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Binominal Constructions with Metaphorical Quantifiers in Russian: "vsplek emocij i volna pozitivā"

1. Introduction

This paper provides a usage-based description of left-headed binominals of the type in (1) in Russian, encoded by a metaphorical quantifier N₁ followed by a genitive modifier N₂, and exemplified in (2):

- (1) N₁[metaphorical quantifier] N₂_{GEN}
- (2) *vsplek emocij* *i volna pozitivā, ☺*
surge emotion.GEN.PL and wave positivity.GEN.SG
- more blestjaščego* *konfetti*
sea sparkling.GEN.SG confetti.GEN.PL

'a surge of emotions and a wave of positivity, ☺ a sea of sparkling confetti'

(web, <vk.com/deti55>)

In these binominals N₁ (*vsplek* 'surge', *volna* 'wave' and *more* 'sea'), which serves as the syntactic head of the noun phrase, is used metaphorically and tends to 'grammatize' into a quantifier or intensifier, denoting a large quantity or a rapid increase of N₂ (*emocij* 'emotions', *pozitiv* 'positivity', *konfetti* 'confetti'), whereas N₂ – the genitive quantified noun – functions as the semantic head of the binominal construction. Therefore, the meaning of the construction emerges from the interaction of N₁ and N₂ as the result of a process of co-semiosis.

The paper is organized as follows: §2 focuses on dynamic metaphors of LARGE QUANTITY and SUDDEN INCREASE and presents two case studies based on complex upward/forward-oriented movements: *vsplek* 'surge' and *volna* 'wave'. The study, set in the framework of Cognitive Linguistics, adopts a usage-based approach: a corpus of Russian, namely the Timestamped web corpus 2014-2021 (henceforward TR)¹, has been queried using Sketch Engine and analysed through its tools (e.g. "concordance", "frequency", "collocations"), in order to identify the classes of N₂-collocates for the two quantifiers and determine which semantic (INTENSITY, ARRANGEMENT, SHAPE), actional (INCHOATIVITY, ITERATIVITY and MULTIACTIONALITY) and pragmatic features (i.e. CONNOTATION, EVALUATION,

¹ Timestamped is a 7-billion-word web corpus made up of news articles gained from their RSS feeds.

SPEAKER'S ATTITUDE towards increasing processes and large quantities) are mapped from N₁ onto N₂ (§2.1 and §2.2). In §2.1.1 and §2.2.1 a sort of qualitative 'collostructional analysis' is carried out with a view to identifying the lexical elements (mainly adjectives and verbs) that co-occur with the constructions under discussion. This kind of analysis helps to shed light on the degree of grammaticalization of the two metaphoric quantifiers, identifying also emerging uses, both in terms of types and tokens.

In line with the adopted usage-based framework, the study tries to show that the whole meaning of these binominal constructions emerges in a complex way, through the interaction of semantic and syntactic factors with contextual information.

2. *Metaphorical Quantifiers*

This paper focuses on a specific 'type' of Russian binominal NPs, illustrated in (1) and exemplified in (2): these constructions² display quite peculiar syntactic and semantic properties. One main issue concerns the semantic function of N₁ with respect to N₂. Within the binominal, N₁ can be defined both as a "measure" or "size" noun (Brems 2003, 2010), if the focus is on its quantifying function, and as an "arrangement classifier" (Lehrer 1986), if the emphasis is on the configuration taken by N₂. Classifiers have the function to characterize the entities denoted by N₂s in terms of salient cognitive features, which, in this case, are "shape" and "arrangement". From this perspective, *škval zvonkov* 'a flood of phone calls' in (3) refers to the fact that the calls followed each other closely ('every two minutes') and can be conceptualized (i.e. "arranged") as a 'flood':

- (3) *Sponedel'nika – škval zvonkov, zvonjat bukvál'no každye dve minuty.*
 'There has been a flood of calls since Monday, literally every two minutes.'
 (web, <don.telestroka.ru>)

Simone and Masini (2014), finally, include some of these N₁s under the label of "support nouns", whose main function is to project an actional information onto N₂, such as in the Italian constructions *attacco d'ira* 'a fit of anger' (lit. 'attack of anger') or *accesso di rabbia* 'a fit of anger' (lit. 'burst of rage'). In (4) *vsplek nacionalizma* 'upsurge of nationalism' refers not only to the spreading of patriotic sentiment, but also to the sudden and unexpected nature of this process:

² The term 'construction' is used here in the sense of Construction Grammar, as a conventional association between form and meaning/function. The binominal [N_[quantifier] + N_{GEN[object/abstract/state/event]}] represents the most abstract form of the "measure construction", which has the function of quantifying over an object, a concept, a state or an event. The abstract binominal schema can be instantiated by semi-specified constructions like the [*volna* + N_{GEN}] or [*vsplek* + N_{GEN}] schemata, where the quantifier is metaphorical in nature. The semi-specified constructions, in turn, are instantiated by fully lexically specified constructions, like the ones in (2). For a more detailed discussion of the "measure constructions with nominal quantifiers" included in the "Russian Construction" project (<<https://construction.github.io/russian/>>) see Kibisova 2020.

- (4) *Ja pomnju slučaj, kogda v Gruzii byl vsplesk nacionalizma, v Gulrypše organizovali miting, učastniki kotorogo prizyvaji vyjti iz sostava SSSR.*

'I remember when there was an upsurge of nationalism in Georgia, in Gulrypsh, a rally was organised where the people called for secession from the USSR.

(TR, <sputnik-abkhazia.ru>)

However, one aspect that goes unnoticed in each of the above definitions is the metaphorical nature of N₁³. The two case studies presented here concern dynamic natural phenomena (Rachilina, Li Su-Chën 2009) – namely the WAVE and the SURGE – which project onto N₂ quantitative features of ABUNDANCE and EXCESS and related actional features of RAPID AND SUDDEN INCREASE, or STEADY AND CONTINUOUS GROWTH. For the purposes of this paper, we will conventionally refer to this kind of N₁ as “metaphorical quantifier”, although we are aware of the fact that it also provides actional information and fulfils a function somewhere between quantification of N₂ and intensification of some of its gradable semantic features (for a general introduction to intensification strategies in Russian and intensifying metaphors see Benigni 2017 and 2020, respectively).

Quantitative metaphors that draw on natural phenomena and the physical environment can be divided into two broad categories: static metaphors (cfr. *more ljudej* ‘a sea of people’, *gory musora* ‘mountains of rubbish’) and dynamic metaphors, which include the two case studies analysed here.

Among the dynamic metaphors for LARGE QUANTITY, it is possible to distinguish between natural phenomena characterized by onward-oriented movement (*potok bežencev* ‘stream of refugees’, *reki entuziazma* ‘rivers of enthusiasm’), downward-oriented movement (*dožd’ nagrad* ‘a rain of rewards’, *grad kritiki* ‘hail of criticism’) and upward-oriented movement (*fontan idej* ‘a fountain of ideas’). Some natural phenomena are characterised by complex movements, e.g. downward / forward: *škval kommentarijev* ‘barrage / flurry of comments’, upward / forward: *vsplesk interesa* ‘surge of interest’, *volna protestov* ‘wave of protests’.

The two case studies presented here (*volna* ‘wave’ and *vsplesk* ‘surge’) concern aquatic phenomena⁴ and fall into the last class: both refer to an upward movement (increasing and advancing in the case of *volna*, sudden and abrupt in the case of *vsplesk*) and imply a downward fall. When used metaphorically, the two nouns indicate a SUDDEN INCREASE of N₂ (whether a concrete countable object, a mass noun or an abstract concept) or a SUDDEN OCCURRENCE of the state or event referred to by N₂.

