual, is gradually fading out as a separate form. Many speakers accept ordinary genitive singular form whereever the paucal form is used, as in *tri šára* 'three balls,' *polšára* 'half of a ball,' *poltora šára* 'one and half of a ball.'

tive, otherwise it is the same as genitive: *dva šara* 'two balls' is either nominative or accusative, *dvux ženščin* 'two women' is either genitive or accusative.

Numerals *poltora* 'one and a half of', *dva* 'two,' and *oba* 'both' are also unque in Russian because they are the only grammatically plural words that formally distinguish gender. All of them have separate feminine and masculine/neuter forms in nominative (and accusative whenever it is equal to nominative): *poltora / dva / oba šara / okna* 'one and half of / two / both balls (M) / windows (N),' but *poltory / dve / obe ženščiny* 'one and half of / two / both women (F)[5]. *Oba* 'both' is doubly unique in having distinct feminine and masculine/neuter stems in oblique cases: *oboim šaram / oknam* 'to both balls (M) / windows (N),' but *obeim ženščinam* 'to both women (F)'.

1.1.6 Series of pronouns

Many pronominal elements in Russian are organized into morphologically regular series, mostly based on interrogatives. These include several series of indefinites but also quantifiers with different semantic contributions (see [Has97] for a discussion of Russian indefinites and a typological perspective; [Yan05] for a closer look at some of the series). Seven series are provided for illustration, each instantiated by three kinds of pronouns (there are of course many more series and pronominal stems):

vse 'everyone'	vsegda 'always'	vsjakij 'all kind of'
kto 'who'	kogda 'when'	kakoj 'what kind of'
kto-to 'someone'	kogda-to 'sometime'	kakoj-to 'some'
malo kto 'few people'	malo kogda 'rarely'	malo kakoj 'a rare'
kto ugodno 'anyone'	kogda ugodno 'at any time'	kakoj ugodno 'any'
nikto 'noone'	nikogda 'never'	nikakoj 'no'
nekto 'a certain person'	nekogda 'once upon a time'	nekij 'a certain'

When prepositions combine with quantified NPs with series markers preceding the pronominal stem, the series marker precedes the preposition. In these examples, series markers are *ni* for the negative concord series and *koe* for an indefinite series:

(5) a. Ni o   čëm ne sprašivaj!
        nor about what not ask
        'Don't ask about anything!' (NCRL)
     b. ja k nemu tut   koe po kakim delam   zabegal
        I to him   here KOE for which business ran by
        'I stopped by his place with some business' (NCRL)

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[5] Notice the gender agreement here in the absence of case agreement: the numerals express the nominative of the whole DP and assign paucal form to the noun, but agree with the noun in gender.

1.1.7 Agreement

Past tense verbs, nominal predicates, and adjectives within noun phrases agree with nouns in case, number, and gender. Russian possesses the three Indo-European genders: masculine, feminine, and neuter. Nouns are also cross-categorized by animacy; whenever gender agreement takes place, so does animacy agreement. Technically, one should speak of two agreement classes within each gender, distinguished by animacy. The sole expression of animacy is the form of accusative case. In the plural, animate nouns' accusative case form is the same as genitive, and inanimate nouns' accusative form equals nominative (the same distinction holds in the singular, but only in some types of paradigms). *Pluralia tantum* can be treated as a separate gender [Zal67].

Quantified NPs have special agreement properties if a quantifier assigns case to the NP (be that genitive, partitive, or a paucal form). With nouns in paucal forms, adjectives and determiners are in nominative plural (usually when they precede the quantifier + NP combination; this is an option only with numerals) or in genitive plural (usually when they precede the common noun):

(6) a. vse   èti   smelye   pjat′ čelovek
          all.NomPl these.NomPl brave.NomPl five person.LargePaucal
          'all these brave five people'
     b. tri   ètix   smelyx   čeloveka
          three these.GenPl brave.GenPl man.SmallPaucal
          'these three brave people'

(as mentioned, for a vast majority of nouns larger paucal form = genitive plural, smaller paucal form = genitive singular)

Verbal agreement can default to 3rd person neuter singular if the subject is a QNP which bears no nominative morphology other than that of the quantifier word [Šve70, 554]. A determiner in nominative forces standard plural agreement, cf.:

(7) a. Prišli /   prišlo   pjat′ studentov
          came.Pl / came.SgN five student.GenPl
          'Five students came.'
     b. Prišli /   prišlo   dva studenta
          came.Pl / came.SgN two student.GenSg
          'Two students came.'
     c. Javilis′ /   javilos′   bol′šinstvo studentov
          show up.Pl / show up.SgN most   student.GenPl
          'Most students showed up.'
     d. ^{OK}Javilis′ / *javilos′   vse   pjat′ studentov
          show up.Pl / show up.SgN all.NomPl five student.GenPl
          'All five students showed up.' (overt nominative blocks default agreement)

1.1.8 Definiteness of NPs

Russian does not have grammaticized articles, neither definite nor indefinite, but semantic (in)definiteness can be expressed. For instance, definiteness is signaled by demonstratives:

(8) Èta ženščina, tot kot, te   studenty, deti   Vani
    this woman   that cat those students children John.GEN
    'this woman', 'that cat', 'those students', 'John's children.'

Definite NPs include proper names. Russian first name stems can typically be treated as monomorphemic, although their compound etymology is sometimes transparent as in Slavic names *Vladimir*, *Vladislav*, *Vjačeslav*. Last names are mostly derived from nouns with suffixes *-ov-*, *-in-*, *-sk-*, *-ovič-*, or from adjectives with suffixes *-ov-* or *-yx*.

Russian demonstrative determiners include *ètot* 'this', *sej* 'this' (obsolete or bookish) and *tot* 'that.'

Since Russian does not have a specialized definite article, bare noun phrases can be interpreted as either definite or indefinite. Sometimes, like in English, a demonstrative is used to express definiteness, or the numeral *odin* 'one' is used to express indefiniteness, usually to introduce a new protagonist into the discourse.

(9) My vstretili odnogo čeloveka. Ètot čelovek okazalsja   dekanom.
    We met   one   man   this man   turned out to be dean
    'We met a man. The man turned out to be the dean.'

1.1.9 Generic Noun Phrases

Generic NPs in Russian, both singular and plural, do not have an overt determiner:

(10) a. Sobaki kusajutsja.
          dogs   bite
         'Dogs bite.'
      b. Krolik razmnožaetsja bystro.
         rabbit reproduces   rapidly.
         'The rabbit reproduces rapidly.'
      c. Dinozavry vymerli.
         dinosaurs extinct
         'Dinosaurs are extinct.'

1.1.10 Quantificational NPIs

Russian *ni*-quantifiers have sometimes been analyzed as NPIs. However, *ni*-quantifiers are licensed only by the same-clause sentential negation but not other decreasing operators. *libo*-quantifiers are a better match to English NPIs since they are used in a wide variety of contexts, including decreasing contexts and polar questions, e.g. (cf. [Per06] for a discussion of the contexts in which *libo*-words are licensed):

(11) a. Devočka ne xotela polučat′ kakoe-libo / nikakoe obrazovanie voobšče.
      Girl   not wanted get.INF which-LIBO / NI-which education   at.all
      'The girl did not want to get any education at all.'

    b. Ja ne verju, čto ona polučit kakoe-libo / *nikakoe obrazovanie.
      I not believe that she got   which-LIBO / *NI-which education
      'I do not believe that she has got any education.'

    c. Polučit li   ona kakoe-libo / *nikakoe obrazovanie?
      get.FUT whether she which-LIBO / *NI-which education
      'Will she get any education?'

  (see also the examples 62b-62d)

1.2 Generalized Existential Quantifiers

1.2.1 D-Quantifiers

In Russian, bare noun phrases can be interpreted as existentially quantified, but there is also a range of overt intersective determiners:

(12) a. Nad kaminom ja uvidel (odin) portret Puškina
      above the fireplace I saw (one) picture of Pushkin
      'I saw a /one picture of Pushkin above the fireplace'

    b. Na ulice pojut   (kakie-to) morjaki
      in the street are singing (some)   sailors
      'Some sailors are singing in the street'

    c. V Khakasii za novogodnie prazdniki pogiblo neskol'ko ženščin
      in Khakasia during the winter holidays died   several   women
      'Several women died in Khakasia during the winter holidays.' (actual news headline)

1.2.1.1 Existential quantifiers

a Existential quantifiers can be formed from question words by means of prefix *koe-* and postfixes[6] *-to*, *-libo*, *-nibud′*.

(13) a. kto -to;   kakoj -to   portret Puškina
       who -EXIST; what -EXIST picture of Pushkin
       'someone'; 'some picture of Pushkin'

   b. Negative existential quantifiers are non-existent. They are expressed through a combination of negation with negative concord items, built from interrogatives with the prefix *ni-*.

(14) ni=kto;   ni=kakoj   portret Puškina
    nor=who; nor=which picture of Pushkin
    'nobody'; 'no picture of Pushkin'

1.2.1.2 Numerals and Modified numerals

Russian numerals are based on the decimal system. Here is the list of one-word cardinal numerals between 1 and 999:

1	odin	10	desjat′	11	odinnadcat′	100	sto
2	dva	20	dvadcat′	12	dvenadcat′	200	dvesti
3	tri	30	tridcat′	13	trinadcat′	300	trista
4	četyre	40	sorok	14	četyrnadcat′	400	četyresta
5	pjat′	50	pjat′desjat	15	pjatnadcat′	500	pjat′sot
6	šest′	60	šest′desjat	16	šestnadcat′	600	šest′sot
7	sem′	70	sem′desjat	17	semnadcat′	700	sem′sot
8	vosem′	80	vosem′desjat	18	vosemnadcat′	800	vosem′sot
9	devjat′	90	devjanosto	19	devjatnadcat′	900	devjat′sot

Names for other numbers below 1,000 are sequences of these one-word numerals, in the descending order of powers of 10, e.g. *sto sem′* '107,' *trista pjat′nadcat′* '315,' *dvadcat′ devjat′* '29.' Note the one-word expressions for numerals 11-19, also found in compound numerals like *šest′sot devjatnadcat′* '619.' Names of numbers larger than 1,000 list the powers of ten in decreasing order using nouns[7] *tysjača* '1,000,' *million* '1,000,000,' *milliard* '1,000,000,000,' *trillion* 'trillion,' *kvadrillion* 'quadrillion,' *kvintillion* 'quintillion,' etc., potentially *ad infinitum*. Here are some examples of numeral use:

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[6] Both of these have a special linear status. *Postfixes* are placed after case, number, and gender inflections (*k=ogo-to* = who=acc-Existential 'someone'), and *prefixes* can be separated from the question word stem by prepositions (*koe na k=ogo* = Existential on who=acc 'on someone')

[7] See discussion of their noun status in [Mel85].

