http://dx.doi.org/10.22168/2237-6321-11esp2097

Experience in creating a bilingual paronym dictionary for foreign language learners

Experiência na criação de um dicionário bilíngue de parônimos para alunos de língua estrangeira

Anna PAVLOVA (Johannes-Gutenberg-University Mainz)
Pavloan@uni-mainz.de
Olga GLEISER (Johannes-Gutenberg-University Mainz)
Gleiser@uni-mainz.de

Recebido em: 25 de set. de 2020.
Aceito em: 16 de dez. de 2020.

PAVLOVA, Anna; GLEISER, Olga. Experience in creating a bilingual paronym dictionary for foreign language learners. **Entrepalavras**, Fortaleza, v. 11, n. esp., e2097, p. 88-117, mar./2022. DOI: 10.22168/2237-6321-11esp2097.

Abstract: In this paper, we would like to present a new version of a German-Russian and Russian-German paronym dictionary. This book is a pioneering work and so far unique of its kind to serve as a reference work for foreign language learners (Russian or German as L2 language), warning them of the dangers of confusing similar sounding words in their spoken language. The previous edition (PAVLOVA; SVETOZAROVA, 2012) includes many types of paronyms which are described in the paper, but this work needs to be expanded by more keywords and paronym groups. The previous version of this Dictionary will also be extended by a few more classes of paronyms. The Dictionary is primarily aimed at two target groups consisting of foreign language (L2) learners. In this case, these are Russians who learn German and Germans who learn Russian as second language. For L2 learners, the difference between words with high and low neighborhood density is larger than for native speakers. This is proven by both the "Slips of the tongue" Corpus we created and by modern psycholinguistic studies to which we refer in this paper. This is the reason why we include more paronym pairs and groups in our

Dictionary than traditional reference works of this kind do. In this paper, we describe different types of paronyms, explain our methods for the selection of keywords, and clarify the structure of our Dictionary.

Keywords: Paronym. Dictionary. Foreign Language Learning.

Resumo: Neste artigo, gostaríamos de apresentar uma nova versão de um dicionário de parônimos alemão-russo e russo-alemão. Este livro é um trabalho pioneiro e até agora único em seu tipo para servir como uma obra de referência para alunos de línguas estrangeiras (russo ou alemão como segunda língua), alertando-os sobre os perigos de confundir palavras com sons semelhantes em sua língua falada. A edição anterior (PAVLOVA; SVETOZAROVA, 2012) inclui muitos tipos de parônimos que são descritos no artigo, mas este trabalho precisa ser expandido por mais palavras-chave e grupos de parônimos. A versão anterior deste Dicionário também será estendida por mais algumas classes de parônimos. O Dicionário é direcionado principalmente a dois grupos-alvo que consistem em alunos de língua estrangeira (L2). Neste caso, são russos que aprendem alemão e alemães que aprendem russo como segunda língua. Para alunos de L2, a diferença entre palavras com alta e baixa densidade de vizinhança é maior do que para falantes nativos. Isso é comprovado tanto pelo Corpus „Lapsos de língua“ que criamos quanto pelos modernos estudos psicolinguísticos aos quais nos referimos neste artigo. Esta é a razão pela qual incluímos mais pares e grupos de parônimos em nosso Dicionário do que obras de referência tradicionais desse tipo. Neste artigo, descrevemos diferentes tipos de parônimos, explicamos nossos métodos para a seleção de palavras-chave e esclarecemos a estrutura de nosso Dicionário.

Palavras-chave: Parônimo. Dicionário. Aprendizagem de língua estrangeira.

Introduction

In this article, we present the concept of the second, expanded version of the German-Russian and Russian-German paronym dictionary. It includes the concept of the first version (PAVLOVA; SVETOZAROVA, 2012) with some extensions. First, we explain what is meant by paronyms and show that the concept of paronyms is not completely clarified in every detail. Then an overview is given of the paronym dictionaries of Russian paronyms that are already available. Also, the situation with German dictionaries of paronyms is described. A special section is dedicated to the topic of "Paronyms from the perspective of psycholinguistics". This section focuses on the difference between the cognitive perception of similar looking and sounding words in the mother tongue (L1) and in the language to be learned (L2). Then we present our methods and approaches in selecting the lemmas for the paronym dictionary, which is primarily intended for foreign language learners (in this special case for Russian speakers who learn German and for German speakers who learn Russian). We also explain the reasons why we deselect certain cases which traditionally are considered as paronyms. In the last section, some examples of the Dictionary in question are demonstrated.

ISSN 2237-6321

v. 11 (esp.)
88-117
mar.
2022

What are paronyms?

Usually, the words in a language differ in both form and meaning. But presumably in every language there are deviations from this regularity. There is **synonymy** as a complete or more often partial agreement in meaning in different forms. In the case of **homonymy**, the words have the same form with fundamentally different meanings. The shape of words and their phonetics can sometimes only partially differentiate. Thus, there is a group of **quasi-homonyms** (or **pseudo-paronyms**) in every language. As quasi-homonyms phoneticians denote word pairs in which the elements differ only by a phoneme, like *wahren / fahren* ('keep / go, drive') in German or *дом / том* ('house / volume') in Russian. **Paronyms** also belong to the group of words that differ in terms of minimal phonetic and /or graphic features. Normally, they differ from quasi-homonyms by a certain similarity in meaning, *e.g. Parodontose / Parodontitis* in German or *осветить / осветлить* ('illuminate / brighten') in Russian. Usually, they are words with the same root. It is scientifically justified to identify this group of lexicons because paronyms are easily confused with each other, especially in spontaneous speech, which regularly cause problems for language learners and native speakers.