³ In this paper we refer to the Conceptual Metaphor Theory, which defines metaphor as “a cross-domain mapping in the conceptual system” (Lakoff 1993: 203).

⁴ The source domain of AQUATIC PHENOMENA seems to be particularly suitable to conceptualize the target domain of QUANTITY and INTENSIFICATION: in addition to the two cases presented here, one should also mention *more* ‘sea’, *potok* ‘flood; flow’ and *reka* ‘river’ (for a more detailed discussion see Rachilina, Li Su-Chën 2009).

TABLE I.
[*volna* + N_{natural phenomenon}]

Type	Rank	Raw Freq	% Freq
<i>volna/volny pavodka/pavodkov</i> 'flood wave(s)	13	1973	0,99
<i>volna/volny tepla</i> 'wave(s) of heat'	17	1819	0,91
<i>volna/volny choloda</i> 'wave(s) of cold'	26	1251	0,62
<i>volna/volny žara</i> 'heat wave(s)'	31	1110	0,55
<i>volna/volny pocholodanija</i> 'wave(s) of cold'	58	466	0,23
Total			3,3

2.1. Binominal constructions with *volna* 'wave'

Both the WAVE and the SURGE fall under the orientational metaphor MORE IS UP. However, the quantitative metaphor of *volna* (MORE IS A RISING WAVE) is more frequent than that of *vsplek* (MORE IS A SUDDEN SURGE) both in terms of types and tokens.

In the TR Corpus (7.218.536.772 tokens) the construction [*volna* + N_{GEN}], in which the lemma *volna* is immediately followed by another noun in the genitive case, occurs 199.144 times. Moreover, 343 different types of constructions with *volna* were extracted from the corpus, each occurring with a token frequency ≥ 50 (percentage frequency in the whole corpus: 0,11%).

The data were manually cleaned by removing those occurrences, in which N₁ is not linked to N₂ by a semantic relation of quantification, e.g. *volny okeana* 'ocean waves' or *volny radio* 'radio waves', where N₂ encodes the location and the medium of N₁ respectively.

In its primary literal meaning *volna* refers to a natural upward-forward movement propagating through a physical medium such as water or air. Among the 100 most frequent types of this construction, only 5 types are observed, where N₂s belong to the same conceptual domain as *volna* and refer to natural and environmental phenomena, often adverse. In TABLE I, these construction types are sorted by rank and frequency (number of tokens and percentage of the total). In the case of *volna*, the plural form is also given when it occurs consistently, while N₂ is given in its most frequent form (single, plural or both).

As shown in TABLE I, the literal uses of the construction (within rank 100) represent only 3,3% of the total. This figure is obtained by adding the values in the column "% freq".

This implies that figurative uses of *volna* far outweigh literal ones. The main semantic features which are mapped from the source domain of the WAVE onto the target domain of N₂ are the idea of RAPID AND CONSISTENT INCREASE and SUDDEN OCCURRENCE. Secondary features, related to the nature of the phenomenon itself, include the idea that the progressive upward movement is followed by a downward phase and that this complex movement is cyclical in nature, thus the event or state to which N₂ refers could be repeat-

TABLE 2.
[*volna* + N_{disease}]

Type	Rank	Raw freq	% freq
<i>voln-a/-y koronavirusa</i> ‘coronavirus wave(s)’	1	26442	13,27
<i>voln-a/-y pandemii</i> ‘pandemic wave(s)’	2	15744	7,90
<i>voln-a/-y epidemii</i> ‘epidemic wave(s)’	4	7812	3,92
<i>voln-a/-y zaboлеваemosti</i> ‘wave(s) of morbidity’	9	2345	1,17
<i>voln-a/-y zabolevanija/zabolevanij</i> ‘wave(s) of disease’	14	1956	0,98
<i>voln-a/-y zaraženija/zaraženij</i> ‘wave(s) of infection(s)’	18	1751	0,87
<i>voln-a/-y virusa</i> ‘wave of virus’	30	1123	0,56
<i>voln-a/-y infekcii/infekcij</i> ‘wave(s) of infection(s)’	33	1007	0,50
<i>volna grippa</i> ‘wave of influenza’	54	493	0,24
<i>voln-a/-y kovidа</i> ‘wave(s) of Covid’	55	491	0,24
<i>voln-a/-y karantina</i> ‘wave(s) of quarantine’	74	340	0,17
<i>volna vakcinacii</i> ‘wave of vaccination’	92	288	0,14
<i>volna vspyški</i> + N _[DISEASE] ‘wave of N _[DISEASE] outbreak’	99	262	0,13
Total			30,09

ed. Secondary features help forming the notion of MAXIMUM PEAK (in terms of intensity or quantity) and contribute to develop negative connotations, such as the idea that this RISE could be UNEXPECTED, VIOLENT, DANGEROUS and RECURRING.

The most frequent construction is by far *volna koronavirusa* ‘wave of coronavirus’ (26.442 occurrences, 13,2% of the total). Moreover, among the top 100 most frequent constructions there are others with an N₂ belonging to the semantic field of DISEASES AND HEALTH DISORDERS, which represent 30,09% of the total of the different types of construction. In TABLE 2, the constructions (within rank 100) belonging to this semantic class are sorted by rank and frequency (both raw and percentage).

This finding is greatly influenced by the type of corpus used, which contains newspaper articles in various topics (mainly politics and economy) covering the period after the outbreak of the coronavirus disease in January 2020 (e.g. N₂s *karantin* ‘quarantine’ and *vakcinacija* ‘vaccination’, rank 74 and 92 respectively, refer to the semantic field of Covid-19).

The collocation of *volna* with nouns belonging to the class of DISEASES AND HEALTH DISORDERS, that are in themselves characterised by a negative semantic, highlights the mapping of the features RECURRING and DANGEROUS onto the target domain of N₂. In particular, the co-text helps to select the feature RECURRING: the methods of collocational analysis (Stefanowitsch, Gries 2003), which combine the quantitative corpus-based

approach with the theoretical framework of Construction Grammar, reveal the co-occurrence of this semi-specified construction (cfr. footnote 1) with numerals, both ordinal and cardinal, as in (5), and deictic temporal adjectives (such as *novyj* ‘new’ or *očerednoj* ‘further; next’), as in (6):

- (5) [...] *ranee epidemiologi prognozirovali dve volny grippa v Ukraine.*
 ‘[...] epidemiologists previously predicted two waves of influenza in Ukraine.’
 (TR, <fakty.ua>)

- (6) *Na prošloj nedele voz predupredila o novoj volne epidemii virusa Ėbola v Liberii.*
 ‘Last week the WHO warned of a new wave of Ebola virus disease in Liberia.’
 (TR, <interfax.ru>)

Although in these contexts *volna* seems to function mainly as an arrangement classifier (providing information on the spatio-temporal distribution of the phenomenon), other examples clearly show the emergence of quantifying and intensifying functions, as in (7). The prefix *na-* adds to the verb *na-kryt* ‘cover’ both a telic and a quantifier meaning; at the same time the object of the verb (*Rossija* ‘Russia’) assumes the function of an incremental theme (in Dowty’s sense), which is “severely” overwhelmed by the flu wave:

- (7) *Rossiju nakryla volna grippa*
 ‘A flu wave hit Russia’
 (TR, <aif.ru>)

Finally, the collocation of *volna* with *vspyška* ‘outbreak’ (rank 99), followed by a noun of DISEASE in the genitive case, shows how the outbreak of infection can be SUD- DEN and, consequently, SEVERE and IMPORTANT. The emergence of quantifying meaning for arrangement classifiers, especially metaphorical ones, seems to be a cross-linguistically common phenomenon (cfr., among others, Benninger 2001 for French and Verweckken 2015 for Spanish).