(15) a. odin million trista pjatdesjat četyre tysjači sto vosemnadcat′
  1 million 300 50 four thousand 100 18
  '1,354,118'

   b. V klasse est′ (rovno) pjat′ / bol′še pjati studentov.
   in class is (exactly) five more five students
   'There are (exactly) five / more than five students in the class.'

   c. V klasse net ni odnogo studenta.
   in class is.no nor one student
   'There are no students in the class.'

The noun *nul′* or *nol′* 'zero' is not found within compound numerals. By their syntactic and morphological properties, the interrogative word *skol′ko* 'how many, how much' and its derivatives like *neskol′ko* 'several,' *skol′ko-to* 'some quantity of' are close in distribution to (larger) numerals. *Mnogo* 'many,' *malo* 'few,' *beskonečno mnogo* 'infinitely many,' are similar to numerals but have a slightly different properties and are traditionally classified as adverbs (see [Mel85] for an extensive discussion of the properties of *mnogo*, *skol′ko* etc.). Determiners *nekotorye* 'some,' *nikakoj/ni odin* 'no,' *praktičeski/počti nikakoj/ni odin* 'practically/almost no' (all but the first negative concord items) are not numerals.

1.2.1.3 Negative existential quantification

'no' is expressed by a combination of sentential negation *ne* and negative concord items *nikakoj/ni odin*, consisting of the particle *ni* 'nor' and either the interrogative determiner or the numeral 'one;' of these two, only *nikakoj* is used with mass nouns.

1.2.1.4 Value judgment cardinals

Value judgment cardinals come in many syntactic flavors. The two core monomorphemic ones are *mnogo* 'many, much' and *malo* 'few, little' can function as adverbs or like numerals (assigning partitive = 2nd genitive case). Some are adjectives (*(ne)mnogočislennyj* '(non-)numerous,' *maločislennyj* 'innumerous'), some are adjectives morphologically but strictly occupy the leftmost position in their NP, i.e. pattern with determiners (*(ne)mnogie* '(not) many'). There are also pronominal series with *mnogo* and *malo* as series markers, e.g. *malo kogda* 'rarely' (lit. 'few when'), *mnogo kto* 'many (people)' (lit. 'many who').

(16) a. My oprosili   (ves′ma) mnogix / nemnogix / mnogočislennyx kandidatov.
          we interviewed (very)   many   / few   / numerous   candidates
          'We interviewed (very) many / few / numerous candidates.'

  b. Sliškom mnogo / malo / nedostatočno kandidatov učastvovalo v vyborax.
      too   many   / few / insufficient   candidates participated in elections
      'Too many/few / Not enough candidates participated in the elections.'

  c. Udivitel′no mnogo / malo kandidatov učastvovalo v vyborax.
      surprisingly many   / few   candidates participated in elections
      'Surprisingly many / few candidates participated in the elections.'

1.2.2 Interrogative D-quantifiers

Russian possesses interrogative determiners, both cardinal (*skol′ko* 'how many, how much') and non-cardinal (*kakoj* 'which', *kotoryj* 'which of the'):

(17) a. Skol′ko   studentov prišlo na lekciju?
           how.many students   came to lecture
           'How many students came to the lecture?'

  b. Kakie studenty sdali   èkzamen?
      which students passed exam
      'Which students passed the exam?'

1.2.3 Boolean compounds of determiners

Russian can apply some boolean operations to determiners, including disjunction (*ili* 'or' and the negative concord item *ni...ni* '(n)either...(n)or') and negation but not conjunction (*i* and *a* 'and', *no* 'but'):

(18) a. Na lekciju prišlo ne bolee pjati studentov.
           to lecture came not more five students
           'Not more than five students came to the lecture.'

  b. Na lekciju prišlo četyre ili pjat′ studentov.
      to lecture came four   or five students
      'Four or five students came to the lecture.'

    c. Na lekciju ne prišlo ni četyre, ni pjat′ studentov.
       to lecture not came nor four   nor five students
       'Neither four nor five students came to the lecture.'

1.2.4 A-Quantifiers

One-word adverbs with the meaning 'n times' exist for numbers 2 through 4: *dvaždy*, *triždy*, *četyreždy*; there are also archaic adverbs of the same morphological model *odnaždy* 'once'[8] and *mnogaždy* 'many times.' The productive way to express the meaning 'n times' is to combine a numeral with the noun *raz* 'time.' This latter strategy is applicable even when a one-word adverb exists, e.g. *dva raza* 'two times.' Here are some examples of existential A-quantifiers:

(19) a. inogda;   dvaždy; n raz;   mnogo raz;   ne očen′ mnogo raz
          sometimes; twice; n times; many   times; not very many   times

      b. často; počti   nikogda; nikogda.
         often; almost never;   never

(20) a. Ja inogda   xožu v školu peškom
          I sometimes go   to school by.foot

      b. Ja (počti) nikogda ne xožu v školu peškom
         I (almost) never not go   to school by.foot

      c. Vanja byl v Taškente dvaždy / četyreždy / mnogo raz
        John   was in Tashkent twice /   four times / many times
        John visited Tashkent twice / four times / many times

---

[8] This adverb is nowadays widely used in the meaning 'once upon a time' but not in the original 'one time.'

1.3 Generalized Universal (Co-intersective) Quantifiers

1.3.1 D-Quantifiers

Here are some co-intersective D-quantifiers of Russian: *vse* 'all', *každyj* 'every, each', *vsjakij* 'every, each', *vse, krome pjati* 'all but five', *počti vse* 'nearly/almost all', *vse, krome konečnogo čisla* 'all but finitely many', *ne vse* 'not all', *každyj ... i ...* 'every...and...'

Quantifiers with the meaning 'all but n', including 'all but finitely many,' have the following syntactic property. Like in English, they can be used as a syntactic unit as in *[vse, krome dvux], roli* 'all but two roles,' but this usage is marginal (although attested: *vse, krome dvux, roli* occurred naturally). It is preferable, however, to place *krome n* 'but n' after the noun phrase restrictor, as in *vse roli, krome dvux* 'all but two roles.'

(21)   a. Vse poety mečtajut.
            all poets daydream
            'All poets daydream.' ($POET - DAYDREAM = \emptyset$)

       b. Každyj   učenik v klasse napisal stixotvorenie.
           every / each student in class   wrote   poem
           'Every / Each student in the class wrote a poem.'

       c. Ne vse koški sery.
           not all cats   grey
           'Not all cats are grey.'

       d. Vse studenty v klasse, krome dvux, sdali   èkzamen.
           All students in class   except two   passed exam
           'All but two students in the class passed the exam.'

       e. Vse čisla,   krome konečnogo (ix)   količestva, bol′še sta.
           All numbers except finite   (their) quantity   greater 100
           'All but finitely many numbers are greater than 100.'

           (In this example I replaced *čislo* 'number' in the second occurrence with *količestvo* 'quantity' to avoid using *čislo* in two different meanings in one sentence, which would make the sentence awkward. A naturally occurring example of 'all but finitely many', from a description of the Turing machine, is given below.)

       f. Vse jačejki, krome konečnogo (ix)   čisla,   zanjaty pustymi simvolami.
           All cells   except finite   (their) number occupied empty   symbols
           'All but finitely many cells are occupied by empty symbols.'

g. Každyj mužčina, ženščina i   rebënok pokinuli gorod.
    every   man   woman   and child   left   city
    'Every man, woman and child left the city.'

1.3.2 A-Quantifiers

Co-intersective A-quantifiers can be syntactically simple or complex. For a semantic analysis of major adverbial quantifiers in Russian, see [Pad89b]:

Vsegda 'always', *počti vsegda* 'almost always', *vsjakij raz, kak / vsjakij raz, kogda* 'whenever', *(počti) každyj raz* '(almost) every time.'

(22) a. Ja vsegda / počti   vsegda ezžu v školu   na avtobuse.
          I   always / almost always go   to school on bus
          'I always / almost always ride the bus to school'

      b. Vanja režetsja   vsegda, kogda breetsja / vsjakij raz, kogda / kak breetsja.
          John   cuts himself always when shaves / every   time when / as   shaves
          'John cuts himself when(ever) he shaves / every time he shaves'

1.4 Proportional Quantifiers

1.4.1 D-Quantifiers Agreeing with Nouns

One proportional quantifier that agrees with plural nouns in case is *vse* 'all.' or have the structure *každyj* 'every' + ordinal numeral, e.g. *každyj pjatyj* 'every fifth.'

The construction *X iz Y* 'X out of Y' combines with the restrictor noun like its numeral component that stands before the noun would. The noun can follow either numeral, as in *semʹ studentov iz desjati* 'seven students out of ten' vs. *semʹ iz desjati studentov* 'seven out of ten students' . Correspondingly, numerals that end in *odin* 'one' combine with singular nouns and agree with them in case and gender, those ending in units 2 through 4, when in nominative, genitive or accusative, combine with the small paucal form, others with the large paucal form, and when in other cases, combine with plural nouns and agree with them. If the numeral ends in *odin*, it combines with a singular noun and agrees with it in case and gender in all cases, e.g. in *lišʹ odin ... iz desjati* 'just one ... in ten,' *ni odin ... iz desjati* 'not one ... in ten,' *tridcatʹ odin ... iz sta* 'thirty one ... in one hundred.'