But semantic closeness is not a mandatory property for paronyms. Even in one's native language, there are cases when one word replaces the other that is semantically unrelated to the original one, like *illuster* ('famous') instead of *illustrativ* ('illustrative') in German or *экскаватор* ('excavator') instead of *эскалатор* ('escalator') in Russian[1]. It means that native speakers can also mix up words that, semantically, have nothing to do with each other. This is often the case when using foreign-sounding words with a low frequency of use, adopted from other languages.

There are also some word pairs whose elements are constantly confused because they occur in similar contexts, *e.g. stalactite/stalagmite*, *arthrosis /arthritis*, *concave/convex*. Usually, such terms come from Latin or Greek. In most dictionaries we find that one part of paronyms of this kind is included, but the other is not (s. VIŠNJAKOVA, 1984; BEL'ČIKOV; PANJUŠEVA, 2002) (more about existing Dictionaries s. section "Russian and German Dictionaries of Paronyms").

[1] You can take a closer look at some specific slips of the tongue of this kind in speeches from famous people: https://blog.lingoking.com/sprache/fremdwoerter-missbraucht-laecherlich-lustig-oder-einfach-nur-peinlich.

It is noteworthy that a native speaker would hardly confuse the similar-looking words that are not borrowings and have no similarity in meaning. Such pairs as *речной / речевой* ('river / speech') or *пыльный / пылкий* ('dusty / passionate') are not paronyms for a Russian native speaker, as well as *verlogen / verloren* ('lying / lost') are not paronyms for a German. But in concrete context, also confusions of this kind are possible and actually happen in oral utterances by native speakers (s. section "Paronyms in Psycholinguistics").

Paronyms from all groups mentioned here, those that are semantically related and those that sound strange but have no semantic similarity, are recorded in paronym dictionaries (s. section "Russian and German Dictionaries of Paronyms").

An important peculiarity of paronyms is that the degree of phonetic similarity is not fixed. The differences in the pronunciation can be minimal, as in the pair *невежа/невежда* ('churl/ignoramus'), but several phonemes can also be affected, *e.g. мускульный/мускулистый* ('muscle/ muscular'), *туристический/туристский* ('travel, tourist').

Semantic differences also vary from unspecific, like German pair *mystisch / mysteriös* ('mystical / mystic'), to very specific, see German verbs *faulen / faulenzen* ('rot / be lazy'). The finest differences can be demonstrated sometimes via translation (in a bilingual dictionary like ours) or via the paronym use in phrases. The similarity of possible context leads to confusion with a high degree of probability.

In addition, there are several pairs of adjectives in Russian which differ in nothing except in the suffix, like *демонический / демоничный* ('demonic'), *иронический / ироничный* ('ironic'), *трагический / трагичный* ('tragic'), *саркастический / саркастичный* ('sarcastic'). The form with the suffix *-н* ('-n') is suitable for the role of syntactic predicate in the short form (*ироничен, трагичен*). Adverbs are also derived from these forms: *иронично, трагично*. Normally such pairs are semantically identical. But sometimes minimal semantic differences develop in them. The adjectives with the suffix *-еск-* ('-esk-') begin to be associated with relative adjectives which are not able to form comparative levels, meanwhile the adjectives with the suffix -н- ('-n-') are of the type "qualitative adjectives". It is also important to record such kinds of pairs in the Paronym dictionary.

If the linguistic term "paronym" is defined as broadly as possible, this class of lexical units should also include words that differ not semantically (denotative meaning) but stylistically, like Russian

ISSN 2237-6321

v. 11 (esp.)
88-117
mar.
2022

проект / прожект ('project / unrealistic expectations, far-fetched plan') or German *Soldaten / Soldateska* ('soldiers / bands of soldiers and murderers').

Besides, it can be proved[2] that phonetically similar words with different roots, but very close meaning can also be confused, like Russian verbs *вилять / вихлять* ('wiggle, avoid, dodge') which have different roots despite their phonetic similarity. For us, they also are paronyms.

There are opinions where only words with the same rhythmic structure can form paronymic pairs (VIŠNJAKOVA, 1984, p. 16). But, if we look at the affixal word formation, it becomes clear that the rhythmic criterion cannot be used consistently, at least for the Russian language, since syllabic (*e.g. -ечк*, *-ов, -еск*) and non-syllable suffixes (e.g. *-н, -т, -ст*) compete.

So far, we have not seen any work in which the weighting of orthography and pronunciation for the formation of paronyms were mutually assessed. "The contribution of orthography to verbal WM [working memory] has been largely ignored in the literature" (LIN *et al.*, 2015, p. 539). Commonsense and intuition allow us to assume that such homographs as the Russian *о́рган / орга́н* ('organ / pipe organ') are not paronyms in the general (traditional) sense of this term because a Russian native speaker would hardly mix them up in his speech. But homographs with the slightest semantic similarity, like *ле́дник / ледни́к* ('icehouse / glacier'), should be included into the Dictionary of paronyms for monolingual native speakers.

Paronymic substitutions occur both in the oral and in the written language in text production, although much more frequently in the oral language because the author usually has more time for self-control when creating a written text. It can be assumed that the phonetic aspect is more important than the graphic one. There are examples where words which have deep graphic differentiations, but similar pronunciation become semantically "the same" and have been substituted in the national lexicon. For example, the Russian paronym *сладости* (originally with the meaning 'delight') has completely replaced the noun *сласти* ('sweets') so that nowadays the word *сласти* is considered out of date.

[2] Such examples are included in our Slip-of-tongue Corpus, s. section "Methods and principles for choosing paronyms for our Dictionary".