In terms of number of types, however, the most productive class (28 of the top 100 constructions) seems to be that formed by N2s referring to ACTS OF VIOLENCE, PROTEST AND DISSENT (both physical and verbal, e.g. *terakt* ‘terrorist attack’, *sankcii* ‘sanctions’) and FEELINGS OF DISAPPOINTMENT (e.g. *negodovanie* ‘indignation’, *nedovol'stvo* ‘discontent’) (cfr. TABLE 3).

This semantic class, which is certainly the most productive in terms of types of constructions, although not the most frequent (21,61% of the total), clearly shows that *volna* maps onto N2 both actional (i.e. INCHOATIVITY, ITERATIVITY, MULTIACTIONALITY) and quantitative features. In (8), the ‘wave of dissent’, mounting among Egyptians in support of their “Muslim Brothers”, signals not only that dissent is widespread (*ešče bol'suju* ‘even greater’), but

TABLE 3.
 [*volna* + N_{act} of violence, protest and dissent/feeling of disappointment]

Type	Rank	Raw freq	% freq
<i>volna protestov/protesta</i> 'wave of protests/protest'	3	9214	4,62
<i>volna kritiki</i> 'wave of criticism'	5	5192	2,60
<i>volna vozmuščenija/vozmuščenij</i> 'wave of outrage'	6	5162	2,59
<i>volna/volny mobilizacii</i> 'wave(s) of mobilization'	7	5162	2,59
<i>volna/volny negodovanija</i> 'wave(s) of indignation'	8	2688	1,34
<i>volna/volny nedovol'stva</i> 'wave(s) of discontent'	10	2316	1,16
<i>volna/volny nasilija</i> 'wave(s) of violence'	15	1916	0,96
<i>volna/volny sankcij</i> 'wave(s) of sanctions'	24	1347	0,67
<i>volna/volny terrora</i> 'wave(s) of terror'	32	1040	0,52
<i>volna/volny represij</i> 'wave(s) of repression'	34	991	0,49
<i>volna/volny besporjadkov</i> 'wave(s) of unrest'	38	786	0,39
<i>volna/volny atak</i> 'wave(s) of attacks'	42	752	0,37
<i>volna/volny arestov</i> 'wave(s) of arrests'	43	698	0,35
<i>volna uvol'nenij</i> 'wave of dismissals'	44	675	0,33
<i>volna obvinenij</i> 'wave of accusations'	46	645	0,32
<i>volna skandalov</i> 'wave of scandals'	48	584	0,29
<i>volna/volny teraktov</i> 'wave(s) of terrorist attacks'	49	581	0,29
<i>volna bor'by</i> 'wave of fighting'	56	477	0,23
<i>volna ograničenij</i> 'wave of restrictions'	67	376	0,18
<i>volna/volny davlenija</i> 'pressure wave(s)'	73	346	0,17
<i>volna revoljucii</i> 'wave of revolution'	82	312	0,15
<i>volna ažiotaža</i> 'wave of excitement'	83	309	0,15
<i>volna napadenij</i> 'wave of attacks'	84	307	0,15
<i>volna demonstracij</i> 'wave of demonstrations'	87	300	0,15
<i>volna zaderžanij</i> 'wave of arrests'	89	292	0,14
<i>volna otstavok</i> 'wave of dismissals'	90	289	0,14
<i>volna zabastovok</i> 'wave of strikes'	91	288	0,14
<i>volna agresii</i> 'wave of aggression/violence'	96	264	0,13
Total			21,61

TABLE 4.
[*volna* + N_{emotional state/current of thought}]

Type	Rank	Raw freq	% freq
<i>volna populjarnosti</i> 'surge of popularity'	16	1835	0,92
<i>volna negativna</i> 'wave of negativity'	19	1669	0,83
<i>volna uspecha</i> 'wave of success'	23	1367	0,68
<i>volna krizisa</i> 'wave/tide of crisis'	28	1196	0,60
<i>volna interesa</i> 'wave of interest'	29	1146	0,57
<i>volna paniki</i> 'wave of panic'	39	774	0,38
<i>volna nenavisti</i> 'wave of hate/hatred'	47	608	0,30
<i>volna gneva</i> 'wave of anger'	50	564	0,28
<i>volna chejta</i> 'wave of hate'	57	472	0,23
<i>volna chajpa</i> 'wave of hype'	62	427	0,21
<i>volna patriotizma</i> 'wave of patriotism'	72	353	0,17
<i>volna sprosa</i> 'increased demand (for)' lit. 'wave of demand'	76	338	0,16
<i>volna pozitivna</i> 'wave of positivity'	77	336	0,16
<i>volna optimizma</i> 'wave of optimism'	79	317	0,15
<i>volna emocij</i> 'wave of emotions'	81	314	0,15
<i>volna ejforii</i> 'wave of euphoria'	86	300	0,15
<i>volna populizma</i> 'wave of populism'	88	295	0,14
<i>volna feminizma</i> 'wave of feminism'	94	269	0,13
Total			6,31

also that it has mounted rapidly, as a reaction to a series of bloodily suppressed demonstrations, highlighting once again the cyclical nature of the WAVE movement:

- (8) *Posle provedenija neskol'kich krovoprolitnyh mitingov, [...] pravitel'stvo Egipta zapretilo dejatel'nost "Brat'ev-musul'man" na territorii strany. Eto vyzvalo esce bol'suju volnu negodovanija sredi sočuvstvujučich egiptjan.*

'After several bloody demonstrations, [...] the Egyptian government banned the Muslim Brotherhood's activities within the country. This caused an even greater wave of outrage among Egyptian supporters.'

(TR, <ntv.ru>)

A semantically related class concerns N₂s referring to PSYCHOLOGICAL/EMOTIONAL STATES AND FEELINGS: *volna populjarnosti* 'a wave/surge of popularity', *volna krizisa* 'a wave

TABLE 5.
[*volna* + N_{increase/decrease}]

Type	Rank	Raw freq	% freq
<i>volna rasprostraneniija</i> 'wave of proliferation'	11	2196	1,10
<i>volna rosta</i> 'wave of growth'	21	1618	0,81
<i>volna sniženija</i> 'wave of decline'	41	767	0,38
<i>volna/volny deval'vacii</i> 'wave/s of devaluation'	52	536	0,26
<i>volna povyšeniija</i> 'wave of increase'	66	396	0,19
<i>volna oslablenija</i> 'wave of weakening'	75	338	0,16
<i>volna vspyški</i> 'wave of outbreak'	99	262	0,13
Total			3,03

of crisis'. This kind of binominal generally refers to the emergence and spread of individual or collective feelings. In these constructions, the quantifying/intensifying and inchoative functions of *volna* emerge clearly, projecting onto N₂ both the meaning of EMERGENCE OF A NEW STATE/FEELING⁵ and PEAK OF INTENSITY. Some of the N₂s in TABLE 4 could also have been included in the previous category (e.g. the 'wave of anger' [*volna gneva*] can be considered either as an expression of dissent or as a feeling). The top 100 N₂ types also include three suffixed nouns in *-izm*, referring to CURRENTS OF THOUGHT such as *patriotizm* 'patriotism', *populizm* 'populism' and *feminizm* 'feminism': this shows that the metaphor SOCIAL AND POLITICAL MOVEMENTS ARE CURRENTS, STREAMS is not only "extended", but also cross-linguistically very consistent, because it appears in the form of different "micrometaphors" (cfr. Kövecses 2010: 57-59). Finally, we also note the frequent collocation of *volna* with two neologisms of English origin that have recently entered the language of public and social media: *chejt* (<*hate*) and *čajp* (<*hype*) (rank 57 and 62 respectively). The former refers to 'expressions of verbal violence on the internet and on social networks', while the second means 'artificially created fuss about an issue or a topic' (cfr. TABLE 4).

