Size Adjectives and Aggregate Nouns in Russian: The Case of melkij

1. Introduction. Object mass nouns like *furniture*, granular aggregates such as *rice* and collective nouns such as the Russian klubnika 'strawberry' have grammatical properties of mass nouns, despite being conceptually associated with clearly defined natural units (NU, Krifka 1989), e.g., a chair, a grain of rice, and a single berry. Such NU seem not to be linguistically accessible: for instance, they cannot be used for counting, e.g., we cannot say *three rices* meaning 'three grains of rice'. Still, certain linguistic phenomena can access such units. Schwartzschild (2011) shows that adjectives which he calls stubbornly distributive, including adjectives of size and shape, can access such units and specify their properties. For instance, the expression *big furniture* specifies that **the pieces of furniture** are big.

Diverging from this documented observation, default size adjectives in some languages cannot apply to mass aggregates. For instance, in Russian, the default size adjectives malen'kij 'small' and bol'šoj 'large' cannot be used with nouns like ris 'rice' or pesok 'sand' (1b). Instead, Russian uses specialized (SP) size adjectives melkij 'small', 'fine' and krupnyj 'large'. This is illustrated in (1). Substituting the specialized adjectives by malen'kij and bol'šoj results in unacceptability or at least degraded acceptability (1b).

- (1) a. melkij gravij / pesok krupnyj grad / ris small_{SP} gravel sand large_{SP} hail rice
 - b. ???malen'kij gravij / pesok ???bol'šoj grad / ris

The goal of the present research is to investigate the properties of specialized size adjectives (for reasons of space, I concentrate on *melkij*), the ways they differ from the default size adjectives, and the mechanism that makes them compatible with mass aggregates in ways in which the default adjectives are not.

2. The distribution of melkij. The word melkij has a range of uses derived from the size meaning via metaphorical extension, as well as the horizontal meaning 'hollow'. These uses are excluded from the discussion as irrelevant; I concentrate only on the prototypical physical size meaning (small). Under this meaning, *melkij* is compatible with the following noun types. Mass nouns:

• Granular aggregates melkij (masculine) gravij 'gravel', pesok 'sand', ris 'rice', grad 'hail'; melkaja (feminine) ščebënka 'rubble', sol' 'salt', ščepa 'wood chips', stružka 'shavings', kroška 'crumbs', krupa 'cereal' • collective mass nouns melkij kartofel' 'potato', žemčug 'pearl'; melkaja rybëška 'fish (diminutive)', kartoška 'potato', vermišel' 'vermicelli', jagoda 'berry (mass)' • object mass nouns melkij musor 'garbage'; melkaja kuxonnaja utvar' 'kitchenware' • pattern expressions (2)

(2) platje v melkuju kletku /	v melkij gorošek /	v melkij cvetoček
dress in small _{SP} cell	in small _{SP} pea.DIM	in small _{SP} flower.DIM

'checkered dress with small print'

'polka dot dress with small dots'

'floral dress with small print'

It is worth noting that the nouns in (2) are uncountable under the present use and denote multiple units forming a pattern, rather than a single flower, cell, etc. In addition, some of the nouns above are ambiguous between mass and count uses, e.g. kroška 'crumb(s)'. In such cases, the use of melkij forces a mass meaning, whereas malen'kij 'small' forces a count interpretation.

Melkij is also compatible with count plural nouns of the following types: • nouns denoting parts/fragments melkie (plural) kusočki 'parts (diminutive)', oskolki 'splinters', oblomki 'chips', 'fragments', opilki 'sawdust' • nouns whose denotata come in clusters melkie stežki 'stitches', kamuški 'stones (diminutive)', rëbryški 'ribs (diminutive)'. When these nouns appear in the singular, the use of *melkij* is considerably degraded, and *malen'kij* gets preferred (subject to some variation in judgments):

(3) a. Dima porezal stejk na malen'kie / melkie kusočki.

- Dima cut steak on small small_{SP} pieces.DIM.PL 'Dima cut the steak into small slices.'
- stejka malen'kij / ???melkij kusoček. b. Dima otrezal ot Dima from.cut from steak small small_{SP} piece.DIM.SG 'Dima cut off a small slice of the steak.'