Although the phonetic aspect is more important in the formation and selection of paronyms, the lexicographers focus primarily on the orthography (spelling). Otherwise, one would have to consider such homophones as *слезать* ('climb down') / *слизать* ('lick off') or *отворить* / *отварить* ('open / cook') as paronyms what does not correspond to the lexicographical tradition.

Now we can move on to the definition of the term "paronym". Paronyms are words that have a similar spelling and phonetics on the one hand and a common semantic feature on the other hand. Similarity of meaning is usually not enough to easily replace one paronym with another. The substitution of paronyms during text production is perceived as a speech defect. But for similar words of foreign origination which sound like "foreign words", a similarity in meaning is not necessarily required to be regarded as paronyms.

Russian and German Dictionaries of Paronyms

The paronym dictionaries, monolingual as well as bilingual, have a special feature compared to other types of dictionaries. Usually, the speakers do not notice that they have made a lexical paronym substitution or are about to make one, except when their contact person points it out to them. This does not reduce the usefulness of such reference works. Nevertheless, one should not be under any illusions about their usefulness in improving the language culture. However, every now and then people know about the existence of two similar words and want to avoid a potential mistake by confusing them. In such situations, a paronym dictionary could preventively help to build up a sentence correctly, like any other type of dictionary.

In Russia, at least five dictionaries of paronyms exist (s. VIŠNJAKOVA, 1984; KOLESNIKOV, 1971; BEL'ČIKOV; PANJUŠEVA, 2002; KRASNYCH, 2003; SNETOVA; VLASOVA, 2019). They were compressed to an online Paronym dictionary 2019 (ONLINE RUSSIAN PARONYM DICTIONARY, 2019). All dictionaries except for the online dictionary are provided with an introduction, in which the theoretical basis for the selection of paronyms is described. Since the definition of paronyms is very vague, the authors of the dictionaries interpret this definition in their own individual way. Ju. Bel'čikov and M. Panjuševa insist that paronyms always have a common root and belong to the same part of speech (BEL'ČIKOV; PANJUŠEVA, 2002). O. Višnjakova also propagates

ISSN 2237-6321

v. 11 (esp.)
88-117
mar.
2022

this point of view, but in her dictionary, there are word pairs like *аспирант / аспират* ('aspirant / aspirate') which do not share a common word root (VIŠNJAKOVA, 1984).

On the other hand, there are several cases where pairs of words have the same word root and still are not included into the Dictionaries, for example, *языковой / языческий* ('linguistic / pagan') or *красный / красивый* ('red / beautiful').

Words which are constantly confused because they occur in similar contexts, *e.g. сталактит / сталагмит* ('stalactite / stalagmite'), or *артроз / артрит* ('arthrosis / arthritis'), arise in all the dictionaries sporadically, but one cannot recognize the reason why one pair of this type is included and another is not.

Some pairs or groups of paronyms in the Dictionaries are built up where only the prefixes differentiate (*одевать / надевать* – 'to dress up') and other groups with different suffixes. The number of groups with the suffixes is much higher but there are no explanations given about the principles for choosing and the attitude of the author towards the prefixes. In none of the Russian Dictionaries, a reason is recognizable why some paronym pairs or groups have been chosen and others of the same type cannot be found there.

It is obvious that there are some inconsistencies between the theoretical principles advocated in the preface and the actual dictionary paronyms. It appears that the only methods for choosing the items are the author's intuition and personal experiences with common "slips of the tongue". In any case, the creation of paronym dictionaries proceeds according to the criteria that every lexicographer chooses whether it suits him/her and considers to be correct. None of the authors of the five dictionaries analyzed consistently follow and implement their own methods.

In Germany, only one bilingual Dictionary (German-Russian and Russian-German) has been published to date (PAVLOVA; SVETOZAROVA, 2012). This book is a pioneering work and so far unique of its kind to serve as a reference work for foreign language learners, warning them of the dangers of confusing similar sounding words in their spoken language.

A new, enlarged, revised version of that Dictionary[3] is being developed at the moment. This paper demonstrates some principles of

[3] In the following, we will start the name of this particular dictionary with a capital letter: Dictionary.

searching for and choosing the paronyms for that Dictionary, s. sections: "Methods and principles for choosing paronyms for our Dictionary", "Structure of the Dictionary". The most features which are described in these sections, have already been implemented in the previous version of our Dictionary but we are striving to expand the corresponding features in the next edition. There are also some features that have been planned but not yet implemented. They are on the agenda for the planned version.

At the same time, a monolingual German corpus-based paronym dictionary is being created at the Institute for German Language (Mannheim). In many publications it is explained in detail, which methods of paronym selection the project team uses, based on German text corpora (SCHNÖRCH, 2015; STORJOHANN, 2017; MELL; STORJOHANN, 2017). It appears that this future dictionary follows a clearly defined list of methods, which are consequently unambiguously defined, for the search and selection of the lemmas.

Below we will refer to the concept of our work presented here as "Dictionary" (capitalized).

Paronyms in Psycholinguistics

Speakers normally know what they want to say before the correct sounding words are chosen in their mental lexicon[4]. The motif precedes its realization. The realization of the motif is accompanied by the "dismemberment" of a continuum (of the thought) into individual linearly organized elements – words, lexemes or idioms and collocations.

Words are stored in memory according to various principles, including phonetic similarity (CONRAD; HULL, 1964; COPELAND; RADVANSKY, 2001). Especially the similarity of the beginning of the word form plays a special role (ELLIS, 1990; WILSHIRE, 1998, 1999; PAGE *et al.*, 2007).