TABLE 5 lists N₂s that refer to PROCESSES OF INCREASE OR DECREASE. This type of construction makes up around 3% of the total concordances: the measure is not absolute since the proposed classification is not rigid and some nouns can be assigned to more than one class. For example, *vspyška* 'outbreak' has been included both in TABLE 5, together with nouns of INCREASE, and in TABLE 2, since it is often specified by nouns referring to DISEASES OR HEALTH DISORDERS.

⁵ Kibisova (2020: 9) observes that also *more* 'sea' (another metaphor drawing from the source domain of aquatic phenomena) frequently collocates with nouns of emotions, which reveals the pervasiveness of the ontological metaphor EMOTIONS ARE LIQUIDS.

TABLE 6.
[*volna* + N_{migration phenomenon}]

Type	Rank	Raw freq	% freq
<i>volna/volny bežencev</i> ‘wave of refugees’	12	2009	1,00
<i>volna migracii</i> ‘wave of migration’	27	1235	0,62
<i>volna èmigracii</i> ‘wave of emigration’	36	955	0,47
<i>volna migrantov</i> ‘wave of migrants’	37	907	0,45
<i>volna pereselenija</i> ‘wave of deportation/resettlement’	68	372	0,18
Total			2,72

These types of N2s activate the quantifying feature of the WAVE-metaphor, as shown in (9):

- (9) *Esli ne ostanovit’ načavšijsja process, to uže k ijunju 2016 goda stranu zavalit volna rasprostranjenija igrovych avtomatov pod vidom loterejnyh terminalov.*

‘If the process is not stopped, by June 2016 the country will be flooded with a wave of [proliferation of] slot machines disguised as lottery terminals.’

(TR, <rg.ru>)

Once again, contextual elements, such as the verb *zavalit* ‘to cover with’, help to determine the meaning of LARGE QUANTITY. The spatial prefix *za-* ‘drives’ the action of the verb *valit* ‘to fall; to pour out’ (which, moreover, is etymologically connected to *volna*) OVER the surrounding space, so as to cover it (for a contrastive corpus-based account of the strategies adopted to translate Russian verbal prefixes into Italian cfr. Slavkova 2019: 515-520). The quantitative meaning of COVERING, FILLING A SPACE thus develops metonymically from an original spatial meaning.

Finally, a last group is formed by N2s that fall within the semantic field of MIGRATION PHENOMENA. These N2s are grouped together given the centrality of this issue on the international agenda, even if they do not constitute a homogeneous class, since they denote both processes (*migracija* ‘migration’, *pereselenie* ‘deportation; resettlement’) and humans (*bežency* ‘refugees’, *migranty* ‘migrants’). This kind of construction makes up 2,72% of the total concordances (cfr. TABLE 6).

Although in these types of binominals *volna* might be best described as an arrangement classifier, in line with the conceptualization of MIGRATIONS AS FLOWS, there are also cases in which the quantifying function of the metaphor emerges clearly, being activated by the co-text (the presence of an adjectival intensifier together with the use of the plural form: *ogromnye volny* ‘huge waves’ in [10]):

TABLE 7.
[Adj + *volna* + N_{GEN}]

Adj	Type freq	Token freq	% type freq
<i>novaja</i> 'new'	69	16.266	35,5
<i>očerednaja</i> 'another; one more'	14	1780	3,80
<i>osnovnaja</i> 'main'	2	381	0,83
<i>nyněšnjaja</i> 'current; present'	3	303	0,60
<i>moščnaja</i> 'powerful; strong'	2	155	0,33
<i>vesennjaja</i> 'spring'	2	145	0,31
<i>sledujuščaja</i> 'next'	2	142	0,31
<i>poslednjaja</i> 'last; final'	2	120	0,26
<i>osennjaja</i> 'autumn'	1	117	0,25
<i>vtoraja</i> 'second'	1	80	0,17
<i>povtornaja</i> 'repeated; second'	1	60	0,13
<i>bolšaja</i> 'big; great'	1	57	0,12
Total	100	19.606	42,61

- (10) *Bez pit'evoj vody možno ždat' ogromnyh voln migracii naselenija po vsemu miru, v tom čisle v Rossiju.*

'Without drinking water, we can expect huge waves of migration around the world, including to Russia.'

(TR, <iz.ru>)

2.1.1. *Collostructional Analysis of Binominals with volna* 'wave'. The collostructional analysis is a corpus-analytical method, which allows us to identify the tendency of certain words to occur "in" specific constructions simply based on word frequency distribution. Here the term has been used in a broader sense, to refer to the tendency of certain words to occur "with" specific constructions. This kind of qualitative collostructional approach allowed to investigate the collocational profile of the *volna*-construction and, therefore, to clarify the meaning associated with this construction type. In particular, it was possible to determine which modifiers and verbs show a preference towards the binominal construction.

As for the context that precedes the construction (left context), the syntactic pattern [Adj + *volna* + N_{GEN}] occurs 45.702 times. The most frequent concordance is *novaja volna koronavirusa* 'a new wave of coronavirus', which occurs 1966 times, with a percentage frequency of 3,88%, followed by *novaja volna protesta* 'a new wave of protest' (1382 occurrences, 2,72% of the total). The adjective *novaja* 'new' is by far the most frequent modifier of *volna*-constructions, both in terms of types and tokens. TABLE 7 summarises the data from the analysis.

The first column reports the type of adjective that collocates with the *volna*-construction, the second one the types of different *volna*-constructions modified by the adjective; in the third and fourth columns the frequency is expressed in tokens and in percentage respectively. The modifiers are ranked in order of percentage frequency of the pattern.

The qualitative analysis of the data shows that most of the adjectives collocating with the *volna*-construction tend to underline actional features of the WAVE-metaphor. In addition to the phasal meaning expressed by the adjective *novaja* ‘new’ (INCHOATIVITY), the repeated nature of the phenomenon (PLURACTIONALITY and ITERATIVITY) emerges through the adjectives *očerednaja* ‘another; one more’ (*očerednaja volna mobilizacii* ‘another wave of mobilisation’), *sledujuščaja* ‘next’ (*sledujuščaja volna koronavirusa* ‘the next wave of coronavirus’), *poslednjaja* ‘last; final’ (*poslednjaja volna sankcij* ‘the latest wave of sanctions’), *povtornaja* ‘repeated’ (*povtornaja volna zaraženija* ‘a second wave of infection; reinfection’). Other actional features less frequently associated with the metaphor are DURATIVITY (*dlitel’naja* ‘prolonged’, *korotkaja* ‘short’) and SUDDENNESS (*neožidannaja* ‘sudden’), although these adjectives do not appear in the list of the 100 most frequent types.