1.4.2 Quantifiers assigning genitive case: D+N$_{Gen}$

Many proportional determiners are syntactically nouns that take a genitive (partitive) complement: *bol′šinstvo* 'most', *vosemdesjat procentov* 'eighty percent of', *dve treti* 'two thirds of', *(značitel′noe) bol′šinstvo* 'a (large) majority of'[9], *(neznačitel′noe) men′šinstvo* 'an (insignificant) minority of.' These can freely combine with modifiers *bolee* 'more than,' *menee* 'fewer than,' *do* 'up to', etc.: *bolee dvadcati procentov* 'more than twenty per cent of', *menee četverti* 'less than one quarter of', *ot dvadcati to tridcati procentov* 'between twenty and thirty percent of', no direct Russan equivalent for *all but a tenth of*, *(liš′) nebol′šoj procent* '(just) a small percentage of', *kakoj procent* 'what percentage of?', *kakaja dolja* 'what fraction of?', *(rovno) polovina* '(exaclty) half (of)', *bolee / menee poloviny* 'more / less than half (of).' Examples of sentences with proportional quantifiers:

(23) a. Bol′šinstvo poetov mečtajut.
          Most   poets   daydream
          'Most poets daydream.'

     b. Shest′desjat procentov amerikanskix podrostkov stradajut izbytočnym vesom.
          sixty   percent American   teenagers suffer   redundant weight
          'Sixty percent of American teenagers are overweight.'

     c. Menee odnoj pjatoj časti amerikancev dvujazyčny.
          less   one   fifth part Americans   bilingual
          'Less than a fifth of Americans are bilingual.'

1.4.3 A-Quantifiers

Russian has a variety of proportional A-quantifiers. Those lacking a one-word expression can be constructed from D-quantifiers with the noun *slučaj* 'case' and preposition *v* 'in.' Here are some examples: *(ne)často* '(in)frequently, (not) often', *v osnovnom / v bol′šinstve slučaev* 'mostly', *obyčno* 'usually', *redko* 'seldom, rarely', *vremja ot vremeni* 'from time to time', *v celom* 'generally,' *v dvux tretjax slučaev* 'two thirds of the time.'

(24) a. Ženščiny v osnovnom golosovali za Rejgana.
          women in basic   voted   for Reagan
          'Women mostly voted for Reagan.'

---

[9] I am not sure whether *podavljajuščee bol′šinstvo* 'the vast majority of,' meaning roughly the same as *počti vse* 'almost all,' must be treated as a proportional or as a co-intersective quantifier.

    b. V bol′šinstve slučaev ženščiny golosovali za Rejgana
       In most   cases   women voted   for Reagan
       'For the most part women voted for Reagan.'

    c. Obyčno, kogda prestupniki ubegajut ot   policii, oni ne ostanavlivajutsja vypit′ kofe.
       usually when outlaws   flee   from police they not stop drink.INF coffee
       'Usually when outlaws flee the police they dont stop for coffee.'

    d. Vanja často ezdit v školu na avtobuse.
       John often goes to school on bus
       'John often / frequently rides the bus to school.'

    e. Vanja redko xodit v muzei   po voskresen′jam
       John rarely goes to museums on Sundays
       'John seldom / rarely visits museums on Sundays.'

1.5 Morphosyntactically complex quantifiers

1.5.1 Complex D-Quantifiers

1.5.1.1 Modified Numerals

Numerals can be modified with both promiscuous ('focus') particles and specialized elements: *priblizitel′no* 'approximately,' *počti (čto)* 'almost,' *rovno* 'exactly,' *tol′ko* 'only,' *liš′* 'just,' or with the prepostion *okolo* 'about' or comparative adverbs *bolee*, *bol′še* 'more,' *menee*, *men′še* 'less.'

    Melchuk [Mel85] classifies the specialized numeral modifiers, which he calls markers of approximateness, into three syntactic groups:

- adverbials, e.g. *priblizitel′no*, *ètak* 'approximately,' *(ne) menee čem* '(not) less than,' *s gakom* 'and more';

- prepositions, e.g. *okolo* 'about,' *ot ... do* 'between ... and,' *za* 'over' (*emu za pjat′ desjat let* 'he is over 50');

- comparatives, e.g. *bolee* 'more (than),' *menee* 'less than.'

    These modifiers, except for the adverbials, are taken [Mel85] to syntactically govern the noun phrase with the numeral and assign case to it (genitive, with the exception of prepositions *pod*, *za* which assign accusative). In this case, the whole quantified NP with the modifying item does not exhibit the surface case normally

associated with its surface position, and is used only in the contexts for nominative or accusative case, or (more rarely) whatever surface case the QNP's form is homophonous with, usually genitive or dative. Examples of modified numerals: *men′še pjati* 'more than five,' *rovno/tol′ko/liš′ pjat′* 'exactly/only/just five,' *men′še pjati* 'less/fewer than five,' *ne men′še/menee pjati* 'at least five,' *ne bol′še/bolee pjati* 'at most five,' *okolo desjati* 'about ten,' *priblizitel′no desjat′* 'approximately ten,' *počti sto* 'nearly/almost a hundred,' *ot pjati do desjati* 'between five and ten.'

The meaning 'approximately' can be expressed not only by overt modifiers, but also by the inversion of the numeral-noun order. If the QNP is an object of a preposition, the head noun precedes the preposition:

(25) a. Javilos′   čelovek tridcat′.
            showed up people   thirty
          'About thirty people showed up.' (NCRL)

  b. Javilos′   tridcat′ čelovek.
      showed up thirty   people
      'Thirty people showed up.'

  c. čerez pjatnadcat′ minut.
      after fifteen   minutes
      'fifteen minutes later'

  d. minut   čerez pjatnadcat′
      minutes after fifteen
      'about fifteen minutes later'

1.5.1.2 Modified value judgment cardinals

Like in English, *mnogo* 'many, much' and *malo* 'little, few' combine with adverbs building complex quantifiers: *osobenno mnogo* 'especially many or much', *sliškom mnogo* 'too many or much', *dovol′no mnogo* 'quite many or much', *sovsem malo* 'altogether little or few', *udivitel′no malo* 'surprisingly little or few', cf. also sentence examples (all examples come from NCRL):

(26) a. V ètot raz   na   festivale bylo   udivitel′no malo   zritelej.
             in this time on festifal was   surprisingly few   viewers
          'This time there were surprisingly few people in the festival's audience.'
          (NCRL)

  b. Odnako ètot organ zrenija   ulavlivaet sliškom malo sveta.
      but   this organ vision$_{Gen}$ catches   too   few   light
      'But this vision organ catches too little light.'

    c. U nas neverojatno mnogo talantlivyx ljudej.
       at us incredibly many talented   people
       'We have incredibly many talented people.'

1.5.1.3 Exception Phrases

Exception phrases are introduced by the preposition *krome* or complex preposition
za isključeniem 'with the exception of'. Among universal quantifiers, the determiner
vse 'all' is preferably used compared to *každyj* 'every.'

(27) a. Vse studenty, krome Vani, prišli na urok rano.
       all students except John came to class early
       'Every student but John came to class early.'

    b. Ni odin student, krome Vani, ne ušël s   večerinki pozdno.
       nor one student except John not left from party   late
       'No student but John left the party late.'

Exception phrases normally combine with universal quantifiers, including neg-
ative concord items like *ni odin* above, which are also likely to be interpreted as
universal quantifiers. However, one can find examples with other quantifiers (exam-
ples below come from NCRL):

(28) a. Krome Èvterpy bylo eščë vosem′ muz.
       except Euterpe was more eight   muses
       'There were eight more Muses not counting Euterpe.'

    b. Komu, krome tebja, ja mogu eščë byt′ nužna?
       who   except you I can   still be   necessary
       'Who can need me if not you?'

    c. Pošli za   neju mnogie, krome professorov i   vrača.
       went after her many   except professors and doctor
       'Many people followed her, with the exception of the professors and the
       doctor.'

    d. ... u mnogix, krome edinstvennogo.
       at   many   except the only
       'Many people with a single exception ⟨ show suffering and doubt on their
       faces ⟩.'

    e. Ne znaju, zametil li   ètu strannost′ kto-to   eščë, krome menja
       not know noticed whether this stangeness who-TO else   except me
       'I don't know if anyone else besides me noticed this strange thing.'

1.5.1.4 Proportional Quantifiers

Proportional quantifiers are generally structurally complex, under both productive constructions: "*každyj* + ordinal numeral" (*každyj pjatyj* 'every fifth') and "cardinal numeral + fraction" (*dve desjatyx* 'two tenths', *tri procenta* 'three percent'); exceptions are fraction names used on their own (including just *polovina* 'half', *tret′* 'one third', *četvert′* 'quarter'). Proportional quantifiers can be modified in various ways: *(liš′, rovno, tol′ko) sem′ iz desjati* '(just, exactly, only) seven out of ten,' *ne menee / bolee semi iz desjati* 'at least / more than seven out of ten'; sentence examples:

(29) a. Sem′ iz   desjati poetov mečtajut.
         Seven from ten   poets daydream
         'Seven out of ten poets daydream.'

    b. Priz polučat bolee odnogo studenta iz   desjati.
        prize get.FUT more one   student from ten
        'More than one student in ten will get a prize.'

    c. Ni odin   učitel′   iz   desjati ne znaet otvet na vopros.
        nor one.NOM teacherNOM from ten   not knows answer on question
        'Not one teacher in ten knows the answer to that question.'[10]

1.5.1.5 Boolean compounds of determiners

Russian forms boolean compounds of determiners, except for conjunctions of determiners ('and') whose meanings are preferably expressed by other means (e.g. *ot X do Y* 'between X and Y' rather than *ne menee X no ne bolee Y* 'at least X but not more than Y'); sentences with conjoined determiners are improved if the shared common noun phrase is supplied with the preposition *iz* 'out of' (it may simply make the sentence grammatical if the selection properties of the quantifiers are otherwise incompatible, as in 30d):

(30) a. Ot   dvux do desjati studentov polučat stipendii   v sledujuščem godu.
         From two   till ten   students get.FUT scholarships in next   year
         'At least two but not more than ten students will get scholarships next year'
         is preferable over

---

[10] The last example is not interpreted as purely proportional. Instead, it reads as referring to a definite set of ten teachers, and can better translated as *Not one of the ten teachers knows the answer to that question*.

b. Ne menee dvux no ne bolee desjati ?(iz) studentov polučat
   not less   two but not more ten   of   students   get.FUT
   stipendii   v sledujuščem godu.
   scholarships in next   year
   'At least two but not more than ten students will get scholarships next year.'

c. Bol′šinstvo poetov, no ne vse (iz nix), spjat dnëm.
   Most   poets   but not all (of them) sleep in.the.afternoon
   'Most but not all poets sleep in the afternoon.'

d. Bol′šinstvo, no ne vse, *(iz) poetov spjat dnëm.
   Most   but not all   (of) poets   sleep in.the.afternoon
   'Most but not all poets sleep in the afternoon.'

e. Ni každyj student, ni každyj učitel′ ne prišël na večerinku.
   Nor every   student nor every   teacher not came to party
   'Neither every student nor every teacher came to the party.'