The stream of information leads from concept to sounds. After the conceptual information of long-term memory has led to an activation of lexical concepts and lemmas, a lemma is selected, and the word forms of the associated morphemes are activated. The phonemes that contain these morphemes are packed into syllable frames in a

[4] Some researchers show that many mental lexicons exist (phonological, orthographic, morphemic etc.). Recently, also skeptical opinion of the non-existing of mental lexicon (at least as a "brain store" of lexemes) has been published (ELMAN, 2009). We do not include the discussion of the mental lexicon nature in our research.

ISSN 2237-6321

v. 11 (esp.)
88-117
mar.
2022

phonological encoding process. This, in turn, activates stored syllable packages that are stored in commands for the articulators to be implemented (LEVELT; ROELOFS; MEYER, 1999).

Different psycholinguistic models of speech production and searching for words in the Mental lexicon exist. According to most of them, when accessing the mental lexicon not only one unit can be activated, but many associated lemmas can be activated at the same time (SWINNEY, 1979). Not only semantics, but also word forms are activated. We know how the words sound. During speaking, the movements of the articulators reflect not only the currently produced phoneme, but also the previous one and the following phoneme. Sometimes, acoustic properties and phonetic categories cannot be clearly assigned to one another because of co-articulation phenomenon. Important for the final decision is the phonetic shape, especially of the first part of the words, *e.g. captain / captive*. But also the frequency of the searched word to be finally activated is considered. High-frequency words are stronger candidates for activation than lower-frequency words (MARSLEN-WILSON, 1987). In (SCHILLER, 2006, p. 553) it is claimed that "segments rather than phonological features play a role in production planning, while more subphonemic detail is necessary to account for the speech comprehension data".

The motif sends a retrieval to the mental lexicon. The mind tries to answer several questions connected to this retrieval. How specific are the semantic features of the lexical unit being searched for? How many associated units of the stored lexicon correspond to the semantic components of the request? How often do we use the corresponding units? Are there units which correspond to the request at all in our memory? etc. In accordance with these questions to be resolved, we choose the necessary unit through a kind of inspection of everything that is activated. But at the same time, we also solve other communicative tasks: we pronounce the previous words, we watch the environment, we search for suitable syntactic constructions and so on. Thanks to this variety of tasks being done, their partial interference arises. The interference is partly influenced by the left context, but also by the anticipation of the next information (OVCHINNIKOVA; PAVLOVA, 2017).

It is not yet known which words and frames exactly are activated by the motif (intention) of the speaker in his mind. There are several models (hypothesis) corresponding to this topic. Spreading activation model (COLLINS; LOFTUS, 1975; McCLELLAND; RUMELHART,

1981; ANDERSON, 1983; DELL, 1986) assumes that semantic features are represented in the mental lexicon within a network of relationships based on associations. It postulates "a network of linguistic rules and units in which decisions about what unit or rule to choose are based on the activation levels of the nodes representing those rules or units" (DELL 1986, p. 283). Collins and Loftus share the opinion that retrieval occurs by activation spreading from one unit to another throughout the network in parallel. The spread of activation is like the effect which occurs when somebody drops a stone into still water. The "waves" spread out in all directions. The result is determined by several factors. In this model, the concept nodes form a semantic network, organized in terms of semantic similarity (*e.g. storm, wind, rain, tornado*). The semantic nodes are activated in parallel with the lexical network where the lexical information related to the concepts is organized in terms of phonetic similarity (*e.g. storm, stork, store, stone*).

The competition between activated lemmas in the mental lexicon sometimes leads to the fact that a lemma is selected, which does not correspond to the intended lexical concept. That makes a slip of the tongue: the speaker says *leash* instead of *collar* in the situation when somebody wants to walk a dog[5]. But more often, similar sounding words are confused during text producing (paronyms or pseudo-paronyms), like *шалфе́й* ('sage') instead of *шпина́т* ('spinach'). Both Russian words begin with the same phoneme [Š], consist of the same number of syllables, have the same rhythmic structure, belong to the same part of speech and to the same semantic area (dishes, herbs)[6]. But there is no common root and no many common phonetic properties to be observed in this pair, and this pair cannot be regarded as "paronyms" in the common sense of this term.

Several psycholinguistic experiments lead to the assumption that in our mind, the activation of overlapping representations takes place. This connectionist model can be described as follows:

> In the model [...] whenever a node is activated, it sends on activation to all the other nodes to which it is connected at the next time step. This means that if the semantic features corresponding to the concept of a cat are activated as the input to the model, they will send activation to the lexical-layer node for CAT, but also to all other lexical nodes that are connected to the semantic features for a cat. (For example, the lexical nodes for RAT and DOG will also have connections

[5] This is an example from our ***corpus***.

[6] This is an example from our ***corpus***.

ISSN 2237-6321

v. 11 (esp.)
88-117
mar.
2022

> to the semantic feature "animal", whereas the lexical nodes LOG and MAT will not.) The lexical nodes for RAT and DOG will not be as strongly activated as the node for CAT because only some of their semantic features will be sending them activation. Any activated lexical nodes then send activation to all the phonological nodes to which they are connected; thus, all the phonological nodes for the lexical items CAT, RAT, and DOG will receive some activation. Again, [r, œ, t] and [d, o, g] should receive less than [k, œ, t]. Activation within this particular model spreads interactively (i.e., in both directions), and the final output at the phonological layer is not determined until activation has spread in both directions through the network over many time steps. If the network is operating as it should, the phonological segments [k, œ, t] will receive most activation when the input is the semantic specification for the word CAT. (BAKER *et al.*, 2001, p. 695).