TABLE 7 shows that another class of adjectives frequently associated with the *volna*-construction are intensifiers such as *moščnaja* ‘powerful; strong’ and *bol’saja* ‘big; great’, but also (further down the list of frequency) *krupnaja* ‘large’, *gigantskaja* ‘giant’ or *ogromnaja* ‘huge’. The use of quantifiers, sometimes even hyperbolic, underlines the quantifying function of the metaphor, as in (11), where the ‘giant wave’ (*gigantskaja volna*) simply reinforces the scalar meaning of *sniženie sprosja* ‘decline in demand’, without conflicting with the downward orientation of the ‘drop’ movement:

- (11) *Gigantskaja volna sniženija sprosja na kommerčeskie avtomobili i sokraščeniija ich proizvodstva vidna uže javstvenno.*

‘A giant wave of declining demand and production of commercial vehicles is already evident.’

(TR, <kommersant.ru>)

The colostruational analysis of the verbal collocates is more complex, since the verb does not have a fixed position with respect to the *volna*-construction, but can either follow or precede it, also according to the syntactic function of the construction itself in the sentence. Therefore, we proceeded in a different way in regard to the extraction of adjectival collocations, first by searching for the concordance [*volna* + N_{GEN}] and then by using the “collocation” function of Sketch Engine to determine – on the basis of statistical criteria – the collocates of the construction in a span of maximum three words either on the left and on the right. Data were cleaned manually by retaining only verbal collocations that fall within the first 100 collocations ranked by logDice score, which is an association measure expressing the strength of collocation.

This method makes it possible to identify the semantic groups to which the verbal collocates belong: these are primarily verbs of motion (*pojti* ‘to go’, *prijti* ‘to come’, *proka-*

tit'sja 'to roll'), which are entirely compatible with both the literal and metaphorical meaning of the WAVE. However, an interesting point emerges from these results: most of the verbs also have a [+QUANTITATIVE] feature in their semantic structure, in that they refer to a rapidly growing and overwhelming movement, either single or repeated (*zachlestnut* 'to wash over; to wave out, *obrušit'sja* [*na*] 'to befall; to hit, *ochvatit* 'to cover; to sweep, *nakryt* 'to cover; to overwhelm, *podnjat'sja* 'to rise, *sbit* 'to surge, cfr. also examples [7] and [9]). The collocate displaying the highest logDice score (9,22) is *prokati-l-a-s'* 'roll-PST-F. SG-R', as in (12); in this case, the collocation also signals MULTIACTIONALITY, since reference is made to a series of protests:

- (12) *Volna besporjadkov prokatilas' uže po vsej strane: radikalny ustrajvajut mjateži vo L'vove, Ivano-Frankovske i Ternopole.*

'A wave of unrest is already sweeping the country: radicals stage protests in Lviv, Ivano-Frankivsk and Ternopil.'

(TR, <ntv.ru>)

Another group of dynamic verbs (*vyzvat* 'cause; trigger, *porodit* 'form; generate, *sprovocirovat* 'form; generate' 'trigger; incite') governs the binominal as direct object: in this case the WAVE is seen as the reaction that "rises" in response to the stimulus expressed by the subject of the verb ('sanctions' against Russia in [13]):

- (13) *Sankcii mogut sprovocirovat' novuju volnu opasenij investorov*

'Sanctions could trigger a new wave of fear among the investors'

(TR, <lenta.ru>)

Finally, the wave is also associated with features of FEAR, DANGER and RISK, metonymically connected to the meanings of RAPID INCREASE, SUDDEN REACTION and of EXCESS. These semantic features are shared by different verbs that fit into the "micrometaphors" THE ADVANCING WAVE IS A DANGER (*opasat'sja* 'fear, *pereživat* 'worry', see [14]) and THE WAVE IS A DANGER THAT ONE MUST TRY TO PREVENT OR STOP (*ostanovit* 'stop, *predotvratit* 'prevent', see [15]).

- (14) *Zapadnaja Evropa pereživaet volnu islamizacii, antisemitizma i antizionizma.*

'Western Europe is suffering a wave of Islamization, anti-Semitism and anti-Zionism.'

(TR, <7kanal.co.il>)

- (15) *Maduro umelo vospol'zovalsja obrušivšejsja na nego kritikoj za nesposobnost' rešit' ekonomičeskie problemy i ustanovit' volnu prestupnosti v strane.*

'Maduro has skilfully exploited the criticism levelled at him for failing to solve the country's economic problems and stem the tide of crime.'

(TR, <mail.ru>)

Although the present paper focuses primarily on the actional meaning of these constructions, it is also interesting to point out the aspectual properties of the verbs they combine with. As for the past tense, both the WAVE-metaphor and the SURGE-metaphor tend to occur with verbs in perfective aspect, which contribute to represent these phenomena in their wholeness, while also emphasising their extent and impact.

2.2. Binominal Constructions with *vsplešk* ‘surge’

The quantitative metaphor of *vsplešk* (MORE IS A SUDDEN SURGE) is less frequent than that of *volna* both in terms of types and tokens.

In the TR, the construction [*vsplešk* + N_{GEN}], in which the lemma *vsplešk* is immediately followed by another noun in the genitive case, occurs 43.458 times, which is less than a quarter of the frequency of *volna*. Moreover, only 101 different types of construction with *vsplešk* were extracted from the corpus, each occurring with a token frequency ≥ 50 (percentage frequency in the whole corpus: 0,11%).

The data were manually cleaned by just removing the “type” *vsplešk gamma-izlučeniija* ‘gamma-ray burst’, which should be best considered as a lexicalized phrase belonging to astronomical terminology. In its primary literal meaning *vsplešk* ‘surge’ refers to a sudden and rapid wave-like (up-and-down) motion of a liquid. Among the 100 most frequent types of this construction, only 3 types are observed, where N2 belongs to the semantic domain of NATURAL PHENOMENA: *vsplešk tepla* ‘surge of heat’ (181 tokens), *vsplešk vody* ‘surge of water; splash’ (152 tokens) and *vsplešk volny* ‘surge of wave’ (51 tokens).

With regard to the metaphorical use of *vsplešk*, both Kuznecov’s (1998) and Efremova’s (2000) provide the meaning of a SUDDEN AND RAPID CHANGE OF MOOD, such as in *vsplešk emocij* ‘a surge of emotions’. Moreover, *Vikislovar*, the Russian version of the free online dictionary *Wiktionary*, also records the quantitative sense of A SUDDEN AND RAPID INCREASE IN SOMETHING, although no example is provided; this definition coincides with the one given by the Macmillan dictionary for the English noun *surge*: “a sudden increase in something such as price, value, or interest”. Temirgazina (2020: 648) argues that the metaphorical use of *vsplešk* ‘surge’ (together with *vzryv* ‘explosion’) in the sense of A SUDDEN AND RAPID APPEARANCE OF SOMETHING is the result of a recent process of semantic extension that occurred in the “pandemic discourse”, where collocations such as *vsplešk epidemii/koronavirusnoj infekcii/zabolevanija* ‘outbreak of epidemic/coronavirus infection/disease’ have spread.

Indeed, the most frequent construction in terms of tokens is *vsplešk zabolevaemosti* ‘surge of morbidity’ (5.029 occurrences, 11,5% of the total). Moreover, among the top 100 most frequent types there are others with an N2 belonging to the semantic field of DISEASES AND HEALTH DISORDERS, which account for a total of 20% of the different types of construction. In TABLE 8, the constructions (within rank 100) belonging to this semantic class are sorted by rank and frequency.