Still, *melkij* is compatible with **count singular** nouns if the latter are conceptualized as consisting of multiple homogenous parts: <u>melkij (masculine)</u> *dožd'* 'rain', *šov* 'seam', *počerk* 'handwriting', *šrift* 'font'. For instance, rain is conceptualized as consisting of multiple water droplets; *melkij dožd'* 'drizzle' specifies that the drops are small. Analogously, handwriting is instantiated by multiple letters, each of which follows to be small if *melkij* is used; the same holds for font.

Finally, *melkij* is not generally compatible with substance mass nouns (*#melkij sok* 'small juice') or count nouns not conceptualized as parts or collections (*#melkaja komnata* 'small room').

3. Generalizations. We can make the following generalizations regarding the distribution and function of *melkij*. It applies to nouns denoting collections of entities and specifies that individual members of these collections (not the collections themselves) are small. As long as the collection condition is satisfied, it is compatible with both mass and count nouns (e.g. *gravij* 'gravel' and *dožd*' 'rain'); within the count domain, it combines with both singular and plural nouns (e.g. *dožd*' 'rain' and *kusočki* 'pieces').

4. Analysis. I propose that *melkij* applies to nominals that denote **spatial clusters** in the sense of Grimm (2012) and Wagiel (2021). A cluster is a sum of objects that share the same property and are all transitively connected, i.e., "connected through a series of mediating entities" (Wagiel 2021: 193). That aggregate nouns, object mass nouns and collectives (may) denote clusters has been proposed by Grimm (2012), Wagiel and Shlikhutka (2023) and Kagan (2024). Count singular nouns like *dožd* 'rain' denote clusters by virtue of their lexical semantics. Count plurals like *kusočki* 'pieces' tend to denote clusters by virtue of their **plurality** in combination with **parthood** meaning. This is why in the singular, they are incompatible / degraded with *melkij*. Finally, patterns are clusters by definition. With all these noun types except count plurals, members of clusters are not linguistically accessible unless special operators are applied (e.g. the singulative suffix). *Melkij* is exactly such an operator. It applies to a cluster-denoting nominal and specifies that each indiviual member of the cluster is small in size relative to the contextually specified standard of comparison (e.g. Kennedy 1999, 2007, Fortin 2011). It thus contributes a kind of distributivity operator. Crucially, it does not apply to pluralities (which could be members of a cluster, too); to ensure this, I use the notion of NU, but this could also be maximally strongly self-connected object, MSSC (Grimm 2012).

(4) $[[melkij]] = \lambda P \lambda x: CLSTR_{SP}(P)(x). \forall y [(NU(P)(y) \& y < x) \rightarrow size(y) < STND]$

The adjective is incompatible with count nouns like *room* and substance masses like *juice* since they do not denote clusters (i.e., the presupposition in (4) is not satisfied).

In contrast, *malen'kij* cannot "extract" otherwise inaccessible NU; it simply applies to a property P and specifies that P-individuals are small (5). With mass aggregates, the adjective cannot relate to the size of NU. With count singulars, it specifies that the whole denotatum of the noun is small, e.g., a rain, not the drops it consists of. Since it is not quite clear what "a small rain" is, the result is weird.

(5) $[[malen'kij]] = \lambda P \lambda x. P(x) \& size(x) < STND$

5. Concusions and Consequences. (i) Not all stubbornly distributive adjectives can apply to collective / aggregate nouns; this requires a specialized operator that can "extract" NU; (ii) The notion of a cluster is linguistically relevant (Grimm 2012); the range of phenomena that are sensitive to it is enriched by certain stubbornly distributive adjectives; (iii) Although unaccessible to most linguistic operations, NU members of clusters denoted by aggregates are linguistically relevant: they can be accessed via specialized linguistic operations, such as singulativity and *melkij*-application; (iv) The concept of NU (or MSSC) should be distinguished from a P-atom, the smallest unit bearing the property P. This is observed with certain aggregates: a grain of rice is not an atom since half a grain of rice is rice, too; however, it is a (whole) grain of rice that constitutes a NU and is thus accessed by *melkij* or by a singulative suffix.

References: Grimm, S. (2012). Degrees of countability: A mereotopological approach to the mass/count distinction. In *SALT*, 584-603 • Schwarzschild, R. (2011). Stubborn distributivity, multiparticipant nouns and the count/mass distinction. In *Proceedings of NELS* 39. 2, pp. 661-678. • Wagiel, M. 2021. Slavic derived collective nouns as spatial and social clusters. In *Formal approaches to number in Slavic and beyond*, eds. M. Dočekal and M.Wagiel, 175–205.