Substitutions represent a common feature of verbal behavior. Word substitutions in spontaneous speech reveal interconnections in the mental lexicon and mechanisms of lexical selection and semantic retrieval during speech generation. As usual, a substitution appears in sentence production when the lexical access is restricted by some obstruction and a speaker fails to select a proper unit in the mental lexicon, making attempts to retrieve a word from long-term storage into working memory and to withstand the influence of the current context thanks to inhibitory control. The structure of the long-term storage of verbal information, which is referred to as mental lexicon, is determined by frequency, time of word acquisition, and the diversity of its associations with other words (BAAYEN; MILIN; RAMSCAR, 2016). Two words are similar if they belong to the same node or hierarchy in the ontology (SLIMANI, 2013). Similarity of words assumes that the words belong to the same part of speech and perform the same text function.

The semantic similarity with the target word foregrounds a substitution, and the phonetic parallels make substitution a very common type of speech error. In the common case, no words or at least no morphemes are used as substitutes, which are not parts of the language system: "the error could be semantic, environmental, or phonological in nature" (DELL, 1986, p. 318).

In the classic paper "The 'Tip of the Tongue' phenomenon", Brown and McNeil (1966) describe the cases of substitutions of words by paronyms or pseudo-paronyms (*e.g. Congress* is substituted by *Concord*) when the speaker has a clear idea in his/her mind what he/she wants to say. The words in the roles of replacers belong to the

same part of speech and normally have the same sounds (and the same letters in the graphic image) in the first word part (here *Con-*), the same number of syllables and the same rhythmic structure (here, the word stress on the first syllable). Also, in Leuninger (1996), the idea that the pair of "substituted – substituent" word has the same rhythmic structure, is voiced. But our examples which are extracted from the "live" speech of Russian native speakers, demonstrate that there are also many substitutions when the substituent word does not have the same rhythmic contour as the substituted word, *e.g.*

1) Человек был *не против поделиться* (instead of не *прочь*). ('This man didn't mind sharing')
2) Он не понимает опасность, на которую может себя *обрести* (instead of *обречь*). ('He does not recognize the danger he is exposing himself to').
3) Юрия Яковлева любило все отечество *беспрекословно* (instead of *безусловно*). ('The actor Juri Jakovlev was undoubtedly loved by the entire population').

There is psycholinguistic evidence that L1 and L2 are activated simultaneously in bilingual minds. This activation can lead to errors of the type "false friends" which are nothing more than cross-language paronyms:

> The activation can spread directly to the target language lexical memory where the cross-lexical similarity neighbor receives activation. For example, if the input word is *Sturm*, the German lexical form triggers the cross-linguistic similarity neighbor *storm* in the target lexicon. The corresponding phonological segments and articulatory features of the target lexical unit become selected to produce the target word. [...] The degree of conceptual overlap between the false cognates appears to play an important role in the processing mechanisms. The significant difference in accuracy between deceptive and accidental false cognates indicated that if input and target share no semantic features at all (for example the German input *Rock* and the English false cognate *rock*), chances are greater that the perceived incompatibility of the conceptual features of the input and its cross-linguistic neighbor results in the inhibition of the selection of the false cognate. [...] In case the two similarity neighbors share conceptual representations L1 lexicon target lexicon input: [...] for example, the German input *Frieden* and the English false cognate *freedom*; the lack of full correspondence in conceptual representations might be bypassed during processing and the cross-linguistic similarity neighbor might become selected instead of the translation equivalent. (PÁL, 2000, p. 122–123)

ISSN 2237-6321

v. 11 (esp.)
88-117
mar.
2022

But also, even in the context of the language to be learned, words that occur as paronyms are confused. In the meantime, there are many studies which demonstrate that words of the foreign language which are phonetically similar to the words of the native language (so called "dense neighborhoods"), are identified and learned much faster than the words of the area "sparse neighborhoods" (CUTLER *et al.*, 1983; FLEGE, 2002; SMITS *et al.*, 2009; STAMER; VITEVITCH, 2012; WEBER; BROERSMA, 2013). The psycholinguists conclude that

> [...] recognizing spoken words is usually effortless in one's native language (L1), but the same task can be much more demanding when listening to a second language (L2). Main issues in L2 word recognition research concern the involvement of the L1 and L2 lexica and the influence of the phonological structure of the listener's mother tongue, with the focus being on lexical representations of word form. (WEBER; BROERSMA, 2013, online).

For L2 learners, the difference between words with high and low neighborhood density is larger than for native speakers (BRADLOW; PISONI, 1999): "second-language sound contrasts that are ignored in the listeners' native language may never reach native standards" (WEBER; BROERSMA, 2013, online). For example, for Japanese learners, hearing the word *rocket* causes temporary lexical activation of the lexical unit *locker*, which cannot happen to the English native speakers in the same situation because the sounds /l/ and /r/ are variants of the same phoneme in Japanese (CUTLER; WEBER; OTAKE, 2006). Not only the phoneme system of L1 can influence the decisions of L2 learners regarding similarity of words in the language they are learning, but also the segmentation (syllable structure), word accent and phoneme combinations they are accustomed to their mother tongue:

> When listening to an L2, listeners tend to use the segmentation strategy they know from their L1. French listeners use the syllable-based segmentation strategy that is appropriate for French even when they are listening to English, and English listeners are not using that strategy when listening to French (WEBER; BROERSMA, 2013, online).

Though there is no term "paronym" mentioned in the scientific papers on the above-mentioned topic, during the L2 learning and usage, there is a higher risk of mistaking one word for another than is the case for L1. This means that many words which are paronyms for L2 learners, for native speakers are not. Or they appear to be quasi-paronyms for L1

speakers. This conclusion is important for understanding the methods we used to select paronym pairs and groups for our Dictionary.

Methods and principles for choosing paronyms for our Dictionary

Our Paronym dictionary has been created for L2 learners, which means, for Russians who learn German, and for Germans who learn Russian. As we have already mentioned, when compiling our Dictionary, we primarily rely on the corpus of substitutions that we have accumulated over the years. These are slips of the tongue of native speakers (German and Russian) as well as substitutions made by German or Russian learners.