1.5.1.6 Partitives: D+iz+NP*Gen.pl*

Russian uses syntactically complex NP partitives with the preposition *iz* with car-
dinal, interrogative, universal, or proportional quantifiers. Quantifiers that usually
occur without a common noun restrictor (e.g. *kto* 'who,' *nikto* 'nobody,' *malo čto*
'few things') can still be used in partitive constructions. Determiners that typically
combine with noun restrictors can be used in the partitive construction, but this is
dispreferred (e.g. collective numerals are preferred over cardinal numerals). Parti-
tive constructions with proportional determiners are slightly degraded, too:

(31) a. Liš′ dvoe / ?dva iz studentov / tex /   moix studentov /
          Just two   of students / those / my   students /
          studentov Vani   sdali èkzamen.
          students   John.GEN passed exam
          Just two of (the /those students / my / Johns students) passed the exam.

      b. Kto iz studentov / tex   studentov sdal   èkzamen?
         who of students /   those students   passed exam
         Which of the / those students passed the exam?

      c. ?Kakie iz studentov / tex   studentov sdali èkzamen?
         which of students /   those students   passed exam
         Which of the / those students passed the exam?

      d. Nikto /   ni odin / ?nikakoj iz studentov ne sdal   èkzamen.
         nobody / nor one / no   of students   not passed exam
         None/neither of the students passed the exam.

e. Oba iz studentov sdali   èkzamen.
   both of students   passed exam
   'Both of the students passed the exam.'

f. ?Bolee vos′midesjati procentov / pjat′ šestyx iz studentov ne sdali   èkzamen.
   more   eighty   percent /   five sixths of students   not passed exam
   'More than eighty percent / five sixths of the students passed the exam.'

g. ?Bol′šinstvo iz studentov sdalo   èkzamen.
   majority   of students   passed exam
   'Most of the students passed the exam.'

Among the universal quantifiers, *každyj* 'every' is preferable over *vse* 'all' in partitive constructions:

(32) a. Každyj / ne každyj iz studentov sdal   èkzamen.
        every /   not every of students   passed exam
        'All / Not all of the students passed the exam.'

      b. ??Vse / ?Ne vse iz studentov sdali   èkzamen.
         all /   not all of students   passed exam
         'All / Not all of the students passed the exam.'

1.5.2 Complex A-quantifiers

1.5.2.1 Modification

Russian A-quanifiers are generally modified in the same way as D-quantifiers, cf.:

(33) a. Vanja byl v Moskve rovno   dvaždy / bolee pjati raz.
         John was in Moscow exactly twice /   more five times
         'John has been to Moscow exactly twice / more than five times.'

      b. Vanja počti   vsegda / liš′ inogda ezdit   na   avtobuse.
         John almost always / just   sometimes rides on   bus
         'John almost always / just rarely takes the bus.'

      c. Vanja ezdit na avtobuse v dva raza čašče,   čem ty.
         John rides on bus   in two times more often than you
         'John takes the bus twice as often as you.'

1.5.2.2 Boolean compounds

A-quantifiers can become syntactically more complex through coordination as well as through coordination of the determiners they include:

(34) a. Vanja propuskal urok ot   trëx do pjati raz.
           John has missed class from two to five times
      (not translatable into Russian with adverbial coordination) 'John has missed class at least twice but not more than five times.'

      b. Na prezidentskix vyborax Marija často,   no ne vsegda, golosovala za demokrata.
           In presidential   elections Mary   frequently but not always voted for Democrat
           'In presidential elections Mary has frequently but not always voted for a Democrat'

1.6 Comparative Quantifiers

1.6.1 Comparison of NP extensions

Russian comparative constructions have largely the same structure as in English. The distribution of comparative D-quantifiers, however, is limited to the positions of the subject and direct object. Even in the case of subjects there is a strong tendency for such comparative noun phrases to be sentence final (postverbal if the sentence has a verbal predicate). (I could not illustrate any positions created by raising to object, due to the absence of clear cases of raising verbs in Russian.)

(35) a. Na večerinku prišlo bol′še učenikov, čem učitelej.
           on party   came more students   than teachers
      More students than teachers came to the party

      b. Na večerinku prišlo ne men′še učenikov, čem učitelej.
           on party   came not less   students   than teachers
           At least as many students as teachers came to the party

      c. Ja konsul′tirovala primerno stol′ko že mužčin, skol′ko i ženščin.
           I consulted approximately as many   men   as also women
           I consulted approximately as many men as women.

      d. Ja znaju bol′še učenikov, čem učitelej.
           I know more students   than teachers
           I know more students than teachers (Direct Object)

e. *Ja rabotal s   bol′še učenikov, čem učitelej.
    I   worked with more students   than teachers
    I have worked with more students than teachers (Obj of Prep)

f. *Byli ukradeny velosipedy stol′kix že učenikov, skol′ko i učitelej.
    were stolen bicycles   as many   students as also   teachers
    Just as many students' as teachers' bicycles were stolen (Possessor)

1.6.2 Comparison of sentential predicate extension (Type $\langle 1, \langle 1, 1 \rangle \rangle$)

Russian has counterparts of English quantifiers with just one conservativity domain but two predicate properties; these include *(ne) bol′še ... čem* '(not) more ... than,' *(ne) men′še ... čem* '(not) less ... than,' *te že ... čto/kotorye* 'the same ... as/which,' *stol′ko že ... skol′ko* 'as many ... as,' covering the whole range of comparative operators as in previous subsection. These, too, are generally found with verb - subject word order in the main clause, and are most often elliptical. Examples:

(36) a. Na večerinku prišlo bol′še studentov, čem gotovilos′ k èkzamenam.
          to party   came more   students   than prepared for exams
      More students came to the party than studied for their exams

b. Rano prišli te že   studenty, čto / kotorye ušli pozdno.
    early came the same students that / which   left late
    The same students came early as left late ($\neq$ The students who came early left late)

c. Tam rabotajut te že   prepodavateli, čto i   v institute.
    there work   the same professors   that also in institute
    The same professors work there as in the institute.

    $(Prof \cap Work(there) = Prof \cap Work(institute))$

1.7 Type $\langle 2 \rangle$ Quantifiers

Russian has exact counterparts of most English type $\langle 2 \rangle$ quantifiers [**?**] including those not reducible to the iterated application of two functions of type $\langle 1, 1 \rangle$:

(37) a. Kakie studenty otvetili na kakie voprosy (na èkzamene)?
 which students answered on which questions (on the exam)?
 Which students answered which questions (on the exam)?

 b. Vse studenty otvetili na odni i te že voprosy (na èkzamene)
 all students answered on one and the same questions (on the exam)
 All the students answered the same questions on the exam

 c. Vse studenty otvetili na raznye voprosy (na èkzamene)
 all students answered on different questions (on the exam)
 Each student answered a different question on the exam (for every two students, the sets of questions they answered were different)

 d. Raznye studenty otvetili na raznye voprosy (na èkzamene)
 different students answered on different questions (on the exam)
 Different students answered different questions (ambiguous between the reading of the sentence above and 'for at least two students, the sets of questions they answered were different.')

 e. Vanja i Petja živut v sosednix derevnjax.
 John and Peter live in neighboring villages
 John and Bill live in neighboring villages

 f. Oni živut v raznyx kvartirax v odnom i tom že zdanii.
 they live in different apartments in one and the same building
 They live in different apartments in the same building

 g. Na vsex učastnikax byl galstuk odnogo cveta.
 On all participants was necktie one.GEN color.GEN
 All the participants wore the same color necktie

 h. Vanja tanceval s Mašej, no bol′še nikto
 John danced with Mary but more no one
 ni s kem ne tanceval.
 nor with whom not danced.
 John danced with Mary but no one else danced with anyone else (Doesn't sound right with the second *bol′še* 'else')

 i. Kartiny nado povesit′ v raznyx komnatax ili
 paintings should hang in different rooms or
 na protivopoložnyx stenax odnoj komnaty.
 on opposite walls one.GEN room.GEN
 The paintings should be hung in separate rooms or on opposite walls of the same room

j. (Raznye)   prisjažnye sdelali razne   vyvody   iz   odnix i
    (Different) jurors   made   different conclusions from one   and
    tex že   argumentov
    the same arguments
    The/Different jurors drew different conclusions from the same arguments

In addition to these, instances of Hybrid Coordination are type $\langle 2 \rangle$ (type $\langle n \rangle$, for n greater than 1) quantifiers which are expressed by a single syntactic constituent. Their meanings can always be paraphrased using a combination of some type $\langle 1 \rangle$ quantifiers, so the meanings expressed are Fregean (but still of type $\langle 2 \rangle$), with the possible exception of interrogative quantifiers.