The collocation of *vsplešk* with nouns characterised by a NEGATIVE semantic prosody, such as nouns of DISEASES AND HEALTH DISORDERS, highlights the mapping of both the

TABLE 8.
[*vsplesk* + N_{disease}]

Type	Rank	Raw freq	% freq
<i>vsplesk zaboлеваemosti</i> 'morbidity surge'	1	5029	11,57
<i>vsplesk zabolevanija</i> 'surge of disease'	8	1036	2,38
<i>vsplesk koronavirusa</i> 'surge of coronavirus'	11	747	1,71
<i>vsplesk zaraženija</i> 'surge of infection'	14	667	1,53
<i>vsplesk infekcii</i> 'surge of infection'	20	348	0,80
<i>vsplesk èpidemii</i> 'surge of epidemic'	21	337	0,77
<i>vsplesk pandemii</i> 'surge of pandemic'	29	258	0,59
<i>vsplesk bolezni</i> 'surge of disease'	55	112	0,25
<i>vsplesk inficirovanija</i> 'surge of infection'	71	75	0,17
<i>vsplesk virusa</i> 'virus surge'	87	63	0,14
<i>vsplesk pnevmonija</i> 'surge of pneumonia'	100	51	0,11
Total			20,02

actional feature SUDDEN and the quantitative feature IMPRESSIVE onto the target domain of N₂. Also, the context supports this interpretation: in (16) the arrival of a 'large' number of tourists from Tbilisi (*naplyv* 'overflow') is the likely cause of an event that is perceived as NEGATIVE and UNCONTROLLED:

- (16) *My tak думаем, что всплеск заражения произошёл из-за наплыва туристов из Тбилиси в августе.*
'We so think that the surge of infection was due to the overflow of tourists from Tbilisi in August.'

(TR, <kavkaz-uzel.eu>)

Moreover, the co-text helps to select the feature RECURRING: the collocation analysis (s. also §2.2.1) reveals the co-occurrence of the *vsplesk*-construction with deictic temporal adjectives (such as *novyj* 'new', *očerednoj* 'further; next', *povtornyj* 'repeated'), as in (17) (cfr. TABLE 11):

- (17) [...] *производители хотят и вове беспрепятственно рекламировать и продавать нагретый табак, что [...] способно привести к новому всплеску заболеваемости и смертности, связанной с его потреблением.*

'[...] manufacturers want to market and sell heated tobacco without restrictions, which [...] could lead to a new surge in morbidity and mortality associated with its use.'

(TR, <lenta.ru>)

TABLE 9.
[*vsplešk* + N_{emotional state/current of thought}]

Type	Rank	Raw freq	% freq
<i>vsplešk interesa</i> 'surge of interest'	2	3402	7,82
<i>vsplešk aktivnosti</i> 'surge of activity'	3	2402	5,52
<i>vsplešk sprosa</i> 'surge in demand'	4	1834	4,22
<i>vsplešk emocij</i> 'outburst of emotion'	6	1161	2,67
<i>vsplešk popularnosti</i> 'surge of popularity'	13	704	1,61
<i>vsplešk prestupnosti</i> 'outbreak of crime'	17	568	1,30
<i>vsplešk terorizma</i> 'outburst of terrorism'	34	183	0,42
<i>vsplešk optimizma</i> 'surge of optimism'	37	166	0,38
<i>vsplešk antisemitizma</i> 'outburst of anti-Semitism'	42	152	0,34
<i>vsplešk vnimanija</i> 'surge in attention'	45	140	0,32
<i>vsplešk patriotizma</i> 'outburst of patriotism'	48	133	0,30
<i>vsplešk nacionalizma</i> 'surge of nationalism'	51	123	0,28
<i>vsplešk negativna</i> 'surge of negativity'	52	120	0,27
<i>vsplešk entuziazma</i> 'surge of enthusiasm'	68	81	0,18
<i>vsplešk separatizma</i> 'outburst of separatism'	73	73	0,16
<i>vsplešk čuvstv</i> 'outburst of feelings'	74	73	0,16
<i>vsplešk ksenofobii</i> 'outburst of xenophobia'	82	69	0,15
<i>vsplešk ekstremizma</i> 'outburst of extremism'	83	68	0,15
<i>vsplešk populizma</i> 'outburst of populism'	89	60	0,13
<i>vsplešk kriminala</i> 'outbreak of crime'	97	54	0,12
Total			26,50

Unlike the *volna*-construction, the *vsplešk*-construction does not usually collocate with numerals. The explanation probably lies in the fact that the two metaphors, although similar, differ in one aspect: the SURGE focuses on the upward phase of the movement, while the WAVE also implies the downward phase, thus referring to whole cycles of ups and downs, which are more likely to be enumerated.

As far as the *vsplešk*-construction is concerned, it is more difficult to group the N2s into semantically homogeneous types. A rather rich but heterogeneous class (26,50% of the total of the different types of construction, cfr. TABLE 9) is represented by nouns referring to PSYCHOLOGICAL/EMOTIONAL STATES (as a broad label for feelings, moods or attitudes) such as *vsplešk interesa* 'surge of interest' or *vsplešk emocij* 'surge of emotions'. In these constructions, the quantifying/intensifying feature and the actional sense of sudden-

ness conveyed by *vsplešk* project onto the metaphor the meaning of EMERGENCE OF AN EMOTIONAL STATE, RAPIDLY GROWING IN INTENSITY.

This class also includes N2s (often suffixed with *-izm*) referring to CURRENTS OF THOUGHT: *antisemitizm* ‘anti-Semitism’, *terrorizm* ‘terrorism’, *patriotizm* ‘patriotism’, *nacionalizm* ‘nationalism’, *separatizm* ‘separatism’, *ksenofobia* ‘xenophobia’, *ekstremizm* ‘extremism’, *populizm* ‘populism’. Compared to *volna*, the class is richer and all the N2s refer to HARMFUL AND DANGEROUS SOCIAL PHENOMENA THAT ARE RAPIDLY GAINING GROUND. In (18) the co-text highlights both the QUANTITATIVE (*uveličenie čisla antisemitskich prestuplenij* lit. ‘the increase in the number of anti-Semitic attacks’) and the SUDDENNESS features (*rezkij vsplešk* ‘sharp surge’):

- (18) *Pri étom, otmetil predstavitel' CST, uveličenie čisla antisemitskich prestuplenij – éto otryžajuščaja nastroyenija obščestva tendencija. Takže rezkij vsplešk ksenofobii i rasizma v Britanii proizošel na fone Brexit i obsuždenija slučaevev antisemitizma v Lejboristskoj partii.*

‘At the same time, said CST [Community Security Trust] spokesman [Mark Gardner], the rise in anti-Semitic attacks reflects the mood of society. There has also been a surge of xenophobia and racism in Britain against the backdrop of Brexit and discussion of anti-Semitism in the Labour Party.’

(TR, <liga.net>)

Another semantic class, conceptually connected to the previous one, is that of N2s referring to VOLUNTARY ACTS OF PROTEST AND DISSENT (both physical and verbal, e.g. *vsplešk aressii* ‘surge of aggression’, *vsplešk žalob* ‘surge of complaints’) or FEELINGS OF DISAPPOINTMENT (e.g. *vsplešk nedovol'stva* ‘surge in discontent’, *vsplešk negodovanija* ‘surge of indignation’). 15 of the top 100 construction types belong to this semantic class (cfr. TABLE 10).