During the creation of our reference work, we mainly consulted the "Slips of the tongue" corpus that we created ourselves. Our database of "Slips of the tongue" includes approximately 2000 examples. We put our corpus together over the course of about 12 years. This corpus contains examples of any kind of slips of the tongue from everyday conversations, interviews, speeches, talk shows, presentations and other sources. One of the most valuable sources that our lemma dictionary feeds is the oral speech of our students in L2. The most slips of the tongue are based on malapropisms, the mistaken use of incorrect words in place of other words with similar phonetic features. The corpus itself has not been published. It serves for us as a source for choosing the lemmata and for identification of paronym types.

There are many paronymic substitutions where the number of syllables and the place of the word stress of the "substitutes" slightly differ from the substituted original. This is the reason why we also include paronyms where the rhythmic structure is not the same into our Dictionary.

However, there are also other deviations in the methodology used to create our Dictionary compared to the traditional monolingual dictionaries we mentioned above. These deviations can be explained by the fact that our bilingual Dictionary is primarily aimed at foreign language learners. The main principle that we follow in choosing the paronymic groups for our Dictionary can be formulated in the following way: for foreign language learners, many words of a second language (L2) seem to be semantically more similar than those for native speakers (L1). In other words, there are more "candidates" for semantic proximity based on their phonetic and graphical similarity in L2 than in L1.

ISSN 2237-6321

v. 11 (esp.)
88-117
mar.
2022

Some of the entries are not suitable for the Dictionary because they include non-existing words, *e.g.*

4) На его счёт *перевесут миллиарды* (instead of *переведут*). ('Billions of dollars are transferred to his account').

The Russian learning student uses a non-existing word – *перевесут,* though all morphemes are correct separately. The reason for the error could be incorrect word-building from the correct infinitive *перевести* where the consonant 's' from the infinitive form went into the shape of the same verb in the finite form in the future tense instead of the correct 'd'. This is not a paronym substitution, and such cases should be excluded from our focus.

But there are many other substitutions that look like real paronymic substitutions: *шапка* (instead of *шляпка*) *гриба* ('mushroom hat'); *учётная* (instead of *учёная*) *степень* ('scientific degree'); *треножёр* (instead of *тренер*) ('trainer'); *отечественная* (instead of *отчая*) *деревня* ('home village') etc. Existing Russian words occur as substitutes, their similarity with the substituted words is as minimal as possible. German learners confuse the words *kuschen / kuscheln* ('cuddle / snuggle'), *Hocker / Höcker* ('stool / humps') and other signals which native speakers normally do not confuse. For foreign language learners, these words seem to be phonetically similar due to their L1 phonetics[7].

And this exactly is the greatest issue for our selections: some slips of the tongue that are paronymic for foreign language learners are not so for native speakers. For example, for native speakers, the substitution *учётная / учёная* corresponds to the criterion 'phonetic similarity', but not to the 'semantic similarity'. But the substitution shows that for the non-native speaker these two words are semantically related. It would not be possible to include every pseudo-paronym group or chain into our Dictionary. Whether we should include such cases in our Dictionary or not, we must decide each time individually and leave room for discussion.

We use our slip-of-the-tongue corpus not only as a source of concrete pairs "substituted – substituent", but also as a reference work for these types of paronyms.

[7] Oral surveys among the L1 and L2 students show this.

Since our reference work is intended for foreign language learners, we are expanding the term "paronyms" and giving it a very broad definition.

In our Dictionary, we use not only pairs of words, but also groups which include more than two words, like German *begreiflich / begreifbar / begrifflich* ('clear / understandable / conceptual') or Russian *тленный / тлеющий / тлетворный* ('mortal / smoldering / harmful').

In the following part of this paper, we will demonstrate some types of slips of the tongue that we consider in our Dictionary. Most of the types that we describe below are already available in the 2012 edition. In the next version, it is planned to tackle them more intensely. It means, we endeavor to include as many cases of these types as possible into the next edition.

But some types have not been implemented yet and are planned only fort he next edition; this is shown in the sections whose titles are marked with the "asterisk" (*).

Traditional paronyms

Under "traditional paronyms", we understand words with the same root, similar semantics, and different suffixes with similar functions, like German *lächerlich / lachhaft* ('ridiculous / laughable'), *effizient / effektiv* ('efficient / effectively') or Russian *шумный / шумовой* ('loud / acoustic').

Quasi-homonyms

For German students who learn Russian, the difference between "soft" and "hard" (palatalized and not palatalized) consonants is not of phonetic relevancy. Also, they confuse the voiced and unvoiced "s". There are also other problems of phonetical kind which must be especially trained, and which cause many errors. For Russians who learn German, long and short vocals are not systemic and are confused repeatedly in their L2 speech or writing. But it is not possible to include all quasi-homonyms which potentially could be confused by the L2 learners since certain phonetic features in L1 cannot be distinguished or seem more similar than for the native speakers. However, we also consider this type of slips of the tongue especially if quasi-homonyms have one common sememe, like in German *Schlamm / Schleim* ('mud / mucus'). The vocals *a* and *ei* are similar for Russian native speakers

ISSN 2237-6321

v. 11 (esp.)
88-117
mar.
2022

who learn German, and both nouns mean 'something slippery'. Another example could be the German pair *Höhle / Hölle* ('cave / hell') where the vocals have different length and cannot be mixed up by L1 speakers.