1.8 Distributive Numerals and Binomial Each

In Russian the adverbial *v obščej složnosti* 'in total' forces group (collective) readings , *každyj* 'each,' either as a modifier or as a floating quantifier, forces distributive readings:

(38) a. Tri   prepodavatelja proverili v obščej složnosti sto rabot.
          three instructors   graded   in total   100 exams
          Three instructors graded 100 exams between them / in total (just group/collective)

     b. Tri   prepodavatelja proverili sto rabot   každyj.
         three instructors   graded   100 exams each
         Three instructors graded 100 exams apiece / each (just a distributive, SWS reading)

Russian forms distributive quantified phrases with numerals using the preposition *po*. It shows peculiar selection properties. Numerals *tysjača* 'thousand,' *million* 'million,' *milliard* 'billion,' *odin* 'one,' and those ending in *odin* 'one' [11]

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[11] In colloquial Russian, *po*+Dative in examples like *po dvadcati odnomu* 'twenty one each' tend to be replaced with nominative like in *po dvadcat' odin*. This use is restricted to inanimate masculine nouns, probably because the masculine form is underspecified for nominative vs. accusative. Such expressions, however, remain marginal. Cf. an actual example from fiction (Dmitrii Kurtsman, *Skazanie O Side*):

(39) Nam po dvadcat′ odin god.
      We   PO twenty   one year
      'We are twenty one year old each.'

are in dative case when combined with the distributive *po*, while noun phrases with other numerals are used in nominative. Here are some naturally occurring examples (all but the first one are taken from NCRL):

(40)   a. Každyj govorit o predmete po odnomu predloženiju.
           every   says   on subject PO one.DAT sentence.DAT
           'Everybody says one sentence on the topic.'

    b. Po dvadcati   odnomu vagonu v každom sostave bylo.
           PO twenty.DAT one.DAT car.DAT in each   train   was
           'Every train had twenty one cars.'

    c. Každyj iz nix   vložil   v predprijatie po 245 tysjač   dollarov.
           Each   of them invested in enterprise   PO 245 thousand dollars
           'Each of them invested 245,000 dollars into the enterprise.'

1.9 Mass quantifiers and Count classifiers

1.9.1 Count Noun Determiners

In Russian, numerals combine with count but not mass nouns: *desjat′ domov* 'ten houses' / *#desjat′ vodorodov* 'ten hydrogens', though, like in English, numerals may induce a type reading with mass nouns: *dva neploxix vina* 'two good wines' = 'two good types of wine,' or a portion reading: *dva saxara* 'two sugars' = 'two packs of sugar,' *tri piva* 'three beers' = 'three glasses of beer'. The determiners *(ne)mnogie* '(not) many' and the oblique cases of *skol′ko* 'how many, how much' are morphologically plural and do not combine with mass nouns: *ot skol′ki domov* 'from how many houses?' / *ot skol′ki *vodoroda/#vodorodov* 'from how many *hydrogen / #hydrogens?' (but OK *skol′ko vodoroda* 'how much hydrogen'). *Nekotoryj* '(a) certain' can be either plural or singular but is not used with mass nouns: *nekotoryj kod* 'a certain code,' but *#nekotoroe pivo* 'a certain beer.'

Neskol′ko 'several' in the modern language also combines only with count nouns, although historically it used to mean 'some' and combined with both mass and count nouns as in obsolete expressions like *neskol′ko vremeni* 'some time,' *neskol′ko deneg* 'some money'.

1.9.2 Two-way determiners

Most Dets in Russian combine with both mass and count nouns. Most of these quantifiers assign genitive singular (or partitive) to mass nouns, and genitive plural (or the greater paucal form) to count nouns. This includes proportional determiners. Determiner *vs-* 'all' does not assign case to its NP but rather agrees with it; is selects for plural and is used in the plural when combined with count nouns, and selects for singular and has a singular form with mass nouns.

(41)   a. malo studentov /   masla,   desjat′ procentov podrostkov / zolota
           few   students.GEN / butterGEN, ten   per cent   teenagers /   gold
           few students / little butter, ten per cent of U.S. teenagers / ten per cent of
           gold

       b. vse   doma /   vsë   pivo,   mnogo okon /   vina
           all.NOMPL houses.NOM / all.NOMSGN beer.NOM⟨N⟩, a lot of windows / wine
           All (the) houses / all (the) beer, a lot of windows / a lot of wine

       c. skol′ko-to mašin / reziny, nikakie mašiny / nikakaja rezina
           some   cars /   rubber, no   cars /   no   rubber
           (some/no) car(s) / (some/no) rubber,

       d. nedostatočno studentov / vina, malo studentov / vina
           not enough   students   wine, little students   wine
           not enough students / not enough wine, few students / little wine

1.9.3 Mass noun determiners

There are no determiners in Russian that combine exclusively with mass nouns.

1.9.4 Numeral classifiers

Classifiers in Russian, like in English, convert mass terms into count ones, enabling us to combine them with numerals and mark plural: *sto **golov** skota* '100 head of cattle,' *pjat′ **počatkov** kukuruzy* 'five ears of corn', *odin **kusok** myla* 'a bar of soap', *neskol′ko **listov** bumagi* 'several sheets of paper', *odna **buxanka** xleba* 'a loaf of bread'. In addition to this, when counting people, the classifier *čelovek* 'person' can be used after numerals, followed by the noun phrase in genitive plural:

(42) Sorok pjat′ čelovek rjadovyx i odin lejtenant.
    forty   five people soldiers   and one lieutenant
    'Forty five soldiers and one lieutenant.' (From Ju. Dombrovsky, *Obez′jana prixodit za svoim čerepom*[12])

1.9.5 Containers and measures

Container expressions can also be used to convert mass to count terms, but to some extent retain their meaning of a physical object. Syntactically they are quantified noun phrases with a mass noun dependent in genitive or partitive:

(43) dve butylki vina; paket moloka; mnogo korobok konfet
    two bottles wine bag   milk   many boxes   candy
    'two bottles of wine, a carton of milk, many boxes of candy'

For example, buying a bottle of milk usually includes buying a bottle, but it could also refer to filling one's own bottle with milk. In other words, names of containers specify quantity (like measure phrases), but in addition to that require that the measured entity is in the specified container *at some moment.*

(44) Petja vypil paket moloka
    Peter drank bag   milk
    'Peter drank out a bag of milk'

Measure phrases behave like abstract containers, specifying pure quantity. Like container words, they assign partitive case to the mass noun:

(45) dva funta   syra / syru;   kilogramm soli; mnogo tonn nefti
    two pounds cheese.GEN / cheese.PART kilogram   salt many   tons oil
    'two pounds of cheese, a kilogram of salt, many tons of oil'

1.9.6 Space and time measures

Units of time and distance, like measure phrases, follow the metric system. Non-metric measure terms like *sažen′* (distance, $\approx$7 feet), *versta* (distance, $\approx$ 3,500 feet),

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[12] Here and below, whenever sources of examples are marked, the examples are taken from the National Corpus of Russian Language (`http://www.ruscorpora.ru/`).

pud (weight, ≈36 lbs) are obsolete. The object measured can again be expressed with a noun phrase in genitive or partitive.

(46) a. Ja prospal desjat′ časov.
           I   slept.for ten   hours
           'I slept for ten hours.'

      b. Ja vernus′   čerez sem′ dnej.
          I   return.FUT after seven days
          'I will return in seven days.'

(47) a. Ja prospal desjat′ časov.
           I   slept.for ten   hours
           'I slept for ten hours.'

      b. Ja vernus′   čerez sem′ dnej.
          I   return.FUT after seven days
          'I will return in seven days.'

      c. V nedele sem′ dnej.
          in week   seven days
          'There are seven days in a week.'

(48) a. Novogrodovka naxoditsja v soroka kilometrax ot   Donecka.
           Novogrodovka is.found   in forty   kilometers from Donetsk
           'Novogrodovka is forty kilometers from Donetsk.' (from world wide web)

      b. Vanja na tri   santimetra vyše, čem Petja.
          John   on three centimeters taller than Peter
          'John is three centimeters higher than Peter.'

1.10 Existential construction

Existential sentences in Russian have the form "restricting prepositional phrase + copula + subject NP." The present tense copula *est′*[13] may be omitted in the presence of the restricting prepositional phrase.

(49) a. V klasse sejčas (est′) pjat′ učenikov; v prošlom godu bylo desjat′.
           in the class now (is)   five students; last year   was ten
           'There are five students in the class now; last year there were ten (students in the class)'

---

[13] *Est′*, which I gloss as "is," does not distinguish number, person, or gender forms.

b. V klasse sejčas net učenikov; v prošlom godu bylo mnogo.
in the class now is.no students; last year was many
'There are no students in the class now; last year there were many (students in the class)'

c. V dome kto-to est′
in the house someone is
'There is someone in the house'

d. Kto (est′) v dome?
who (is) in the house
'Who is in the house?'

e. Est′ li kto-libo v dome?
is whether anyone in the house
'Is there anyone in the house?'

f. V dome nikogo net
in the house nobody is.no
'There isn't anyone in the house.'

The meaning of existence can also be expressed with a special verb *suščestvovat′* 'exist' (examples from NCRL):

(50) a. Suščestvuet tak nazyvaemaja Minskaja gruppa OBSE.
exists so called Minsk:ADJ group OSCE
'There is so-called OSCE Minsk Group'

b. Suščestvuet celyj rjad takix bibliotek.
exists whole row such libraries.GEN
'There is quite a number of such libraries.'

Russian does not exhibit English-like restrictions on the determiners in existential statements:

(51) a. V klasse est′ vse studenty.
in class is all students
'All students are in the class.'

b. V klasse est′ bol′šinstvo studentov.
in class is most students
'Most students are in the class.'

c. V klasse est′ Vanja.
in class is John
'John is in the class.'

Negative existential statements, as in the examples below, use the same negative particle *ne* as in simple declarative sentences. Present tense is exceptional, though: instead of **ne est′* Russian uses the special form *net* or (colloquial) *netu*[14].

(52) a. V slovare   net / netu risunkov.
          in dictionary is.no   pictures
          'There are no pictures in the dictionary'

    b. V slovare   ne bylo risunkov.
          in dictionary not was pictures
          'There were no pictures in the dictionary'

    c. V slovare   ne budet   risunkov.
          in dictionary not be.FUT pictures
          'There will be no pictures in the dictionary'

Existential copula *byt′* 'be' is also used as the default way to express possession, with the possessor expressed by a prepositional phrase with the preposition *u*:

(53) a. U menja net / netu risunkov.
          of I.GEN is.no   pictures
          'I have no pictures.'

    b. U menja est′ risunki.
          of I.GEN is   pictures
          'I have (some) pictures.'

    c. U menja byli risunki.
          of I.GEN were pictures
          'I had (some) pictures.'