Although it is not possible to draw a clear dividing line between these two classes (cfr. TABLES 9 and 10), which differ mainly on the basis of an [+AGENTIVITY] parameter (states vs. actions), it is interesting to note how the *vsplešk*-construction diverges from the *volna*-construction precisely in relation to this parameter. The preference of *vsplešk* for nouns of emotional attitude can be explained by the fact that the SURGE-metaphor, compared to the WAVE-metaphor, is more appropriate to describe the SUDDEN AND UNCONTROLLED MANIFESTATION OF MOODS AND BEHAVIOURS. An anonymous reviewer suggests that other parameters might come into play in the choice between the two constructions with nouns of emotional attitude, such as the individual or collective nature of the emotion, but this is an issue that deserves further investigation and cannot be answered here. Finally, the last two classes of N2 clearly reveal the quantifying function of the SURGE-metaphor. The former class, which is rather heterogeneous, includes nouns that refer to measurable entities or notions, such as:

TABLE 10.
 [*vsplešk* + N_{act} of protest and dissent/feeling of disappointment]

Type	Rank	Raw freq	% freq
<i>vsplešk nasilija</i> 'surge of violence'	5	1318	3,032
<i>vsplešk nedovol'stva</i> 'outburst of dissatisfaction'	23	294	0,67
<i>vsplešk naprjaženosti</i> 'outburst of tension'	28	275	0,63
<i>vsplešk agresii</i> 'outburst of aggression'	31	249	0,57
<i>vsplešk mošenničestva</i> 'surge of fraud'	33	209	0,48
<i>vsplešk negodovanija</i> 'outburst of indignation'	40	158	0,36
<i>vsplešk protestov/protesta</i> 'outburst of protests/protest'	43	152	0,34
<i>vsplešk žalob</i> 'outbreak of complaints'	49	128	0,29
<i>vsplešk prestuplenij</i> 'outburst of crime'	54	113	0,26
<i>vsplešk vozmuščenija</i> 'outburst of indignation'	56	110	0,25
<i>vsplešk nenavisti</i> 'outburst of hatred'	60	91	0,20
<i>vsplešk smertej</i> 'outburst of deaths'	61	91	0,20
<i>vsplešk ataka</i> 'outburst of attack'	62	90	0,20
<i>vsplešk samoubijstv</i> 'surge of suicide'	65	86	0,19
<i>vsplešk napadenij</i> 'surge of attacks'	84	65	0,14
Total			7,81

- abstract nouns designating social dynamics or qualities (*infljacija* 'inflation', *bezrobotica* 'unemployment', *roždaemost* 'natality', *smertnost* 'mortality', *poseščaemost* 'attendance', *rezul'tativnost* 'effectiveness [of a team]');
- mass nouns (mainly chemicals: *adrenalin* 'adrenaline', *insulin* 'insulin', *gljukoz* 'glucose');
- plural countable nouns referring to events (*DTP* 'road accidents', *avarii* 'crashes', *razvody* 'divorces').

The latter class consists of "parametric nouns", such as *cena* 'price', *číslo* 'number', *količestvo* 'quantity', *uroven* 'level'. Within the class it is possible to identify the subset of "high-degree nouns", for which the parameter is explicitly qualified as high, e.g. *rost* 'growth', *rasprostranenie* 'diffusion', *razvitie* 'development'. As the translation in (19) shows ('surge in consumer prices', lit. 'surge of growth of consumer prices'), Russian appears to be more redundant than English in "specifying" (through the genitive case) the INCREASE, this because the *vsplešk*-construction focuses on the phenomenon's emergence:

- (19) *Analogičnyj vsplesk rosta potrebitel'skich cen nabljudalsja v marte na fone sobytij na Ukraine.*
 'A similar surge in consumer prices was seen in March against the backdrop of events in Ukraine.'

(TR, <nabludatel.ru>)

2.2.1. *Collostructional analysis of binominals with vsplesk 'surge'*. As for the left context, the syntactic pattern [Adj + *vsplesk* + N_{GEN}] occurs 14.813 times. The most frequent collocation is *novyj vsplesk zaboлеваemosti* lit. 'a new surge in morbidity / in the incidence (of disease)', which occurs 639 times, with a percentage frequency of 4.31%, followed by *rezkij vsplesk zaboлеваemosti* 'a sharp surge in morbidity' (377 occurrences, 2.55% of the total). The adjective *novyj* 'new' is the most frequent modifier of the *vsplesk*-construction in terms of tokens: it occurs 2091 times among the 100 most frequent types of construction. The adjective *rezkij* 'sharp', on the other hand, is the most frequent modifier of the *vsplesk*-construction in terms of types, occurring in 25 different types of constructions. TABLE II summarises the data from the analysis. The first column reports the type of adjective that collocates with the *vsplesk*-construction, the next one the types of constructions modified by the adjective. In the third and fourth columns the frequency is expressed in tokens and in percentage respectively. The modifiers are ranked in order of percentage frequency of the pattern.

The first thing that stands out in TABLE II is the wide variety of adjectives collocating with the *vsplesk*-construction compared to the *volna*-construction. The qualitative analysis of the data shows that most of the adjectives are intensifiers that emphasise the size of the SURGE: *rezkij* 'sharp', *bolšoj* 'big', *nebyvalyj* 'unprecedented', *moščnyj* 'powerful', *ser'eznyj* 'severe', *ogromnyj* 'enormous', *burnyj* lit. 'turbulent; stormy', *zametnyj* lit. 'prominent', *sil'nyj* 'strong', *značitel'nyj* 'significant'.

The adjective *rezkij* 'sharp', moreover, also expresses a qualitative meaning: in (20) it means that the 'surge in violence' (*vsplesk nasilija*) is both 'significant' and 'dramatic':

- (20) *Agentstvo otmečaet, čto v svjazi s godovščinoj revoljucii 25 janvarja v Egipte ožidaetsja rezkij vsplesk nasilija.*

'The agency notes that violence in Egypt is expected to spike on the anniversary of the revolution on 25 January.'

(TR, <lenta.ru>)

Other adjectives tend to highlight actional features of the SURGE-metaphor. In addition to the phasal meaning expressed by the adjective *novyj* 'new' (INCHOATIVITY), the repeated nature of the phenomenon (PLURACTIONALITY/ITERATIVITY) emerges through the adjectives *očerednoj* 'another; one more' (*očerednoj vsplesk interesa* 'another surge of interest'), *povtornyj* 'repeated' (*povtornyj vsplesk infekcii* 're-surge of infection'), *poslednij* 'last; final' (*poslednij vsplesk interesa* 'the latest surge of interest'), *sledujuščij* 'next' (*sledujuščij vsplesk aktivnosti* 'the next surge of activity'). Other actional features frequently associated with the metaphor are SUDDENNESS (*slučajnyj* 'accidental' and *vnezapnyj* 'sud-

TABLE II.
[Adj + *vsplesk* + N_{GEN}]