Same root, suffixes with similar functions, deep semantic differences

These are word pairs like ***заказник / заказчик*** ('nature reserve / client'), ***купальник / купальщик*** ('swimsuit / bather'), German *befrieden / befriedigen* ('pacify / satisfy'), *folgsam / folglich* ('obedient / consequently, therefore'). Though the suffixes have similar functions, the words differ semantically in a very essential way, but they can be confused by L2 learners who only know the main functions of the suffixes. For example, the main grammatical meaning of the Russian suffixes ***-ник / -щик / -чик*** is 'signaling of (grammatical) agent'. This is already well-known by Russian learners on the basic level of speech acquisition. But they do not often know that there can be other meanings of the same suffixes.

Semantic similarity but different word roots

There are many synonymous word pairs that begin similarly, *e.g.* Russian ***бесчисленный – бессчётный*** ('innumerable'), ***долгосрочный / долговременный*** ('long term'), German *bloßlegen / bloßstellen* ('expose'). They can sometimes be used in the same context, but there also are phrases where they could not be substituted interchangeably. It depends on the combinatorics[8].

The same or semi same root, one word with suffix and another without suffix

These are pairs like German *Betrag / Betragen* ('amount / behaviour'), *Anruf / Anrufung* ('call, / invocation') or Russian ***клин / клинок*** ('wedge / blade'), ***нос / носик*** ('nose / spout'). The semantic similarity can exist or be completely absent in such groups.

Perfect and imperfect aspects of Russian verbs with semantic differences

It is well known that most Russian verbs are represented in two grammatical aspects – the perfective and the imperfective. In some cases, the forms of the perfective and the imperfective aspect

[8] In Norman (2020, p. 173), such words are called not "paronyms", but "taronyms".

have diverged semantically. It is important for Russian learners to know about this. For example, the forms ***поступать*** (imperfective) / ***поступить*** (perfective) look like two forms of the same verb, but these forms have different semantics: 'apply to the university' / 'be enrolled'. The imperfective aspect ***раздумывать*** means 'ponder', while the perfective ***раздумать*** has the meaning 'have changed your mind'.

Non-reflexive and reflexive verbs

Experience has shown that foreign language learners do not attach great importance to the reflexivity of the verb. But they should know that sometimes the reflexive pronoun *sich* in German or the affix *-ся* in Russian can change the semantics of the verb significantly. See Russian ***обыскать*** / ***обыскаться*** ('search / to be looking all over for something'), ***отказать*** / ***отказаться*** ('reject / dispense'); German *werfen / sich werfen* ('through / pounce'). There are even such pairs of verbs whose meanings have completely diverged so that antonyms have formed: ***просчитать*** / ***просчитаться*** ('count, calculate / have miscalculated').

Long and short forms of adjectives with meaning differentiation

Most Russian qualitative adjectives have short forms which are derived from their "normal" (long) forms. Short forms serve exclusively as grammatical predicates[9], while long forms function as attributes or as predicates. In some cases, the semantics of long and short form of the same adjective developed apart, and pairs like ***хороший*** / ***хорош*** ('good / smart, pretty') or ***великий*** / ***велик*** ('great / too wide – about clothes') occur. We also consider such pairs in our Dictionary.

Same root, different but phonetically similar prefixes

We cannot consider all the cases of words with the same root, but different prefixes can be substituted by each other. There are too many of these word chains, especially in Russian. That is why we limit ourselves to certain items. Based on the phonetic similarity of the prefixes from the perspective of a non-native speaker, we consider the

[9] At least, in the modern language.

ISSN 2237-6321

v. 11 (esp.)
88-117
mar.
2022

following cases: Russian *о-* / *от-* (*оступиться* / *отступиться* – 'stumble / deny, betray'); *о-* / *у-* (*охватить* / *ухватить* – 'capture, overwhelm / grasp'), *в-* /*вз-* (*войти* / *взойти* – 'come in / rise up') and a few more; German *an-* / *ein-* (*Ansicht* / *Einsicht* – 'view / insight'), *be-* / *ge-* (*beruhen* / *geruhen* – 'to be based / deign').

The same root, different negative affixes

The German prefix *un-* and the suffixes *-los, -frei*, have the same meaning of negation. Nevertheless, there are word pairs where the root is the same, but the words have either the prefix *un-* or the suffixes *-los* or *-frei* and slightly differ from each other in their semantics or in their usage. In our reference work, we have such pairs as *unproblematisch / problemlos* ('unproblematic / problem-free'), *unschuldig / schuldlos* ('innocent / blameless'), *fehlerlos / fehlerfrei* ('flawless, immaculate / correct, error-free'). A similar situation is observed with the Russian prefixes *не-* and *без-*: *неизвестный / безвестный* ('unknown / 1. insignificant, 2. missing').

Homographs and homonym pairs with different grammatical gender

The homographs like Russian *о́рган / орга́н* ('organ / pipe organ'), *полно́ / по́лно* ('full, plenty / enough, stop it'), or German *Ténor / Tenór* ('the main idea / tenor'), *úmbauen / umbáuen* ('remodel / build around') pose great difficulties for learning a foreign language. For example, the German learners of Russian must try to get used to the Russian flexible word stress and to understand its importance in word differentiation, and for Russian learners of German, the stressed and the unstressed prefixes (like *um-, über-, durch-, wider-*) which have different functions must be acquired with special diligence. That is why they are part of our Dictionary. In such cases, the graphic representation of the word stress is of utmost importance.

In addition, there are homonyms in German which identify themselves by belonging to different grammatical genders, such as *die Kiefer / der Kiefer* ('pine / jaw'), *das Gehalt / der Gehalt* ('salary / content'), *die Leiter / der Leiter* ('ladder / head') and some other. This group of German nouns is also quite difficult for German learners and must therefore be included into our reference work.