1.11 Floating Quantifiers

Russian, like English, allows *vse* 'all' and *oba* 'both' be part of the predicate as well as of a noun phrase. Examples:

(54) a. Eti   studenty včera   oba gotovilis′ k èkzamenam.
          these students yesterday both prepared for exams
          'Yesterday these students both studied for their exams.'

---

[14] Like *est′*, the negative present-tense copulas do not distinguish number, person, or gender forms.

b. Oba studenta včera gotovilis′ k èkzamenam.
Both students yesterday prepared for exams
'Yesterday both students studied for their exams.'

c. Petja i Vanja včera oba gotovilis′ k èkzamenam.
Peter and John yesterday both prepared for exams
'Yesterday Peter and John both studied for their exams.'

d. Eti studenty včera vse gotovilis′ k èkzamenam.
these students yesterday all prepared for exams
'Yesterday these students all studied for their exams.'

e. Vse studenty včera gotovilis′ k èkzamenam.
all students yesterday prepared for exams
'Yesterday all the students studied for their exams.'

f. Maša, Petja i Vanja včera vse gotovilis′ k èkzamenam.
Mary Peter and John yesterday all prepared for exams
'Yesterday Mary, Peter, and John all studied for their exams.'

Numerals do not usually occur in the same form in predicates as within noun phrases; instead, special adverbial forms are used: *vdvoëm* 'two in quantity,' *vtroëm* 'three in quantity,' *včetverom* 'four in quantity,' etc. These adverbs, however, not only specify quantity but also force a group reading; this component of their meaning may be translated as 'together:'

(55) a. Eti dva studenta včera gotovilis′ k èkzamenam.
these two students yesterday prepared for exams
'Yesterday these two students studied for their exams.' = 'Yesterday these students both studied for their exams.'

b. Eti studenty včera vdvoëm gotovilis′ k èkzamenam.
these students yesterday in.two prepared for exams
'Yesterday these two students studied for their exams (together') ≠ 'Yesterday these students both studied for their exams.'

To the extent that floating numerals are acceptable, collective numerals (*troe* '3', *četvero* '4', *pyatero* '5' etc.) are preferable compared to cardinal numerals (e.g. *tri*, *četyre*, *pyat′*)

(56) a. Eti tri studenta včera gotovilis′ k èkzamenam.
these three students yesterday prepared for exams
'Yesterday these three students studied for their exams.'

b. Eti studenty včera *tri / ?troe (OK vtroëm) gotovilis′ k èkzamenam.
these students yesterday three (OK in.three) prepared for exams
'Yesterday these three students studied for their exams.'

1.12 Quantifiers as predicates

In Russian, not only cardinal numerals and value judgment cardinals can function as predicates but also measure phrases and container phrases. The subject noun phrase in this case is not nominative but a form that most of the time is the same as genitive. The case of the quantified subject NP is thus the same as in quantifier constructions. However, predicate quantifier constructions do not always look like QNPs with displaced nominal part. More precisely, count terms as subjects of quantifier predicates accept the greater paucal (plural) form, even if the numeral that functions as a predicate combines with the smaller count form, like *dva* does, or with nominative singular, like *dvadcat′ odin* does. One exception to this is the predicate *odin* 'one', which combines with nominative subjects. Mass terms take partitive (singular) form:

(57) a. Student   byl odin.
           student.NOMSG was one
           'The student was one in number.'

  b. Studentov   bylo dva.
      student.GENPL was two
      'Students were two in number.'

  c. Studentov   bylo pjat′.
      student.GENPL was five
      'Students were five in number.'

  d. Studentov   bylo dvadcat′ odin.
      student.GENPL was twenty   one
      'Students were five twenty one.'

  e. Studentov   bylo pjat′ vagonov.
      student.GENPL was five car
      'Students were five (train) cars in volume.'

  f. Muki   bylo pjat′ jaščikov.
      flour.GENSG was five cases
      'The flour was five cases in volume.'

  g. Vody   bylo pjat′ litrov.
      water.GENSG was five liters
      'The water was five liters in volume.'

1.13 Determiners functioning as arguments

All determiners can function as DPs in an elliptical contexts, as seen in the following example:

(58) Galstuki byli nedorogi,   tak čto ja primeril
    ties   were inexpensive so   I fit
   tri,   neskol′ko, bol′šinstvo, mnogo, vse, každyj
   three several   many   most   all every
   'The ties were inexpensive so I tried on three, several, a few, many, most of them, them all, each one.'

1.14 Relations between universal, existential, and interrogative pronouns

As I mentioned in the beginning of this article, many pronouns and pronominal adverbs are organized in series. This means systematic formal relations between e.g. interrogative pronouns and universal pronouns: *kogda* 'when', *vsegda* 'always' (temporal adverb), *čego* 'of what', *vsego* 'of everything' (Genitive singular inanimate),*čemu* 'to what', *vsemu* 'to everything' (Dative singular inanimate), *gde* 'where', *vezde* 'everywhere' (locative adverb, with voicing of /k/ of the interrogative stem and /s/ of the universal stem). The formal relation of interrogatives with universals (and demonstratives) is a heritage of Proto-Slavic where this was very regular. Speakers of in modern Russian feel the relation even though it has been sometimes historically obscured, cf. formal defferences is *kak* 'how' and *vsjako* 'in all ways'; *otkuda* 'whence' and *otovsjudu* 'from everywhere'; and sometimes the universal counterpart to interrogatives is missing as with *skol′ko* 'how many', *začem* 'what for.'

In contrast, the derivation of various quantifiers which are formally based on interrogative pronouns by means of prefixes or postfixes is fully regular and productive. For instance, Russian can form certain ('free choice') quantifiers with the universal reading from interrogative ones using the postfix *ugodno*: *kto ugodno* 'whoever', *čto ugodno* 'whatever', *kogda ugodno* 'whenever', *gde ugodno* 'wherever', *kak ugodno* 'however', *počemu ugodno* *whyever. Their usage as universals is licensed by a modal operator, so that they can be rendered through English *any*-pronouns, cf. examples (from world wide web):

(59) a. Zdes′ možno otpravit′ čto   ugodno za voznagraždenie.
          Here possible send.INF what ever   for reward
          'For a fee, one can send anything here.' (= for all X, one can send X here
          for a fee)

      b. Ja budu   kem ugodno, liš′ by   byt′ s   toboj.
          I   be.FUT who ever   just MODAL be.INF with thee
          'I will be anyone just to be with you.' (= for all properties X, if being X is
          required to be with you, I will be X)

Existential ('indefinite') pronouns are all based on interrogatives, derived with a prefix (*koe-*) or a postfix (*-libo*, *-to*, *-nidub′*).

1.15 Decreasing Quantifiers

1.15.1 Decreasing Determiners

Russian does have determiners which build decreasing NPs. Some intersective ones are problematic due to negative concord: any sentence with *ni odin* 'not one' or *nikakoj* 'no' has to have a sentence-level negation *ne*, so that these quantifiers are preferably analyzed as denoting increasing determiners. Two options are open and have been advocated: existential quantifiers obligatorily interpreted under the scope of negation[15], and universal quantifiers obligatorily outscoping negation [Abe05].

(60) Ni odin student ne prišël na lekciju.
        nor one student not came to lecture
      'No students came to the lecture.' (Intersective; negative concord)

Still, there are decreasing determiners that are not involved in negative concord. Examples:

(61) a. Prisutstvovalo men′še pjati studentov.
          attended   fewer five students
          'Fewer than five students attended.'

      b. Ne   vse deti   mnogo plačut.
          Not all children a lot   cry
          'Not all children cry a lot.' (Co-intersective)

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[15] This approach is incorporated into Yanovich's account of Russian indefinites [Yan05] where quantifiers like *nikakoj* are interpreted as choice functions.

c. Men′še četverti studentov sdali èkzamen.
Less quarter students passed exam
'Less than a quarter of the students passed the exam.' (Proportional)

d. Ne bolee semi iz desjati morjakov kurjat sigary.
not more seven from ten sailors smoke cigars
'Not more than seven out of ten sailors smoke cigars.'

1.15.2 Negative Polarity Items

The closest Russian can get to English negative polarity items are quantifier words
with the postfix *-libo* (see also section 1.1.10). They are licensed by decreasing NPs,
with the exception that they do not co-occur with the same-clause sentential negation
ne, which is obligatory if there is a constituent with *ni* in the sentence 62a; *-libo-*
quantifiers are only possible in negative contexts if they are licensed by a different
operator (e.g. the conditional operator) and take scope over negation, cf. 62b:

(62) a. Ni Vanja, ni Petja nikogda ne byli v Moskve.
Nor John nor Peter never not were in Moscow
'Neither John nor Peter have ever been to Moscow.'

b. Esli ni Vanja, ni Petja nikogda ne byli gde-libo...
if nor John nor Peter never not were anywhere
'If there's a place that neither John nor Peter have ever been to...'

c. Ne bolee dvux učenikov videli na progulke kakix-libo ptic.
Not more two students saw on walk any birds
'Not more than two students saw any birds on the walk.'

d. Men′še poloviny studentov zdes′ kogda-libo byli v Pinske.
Less half students here ever were in Pinsk
'Less than half the students here have ever been to Pinsk.'