Adj	Type freq	Token freq	% type freq
<i>novyj</i> 'new'	21	2091	14,11
<i>rezkij</i> 'sharp'	25	1355	9,14
<i>očerednoj</i> 'another'	8	386	2,60
<i>sezonnij</i> 'seasonal'	5	193	1,30
<i>bol'soj</i> 'big'	4	174	1,17
<i>vozmožnyj</i> 'possible'	4	144	0,97
<i>nedavnij</i> 'recent'	4	120	0,81
<i>nynješnij</i> 'current'	3	88	0,59
<i>povtornij</i> 'recurring'	2	84	0,56
<i>nebyvalyj</i> 'unprecedented'	2	71	0,47
<i>osennij</i> 'autumn'	1	62	0,41
<i>poslednij</i> 'recent, last'	2	48	0,32
<i>kratkosročnyj</i> 'short-term'	2	44	0,29
<i>moščnyj</i> 'powerful'	2	44	0,29
<i>nebol'soj</i> 'short'	2	42	0,28
<i>ser'eznyj</i> 'serious'	1	42	0,28
<i>ogromnyj</i> 'enormous'	1	29	0,19
<i>sledujuščij</i> 'next'	1	29	0,19
<i>slučajnyj</i> 'random'	1	27	0,18
<i>burnyj</i> lit. 'turbulent; stormy'	1	26	0,17
<i>zametnyj</i> 'conspicuous'	1	26	0,17
<i>tradicionnyj</i> 'traditional'	1	23	0,15
<i>kratkovremennyj</i> 'brief'	1	21	0,14
<i>charakternyj</i> 'typical'	1	21	0,14
<i>sil'nyj</i> 'strong'	1	20	0,13
<i>vnezapnyj</i> 'sudden'	1	19	0,12
<i>značitel'nyj</i> 'significant'	1	19	0,12
<i>podobnyj</i> 'similar'	1	19	0,12
Totale	100	5267	35,55

den'), POTENTIALITY (*vozmožnyj* 'possible'), and DURATIVITY (*kratkosročnyj* and *kratkovremennyj*, both meaning 'short-term'). These collocations highlight that the SURGE, as opposed to the WAVE, is better suited to conceptualize SUDDEN AND RADICAL CHANGES, although NOT NECESSARILY LONG-TERM.

The 'collocation' function of Sketch Engine made it possible to extract a list of the verbal collocates of the *vsplesk*-construction sorted by their logDice score, which, as mentioned above, measures the strength of the collocation. The qualitative analysis of the verbal collocates shows differences with respect to the *volna*-construction. The collocate with the highest logDice score (7,72) is *nabljudat'sja* 'there has been [a surge of]' (observe-PST-M. SG-R) which belongs to the class of existential verbs, together with *proizojti* 'to take place', *slučit'sja* 'to happen', *otmečat'sja* 'to take place' (in order of raw frequency). The SURGE metaphor refers, above all, to the occurrence of uncontrolled phenomena of which the speaker is a mere spectator (note that two of the existential verbs are passive forms of verbs of perception: *nabljudat'sja* 'to be observed', *otmečat'sja* 'to be noted').

- (21) *Predyduščuju nedelju s 14 po 20 oktjabrja nabljudalsja vsplesk cen na 0,3% (v pervye s načala ijulja, kogda iz-za indeksacii tarifov ceny vyrosli tože na 0,3%) [...].*

'The previous week, from 14 to 20 October, there was a price increase of 0.3% (for the first time since the beginning of July, when prices rose by 0.3% due to tariff indexation) [...].

(TR, <vedomosti.ru>)

The class of dynamic causative verbs (almost exclusively in the perfective past tense) is also frequent. These verbs govern the binominal construction as direct object (*vyzvat* 'cause [a surge of]'; *sprovocirovat* 'generate/trigger [a surge of]') or as goal (*privesti k* 'to lead to [a surge of]'), thus the SURGE is seen as the reaction that "arises" in response to the stimulus expressed by the subject of the verb (in [22] the defeat in a football match):

- (22) *Chožjaeva proigrali so sčedom 1:0, što privelo k vsplesku negodovanija boležčikov.*

'The hosts lost 1-0, which caused a surge of outrage from the fans.'

(TR, <lenta.ru>)

3. Concluding Remarks

The two metaphors refer to similar natural phenomena involving a complex forward/upward movement of liquids, so both are well suited to conceptualize quantity and intensification. For both constructions, the metaphorical uses exceed the literal ones (at least in the type of texts that constitute the corpus) and this clearly indicates a high degree of grammaticalization of the two nouns, which, however, differ in terms of their actional properties. The *volna*-metaphor, more frequent in terms of types and tokens, implies a MASSIVE AND PROLONGED INCREASE, often REPEATED over time. The sense of predictability associated with the cyclic nature of the movement makes the series of events more easily COUNTABLE. *Vsplesk*, on the other hand, indicates a RAPID, SUDDEN (though not

necessarily prolonged) INCREASE. Moreover, the two metaphors diverge with respect to the parameter of agentivity: *volna* is more likely to be associated with an INCREASE CAUSED BY A VOLITIONAL HUMAN AGENT, whereas *vsplesk* is more often linked with an INCREASE MERELY WITNESSED. These differences are reflected in the types of N2s that collocate with the two metaphorical quantifiers, as well as in the types of adjectives and verbs that co-occur with the binominal construction.

Finally, it is worth noting that such dynamic metaphors are at the same time cross-linguistically common and culturally specific. While in English we can establish a general semantic and functional equivalence of *wave* and *volna*, and of *surge* and *vsplesk*, a preliminary contrastive analysis with Italian (based on parallel and comparable corpora) allows us to identify two equivalents for *volna*: *onda*, for the literal uses, and *ondata* for the more metaphorical ones. As far as *vsplesk* is concerned, the semantic equivalents are *spruzzo* and *schizzo*, which, however, mainly collocate with nouns of liquids and map onto N2 the feature of SMALL QUANTITY OF (i.e. *uno spruzzo di rum* ‘a splash of rum’). Therefore, functional equivalents have to draw on metaphors based on other source domains, such as WAR and FIRE (*scoppio* ‘outburst’ or *esplosione* ‘explosion’) or MOUNTAIN (such as in the idiom [*raggiungere*] *vette di popolarità* ‘[to reach] heights [lit. ‘peaks’] of popularity’ or in the collocation *picco di contagi* ‘peak of infections’).

The contrastive analysis, which cannot be delved into here for reasons of space, would allow us to highlight differences and similarities in the way different languages map a source domain onto a target domain, shedding light on the linguistic means and the semantic fields involved in the processes of metaphorisation.

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Abstract

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Binominal Constructions with Metaphorical Quantifiers in Russian: “vsplesk émocij i volna pozitivna”

The paper provides a usage-based description of left-headed Russian binominals of the type [N₁_[metaphorical quantifier]N₂_{GEN}] (e.g. *vsplesk émocij* ‘a surge of emotions’, *volna pozitivna* ‘a wave of positivity’), where N₁ is used metaphorically and tends to ‘grammaticalize’ into a quantifier and/or intensifier, denoting a large quantity or a sudden increase of N₂. The analysis presents two case studies based on complex upward/forward-oriented movements: *vsplesk* ‘surge’ and *volna* ‘wave’. The study, set in the framework of cognitive linguistics, adopts a usage-based approach in order to identify the classes of N₂-collocates for the two quantifiers/intensifiers and determine which semantic (intensity, arrangement, shape), actional (inchoativity, iterativity and multiactionality) and pragmatic features (i.e., connotation, evaluation, speaker’s attitude towards increasing processes and large quantities) are mapped from N₁ onto N₂.

Keywords

Binominal Constructions; Metaphorical Quantifiers; Arrangement Classifiers; Support Nouns; Russian Language.