1.16 Distribution of QNPs

1.16.1 Some restrictions on QNP distribution

QNPs in Russian can occur in all major grammatical functions, including subject,
object, object of adposition, and possessor. This is constrained by the fact that some

QNPs can only be used as nominative or accusative but not oblique case (exemplified below by a QNP modified by *okolo* 'about'). Examples:

(63)   a.   Vanja otvetil   liš′ na tri   voprosa   na èkzamene.
             John   answered just on three questions on exam
             'John answered just three questions on the exam.'

       b.   Ja otvetil   na vse voprosy, krome odnogo.
            I   answered on all   questions except one
            'I answered all but one question / all but one of the questions.'

       c.   Maša otvetila   na bol′šinstvo / tri   četverti voprosov.
            Mary answered on most /   three quarters questions
            'Mary answered most / three quarters of the questions.'

       d.   Biblioteka poslala izveščenie neskol′kim / vsem
            library   sent   notice   several /   all
            studentam /   primerno polovine / *okolo   poloviny studentov.
            approximately half.DAT / *about   half.GEN students
            'The library sent a notice to several students / all the students / about half
            the students.'

       e.   Byli arestovany vrači   dvux   studentov.
            were arrested   doctors two.GEN students.GEN
            'Two students' doctors were arrested.'

       f.   Vrač každogo   studenta   vysoko kvalificirovan.
            doctor every.GEN student.GEN highly   qualified
            'Every / Each student's doctor is well qualified.'

       g.   Vanja oprosil   vračej   bol′šinstva studentov.
            John   interviewed doctors most.GEN   students.GEN
            'John interviewed most of the students' doctors.'

       h.   Vanja oprosil   okolo tysjači   studentov.
            John   interviewed about thousand.GEN students.GEN
            'John interviewed about a thousand students.'

       i.   *Vanja znakom   s   okolo tysjači   studentov.
            John   is acquainted with about thousand.GEN students.GEN
            'John knows about a thousand students.' (*s* assigns instrumental case, and an
            okolo-modified QNP can only function as nominative, accusative, or geni-
            tive)

1.16.2 Dislocated QNPs

QNPs generally occupy the same positions as definite NPs. Wh-quantifiers, fronted to the sentence edge, are one natural class of exceptions. Overtly negated NPs occur either topicalized (sentence-initially) or in the sentence-final position; in the latter case, they always bear the nuclear pitch accent:

(64) a. Ne každyj student otvetil   na každyj vopros.
           not every   student answered on every   question
           'Not every student answered every question.'

      b. Vanja otvetil   ne na každyj vopros.
          John   answered not on every   question
          'John answered not every question.'

1.17 Scope Ambiguities

Like in English, two or more arguments of a given predicate in Russian can be bound simultaneously by QNPs. In this case, scope ambiguities may arise:

(65) Nekotoryj redaktor pročël každuju rukopis′.
        some   editor   read everj   manuscript
      Some editor read every manuscript (Scope ambiguous in Russian, like its English counterpart)

Two scope readings are available:

- Subject Wide Scope (SWS): There is one editor x such that x read all the manuscripts.

- Object Wide Scope (OWS): Each manuscript is such that at least one editor read it (possibly different editors read different manuscripts).

(66) Tri   prepodavatelja proverili sto rabot.
        three instructors   graded   100 exams
      Three instructors graded 100 exams

Both SWS and OWS readings are marginal in this example; the group reading is the prominent one:

- SWS: There are 3 instructors each one of which graded 100 exams.

- OWS: There are 100 exams such that each instructor graded them.

- Group: There is a group of 3 instructors and a group of 100 exams and the group of instructors graded the group of exams.

Modified numerals in object position tend to force narrow scope:

(67) Každyj student pročël odnu p′esu Shekspira   na kanikulax.
         each   student read   one   play Shakespeare.GEN on vacation
      Each student read one Shakespeare play over the vacation (Scope ambiguous;
      only SWS if *odin* receives a phrasal accent)

(68) Každyj student pročël ne menee odnoj p′esy Shekspira.
         each   student read   not less   one   play Shakespeare.GEN
      Each student read at least one Shakespeare play (Just SWS reading)

Negative concord items are usually interpreted in situ. The following examples are interpreted with SWS, except if the context forces the inverse scope, and and the object QNP is accented (e.g. *How many babies did most politicians kiss at the fair? - Most politicians kissed NO babies at the fair*):

(69) a. Ni odin politik   ne poceloval každogo rebënka na jarmarke.
             nor one politician not kissed   every   baby   on fair
          No politician kissed every baby at the fair (Just SWS)

      b. Bol′šinstvo politikov   ne pocelovalo ni odnogo rebënka na jarmarke.
          Most   politicians not kissed   nor one   baby   at fair
          Most politicians kissed no baby at the fair

          (SWS only, but if the determiner *ni odnogo* receives the nuclear pitch accent, scope ambiguity is facilitated).

      c. Liš′ odin student ne otvetil   ni na odin vopros   na èkzamene.
          just one student not answered nor on one question on exam
          Just one student answered no question on the exam

          (SWS only; if the determiner *ni na odin* receives the nuclear pitch accent, the sentence is not felicitous. On the other hand, if a raising phrasal accent is placed on *liš′ odin*, and a falling phrasal accent on *ni odin*, OWS reading is possible though still marginal).

      d. Vse studenty, krome odnogo, otvetili   po krajnej mere na odin vopros   na èkzamene.
          all students   except one   answered at least   one question on exam
          All but one student answered at least one question on the exam. (SWS only; OWS somewhat facilitated by pitch accent on *na odin*)

Like in English, different choices of D-quantifier lend themselves to different judgments of scope (non-)ambiguity even when the Ds are otherwise near synonyms.

(70) a. Nekotoryj / Kakoj-to redaktor pročël vse rukopisi.
          some   editor   read   all manuscripts
          Some editor read all the manuscripts (Just SWS)

     b. Nekotoryj / Kakoj-to redaktor pročël každuju   rukopis′.
          some   editor   read   every/each manuscript
          Some editor read every/each manuscript (Both scope Ambiguous)

Like in English, *vse* 'all' differs from *každyj* 'each', *ljuboj* 'any', and *vsjakij* 'all, any' in allowing various sorts of collective or group level interpretations, whereas every and each are distributive in interpretation. For example *vse* + N occurs naturally with symmetric predicates, *každyj*, *ljuboj*, and *vsjakij* + N do not:

(71) a. Vse studenty sobralis′ včera   vo dvore.
           all   students gathered yesterday in courtyard
          All the students gathered/met in the courtyard last night

     b. *Každyj / *Vsjakij / *Ljuboj prepodavatel′ sobralsja včera   vo dvore.
          Every /   any   instructor   gathered yesterday in courtyard
          Each instructor gathered/met last night

     c. (Na stole ležala) fotografija vsex studentov.
          (on the table lay) picture   all   students.GEN
          A picture of all the students (was on the table) [Meaning conveyed: one picture, many students]

     d. (Na stole ležala) fotografija každogo studenta.
          (on the table lay) picture   every   student.GEN
          A picture of each student (was on the table) [Possibly as many pictures as students, although some but not all of them may have joint pictures]

1.17.1 Scope ambiguity asymmetries in wh-questions.

Wh-quantfiers outscope all other quantifiers in the question, except for *každyj* 'every, each' that can scope above the wh-quantifier, giving rise to pair list readings. For example, the first two questions below just have a SWS reading.

(72) a. Kakoj student otvetil   na bol′šinstvo voprosov (na èkzamene)?
         which student answered on most   questions (on the exam)?
         Which student answered the most (the largest number of) questions (on the
         exam)?

      b. Kakoj student otvetil   na vse voprosy (na èkzamene)?
         which student answered on all questions (on the exam)?
         Which student answered all the questions (on the exam)?

      c. Na kakoj vopros   otvetil   každyj student?
         on which question answered each   student
         Which question did each student answer? (Both SWS and OWS)

         SWS: For each student x, identify the question x answered OWS: Identify a
         unique question y with the property that each student answered y.

      d. Na kakoj vopros   otvetili   vse studenty?
         on which question answered all   students
         Which question did all the students answer? (Just OWS)

1.17.2 Self Embedding of QNPs.

The choices of Dets on the whole NP and on the embedded NP are fairly indepen-
dent:

(73) (kakoj-to) drug   každogo senatora,   dva druga každogo
      (some)   friend every   senator.GEN, two friends every
     senatora,   každyj drug   každogo senatora
     senator.GEN, every   friend every   senator.GEN
     'a friend of every senator, two friends of every senator, every friend of every
     senator'

    These expressions are in principle scope ambiguous. They are preferably inter-
preted with possessor wide scope 'for every senator, two of his friends' or 'for ev-
ery senator y, a/some/every friend of y;' although, possessor narrow scope readings
'some x / every x such that x is a friend of every senator' and 'two people each of
whom is a friend of every senator' are also available.

    j. Ambiguity between nominal and verbal quantifiers (Gil 1993)

(74) Dva mal′čika speli triždy.
      Two boys   sang three times
      'Two boys sang three times.'

The preferable reading of the last example is the group reading 'there were two boys who sang three times together.' However, both the SWS reading 'there are two boys sang three times each' and the OWS reading 'on three occasions there were two boys who sang' are available.

1.18 One to One dependency: The Indexing Function of Universal Quantifier

Determiners *vsë bol′še* 'more and more' and *vsë men′še* 'less and less' involve quantification over times. Sometimes the domain of quantification is expressed in a prepositional phrase with the preposition *s* 'with,' e.g. *s každym godom* 'every year,' *so vremenem* 'over time,' *s vozrastom* 'with age' = 'as one grows up.' Overt quantifiers other than the universal *každyj* do not appear in the domain of quantification:

(75) S   každym godom vsë bol′še ljudej pokupajut Tojotu.
       with every   year   all more people buy   Toyota
       'More people buy Toyotas every year' (but not *s nekotorym godom* '*some year', *s pjat′ju godami* '*five years')

The usual way to use the domain of the universal *každyj* as an index set for another quantifier over individuals is to use construction $na + NP_{Acc} + prixodit′sja + NP_{Nom}$:

(76) Na každogo žitelja   respubliki   prixoditsja   31,5 gektara zemli.
       on every   resident republic.GEN corresponds 31.5 hectares of land
     'For each resident of the republic, there are 31.5 hectares of land.'

1.19 Rate phrases

Rate phrases in Russian are constructed in the form $amount + v + measure_{Acc}$, usually accompanied with the phrase *so skorost′ju* when indicating motion speed, e.g.:

(77) a. Ètot poezd edet so   skorost′ju 400 kilometrov v čas
          this train   goes with speed   400 kilometers in hour
        'That train is traveling at 400 kilometers per hour.'

b. Ja probegaju dvadcat′ kilometrov v den′.
   I run   twenty   kilometers in day
   'I run twenty kilometers a day.'

c. Vanja umyvaetsja dvaždy / triždy   v den′ / každyj den′.
   John washes.face twice   / three times in day / every   day
   John washes his face twice a day / three times a day / every day

1.19.1 'Every x and y'

Russian, like English, uses combinations of determiners with conjunction *i* 'and' to
form quantifiers out of multiple noun phrases. Russian uses *i* in negative contexts
where English uses *or* in analogous constructions; coordination may be interpreted
as boolean if the common nouns are assumed to be not of type (et) but of the more
complex (lifted) type ((et,(et,t)),(et,t)):

(78) a. Každyj mužčina, ženščina i   rebënok vskočili na bort.
           Every man   woman   and child   jumped on board
          'Every man, woman and child jumped overboard.' (= Every man jumped...,
          every woman jumped..., every child jumped... ≠ Every person who was both
          a man, a woman and a child jumped...)

      b. Každyj gubernator i   mèr   soderžat ogromnoe množestvo ... gazet
          Every governor   and mayor support great   set   newspapers.GEN
          'Every governor and mayor support an enormous number of newspapers.'
          (adapted from NCRL, = 'every governor and every mayor...,' ≠'everyone
          who is both a governor and a mayor...')

      c. Nikakogo pistoleta i   dubinki   u nego net!
          no   gun   and truncheon at him is.not
          'He has no gun or truncheon!' (NCRL)

1.20 Miscellaneous

1.20.1 Structural complexity of quantifiers

The following quantifier stems are synchronically monomorphemic: *k-* 'who,' *č-* 'what,' *vs-* 'all,' *každ-* 'every,' *ljub-* 'any,' numerals 0—10, 40, 100, 1000, *mnog-* 'many, lots,' *mal-* 'few,' *pol-* 'half,' *poltor-* 'one and half,' *ob-* 'both.'

The following quantifier lexemes, in addition to the ones with stems listed above, are just one phonological word:

- *kakoj* 'which,' *skol'ko* 'how many,' *kogda* 'when,' *kak* 'how,' *gde* 'where,' *kuda* 'to where,' *otkuda* 'from where,' *dokuda* 'till where,' *začem* 'for what purpose,' *počemu* 'why;'

- *vsjakij* 'every,' *vsegda* 'always,' *vezde* 'everywhere,' *vsjudu* 'to everywhere,' *otovsjudu* 'from everywhere;'

- *nikto* 'nobody,' *ničto* 'nothing,' *nikakoj* 'no,' *niskol'ko* 'not a single,' *nikogda* 'never,' *nikak* 'no way,' *nigde* 'nowhere,' *nikuda* 'to nowhere,' *niotkuda* 'from nowhere,' *nizačem* 'for no purpose;'

- *kto-to* 'somebody,' *čto-to* 'something,' *kakoj-to* 'some,' *skol'ko-to* 'some quantity of,' *kogda-to* 'sometime,' *kak-to* 'in some way,' *gde-to* 'somewhere,' *kuda-to* 'to somewhere,' *otkuda-to* 'from somewhere,' *začem-to* 'for some purpose;' *dokuda-to* 'till somewhere,' *počemu-to* 'for some reason;'

- more series of quantifiers formed from interrogatives with prefixal and postfixal clitics *koe-*, *-libo*, *-nibud'*, *ne-*[16];

- *bol'še* 'more,' *men'še* 'less;'

- *ni odin* 'not one,' *nemnogo, nemnogie* 'few,' *mnogočislennyj* 'numerous,' *(ne)dostatočno* '(in)sufficiently many;'

- numerals 11-20, 30, 50, 60, 70, 80, 90, 200, 300, 400, 500, 600, 700, 800, 900;

- *inogda* 'sometimes,' *dvaždy* 'twice,' *triždy* 'three times,' *četyreždy* 'four times;' obsolete *odnaždy* 'once' and *mnogaždy* 'many times;'

- *ne vse* 'not everybody / not all,' *ne vsë* 'not everything / not all,' *ne vsyakij* 'not every,' *ne vsegda* 'not always,' *ne vezde* 'not everywhere,' *ne vsjudu* 'not to everywhere,' *ne otovsjudu* 'not from everywhere;'

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[16] All the prefixal clitics can be separated from the stem by a preposition

- *bol′šinstvo* 'a majority of,' *men′šinstvo* 'a minority of,' *polovina* 'half,' *tret′* 'third,' *četvert′* 'quarter;'

- *(ne)často* '(not) often', *v osnovnom* 'mostly', *obyčno* 'usually', *redko* 'seldom', *v celom* 'generally.'

(1) Russian has a monomorphemic stem for 'all' in *vse* 'everybody, all' and *vsë* 'everything, all.'

(2) Russian has a monomorphemic stem *od(i)n-* for 'one.' While there is no special indefinite article and bare noun phrases can be interpreted as indefinite, *odin*, like in English, is sometimes used to express indefiniteness.

(3) Russian has a monomorphemic proportional determiner *pol* 'half'. However, it is a clitic rather than a separate phonological word. *Chasto* 'often' is not monomorphemic since it contains the adverb suffix *-o*.

(4) Russian has two monomorphemic value judgment quantifier stems, *mnog-* 'many' and *mal-* 'few.'

(5) Russian lacks a monomorphemic Det translating *no*.

(6) Russian has at least four universal D-quantifiers: *každyj, vsjakij* 'each, every,' *vse* 'all (the),' *ljuboj* 'any'. *Vse* is the only collective one. Determiner *vsjakij* is reported [Pad89a] to quantify only over infinite sets, hence restricted mostly to mathematical usage.

(7) It is hard to tell whether A-quantifiers are morphosyntactically more complex than D-quantifiers in the case of *často* 'frequently' and *redko* 'rarely,' related to *častyj* 'frequent' and *redkij* 'rare.' Where adjectives have agreement markers (e.g. *-yj* for Nominative singular masculine) adverbs place a constant adverbial suffix *-o*. *Dvaždy* 'twice,' *triždy* 'three times,' *četyreždy* 'four times' are built from simpler *dva* 'two,' *tri* 'three,' *četyre* 'four.' *V osnovnom* 'mostly' has an internal structure of a prepositional phrase, and *n raz* 'n times,' *mnogo raz* 'many times' have the internal structure of an NP.

1.20.2 Only

The particle *tol′ko* 'only' functions like English *only*, except it cannot semantically combine with a proper subconstituent of its syntactic scope:

(79)   a. Tol′ko Vanja polučil priz.
           Only   John   got   prize
          'Only John got a prize.'

b. Tol′ko studenty prisutstvovali na ceremonii.
Only students were at ceremony
'Only students attended the ceremony.' (= everybody who attended the ceremony were students)

c. Petja tol′ko pil pivo.
Peter only drank beer
'All Peter did was drink beer.' (not 'All that Peter drank was beer,' a possible meaning in English)

In addition to *tol′ko*, the meaning 'only' can be rendered by the particle *liš′* or the combination of the two *tol′ko liš′*

(80) a. Botaniki priznajut liš′ 4 "xorošix" vida astrofitumov.
botanists recognize just 4 "good" species astrophyta.GEN
'Botanists recognize only 4 'true' species of astrophyta.' (NCRL)

b. No vsë èto liš′ tol′ko raz v godu.
But all this just only time in year
'But all this happens only one time in a year.' (NCRL)

Determiner *odin* 'one' is yet another way to express 'only.' Unlike the particles *tol′ko* and *liš′*, *odin* combines only with nouns and agrees with them in case, number, and gender:

(81) a. Arestovali odnogo Andreja.
Arrested one.MASCACCSG Andrew.ACC.
'Only Andrew was arrested.' (NCRL)

b. U nas v sem′e odni devčonki.
at us in family one.NOMPL girl.NOMPL
'There are only girls in our family.' (NCRL)

c. pita′=sja odnimi pel′menjami
feed.INF-REFL one.INSTRPL dumpling.INSTRPL.
'to eat only dumplings' (NCRL)

1.21 Additions

1.21.1 Obscene quantifiers

Some quantifier expressions in Russian are idioms based on words with emotional connotations, more specifically, on certain masculine stems. These include: *čërt* 'devil,' tabooed *xuj* 'penis,' and euphemisms of the latter: *xren* 'horseradish,' *xer* 'letter X,' *fig* 'fig' (*xer* and *fig* are obsolete in their literal meanings).

The following models freely combine with these words giving quantifiers: *ni Xá* 'nothing,' 'not at all;' *do Xá* or *do X́a* 'plenty;' *na Xá* 'what for (usually in rhetorical questions);' *kakogo X́a* 'why (usually in rhetorical questions).' Examples:

(82) a. Kakogo xéra ty   pritaščila eë sjuda?
          which   xer thou dragged   her here
          'Why did you take her here?' (NCRL)

      b. Ix   tam v èto vremja do čërta.
          they there in this time   till devil
          'There are plenty (of them) there at this time.' (NCRL)

      c. Ni čertá on ot   menja ne polučit.
          nor devil he from me   not get.FUT
          'He won't get anything from me.' (NCRL)

Rarely, the feminine *pizda* 'vulva' is found in similar constructions: *ni pizdy* 'nothing,' *kakoj pizdy* 'why.'

1.21.2 Hybrid Coordination

Russian allows coordination of constituents (arguments or adjuncts) of different categories given that they include the same type of quantifier. Semantically, they can be analyzed as resumptive quantifiers of that type (i.e. quantifiers over pairs or tuples):

(83) a. Vsem,   vezde   i   vse   do lampočki
          everyone$_{dat}$ everywhere and everything$_{nom}$ don't care
          'nobody cares about anything anywhere' = for all triples (x,y,z) [x doesn't care about y in the place z]

    b. Kto-to   i   kogo-to   obidel
       someone$_{nom}$ and someone$_{acc}$ offended
       'someone offended somebody' = for some pair (x,y) [x offended y]

    c. Nikto   i   ni ot   kogo ix   ne skryvaet
       nobody and nor from whom them not conceals
       'nobody conceals them from anyone' = for no pair (x,y) [x conceals them from y]

    d. Kto i   kogda tebe skažet pravdu?
       who and when you tell   truth
       'who will tell you the truth and when?' = for what pair (x,y) [x will tell you the truth at moment y]

See papers by Kazenin, Chaves and Paperno for more syntactic and semantic data. [CP07, Kaz00, Pap09].

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