*Phraseology and collocations**

Substituting just one letter or sound can destroy an entire phraseologism. For example, if somebody says ***сотрясение воздуха*** instead of ***сотрясание воздуха***, the Russian idiom with the meaning 'much ado about nothing' would be destroyed although a single letter is replaced in the suffix of the noun. Both nouns, ***сотрясение*** and ***сотрясание***, mean the same and are closely related synonyms, but it is not possible to swap them without destroying the idiomaticity. According to our "slips of the tongue" corpus, such cases are common practice.

A similar situation arises from confusion of collocations, especially in the word groups "preposition + noun". One confuses prepositions in such groups, especially often for foreign language learners. It is for this reason that we plan to include such groups into the Dictionary, *e.g.* German *auf Sicht / in Sicht* ('on sight / into view'), Russian ***на виду / по виду*** ('public / on the outside').

*Not only basic forms of words**

The nominal form of a keyword in different dictionaries is normally the basic form, for example the infinitive for verbs, the nominative singular for nouns, the positive for adjectives.

At this point we are violating lexicographical traditions. It is not customary to list words in forms that differ from basic forms in any kind of dictionaries. But the problem with paronyms is that sometimes it is not the basic form of the word that causes confusion but some different word form.

For example, some polysemous words have different plural forms depending on their meaning, such as Russian ***цветы / цвета*** ('flowers / colors'), ***провода / проводы*** ('cables / farewell'); German *Tone / Töne* ('clays / sounds'). Some meanings of polysemous words are only exposed in the plural form, as ***манера / манеры*** (Pluralia tantum) ('way, kind / manners').

We intend to include such pairs into our lexicographical work for the next edition.

We also consider some comparative forms of the adjectives. For example, there is a tendency to confuse the Russian forms which mean the same: ***больше / более*** ('more') or ***меньше / менее*** ('less').

ISSN 2237-6321

v. 11 (esp.)
88-117
mar.
2022

The only difference of the elements of these pairs is rooted in Grammar: the forms *более* and *менее* are used as parts of combined comparative forms for Russian adjectives, *e.g.* *более холодный* ('colder') or *менее заметный* ('less noticeable'), but they can never be used as comparative of 'much / little' as such, separately. In contrast to these forms, the words *больше* and *меньше* occur as comparatives by themselves. The fields of use of these pairs do not overlap.

Another group of examples are Russian participles. Sometimes, two different participles derived from the same verb form a patronymic pair. In such cases, we also put them in the focus of our attention. See Russian *подвергнутый / подверженный* ('exposed / predisposed'), derived from the same verb *подвергнуть*. Some verbs cannot be regarded as paronyms but the participles derived from them make a couple, as it is the case with Russian: *брести* > *бредший* ('walk slowly > walking slowly'), *бредить* > *бредивший* ('get delirious > getting delirious'). The verbs are not very similar, but the participles are confusingly similar. A neighboring group is formed by cases when a participle and an adjective have become paronyms, like *пропавший / пропащий* ('lost / a hopeless case, self-destructed, swooper').

Also, some homographs will be part of our Dictionary in the case they are not basic forms of the corresponding words, *e.g.* Russian *раздáлись – раздалúсь* ('have become obese / have sounded'). Both Russian finite verbs have the same form of the 3rd person plural, preterit tense. Both are derived from the verb *раздаться*. But these forms of the same verb differ in their semantics because they have been derived from different meanings of a polysemic lexeme. In other cases, homographs evolve from completely different verbs, like the pair *расплачýсь* (from *расплатúться* – 'to pay') / *расплáчусь* (from *расплáкаться* – 'to burst into tears'). The infinitives can hardly be taken for paronyms, at least not by native speakers. But the forms of the 1st person singular in future tense become homographs which are considered and included into our Dictionary because of their difficulty for L2 learners.

Types of paronyms which were voted out[10]

One or both elements of the pair are uncommon, rare, specific words

Spoken language of neutral or colloquial style is one of the most important criteria for our decisions. For this reason, we do not include specific technical terms or rare words into our Dictionary as it is the case in traditional Russian paronym dictionaries. In the pair *скальпель / скарпель* ('scalpel / some kind of plane') which can be found in the Russian online dictionary, the second word is a specific and rare one. In the pair *скобочный / скобчатый* ('bracket / bracket-like'), both adjectives are technical terms which are seldom used in the spoken language. We do not include such cases into our work. For the same reason, such pairs as Russian *аспирант / аспират* ('aspirant / aspirate') are not regarded in our work, because the element 'aspirate' is a special linguistic term which is only known to a relatively small group of specialists.

At least one or both elements of the pair belong to criminal slang

The pairs of the type *подстава / подставка* ('trap, fraud / setup, frame') are not part of our Dictionary because we choose only neutral or colloquial lexis while the first word in this example belong to criminal jargon.

Traditional paronyms which cannot be explained by their translation

The paronyms *Abonnement / Abonnent* ('subscription / subscriber') or *Method / Methodologie* ('method / methodology') which are translated into Russian with the same pair, but written in Cyrillic, are not considered in our reference work. This is the reason why we also do not regard the pairs like Russian *сталактит / сталагмит* ('stalactite / stalagmite'), German *Osteoporose / Osteochondrose* ('osteoporosis / osteochondrosis').

Structure of the Dictionary

The Dictionary consists of the detailed foreword, the list of abbreviations, two main parts, a German-Russian and a Russian-German paronym dictionary, and two indexes.

[10] These types of paronyms were voted out already for the edition of 2012.

ISSN 2237-6321

v. 11 (esp.)
88-117
mar.
2022

Macrostructure

Lemmas are arranged in alphabetical order. However, since several lemmas follow one another in a microstructure, one special index at the end of the book lists the first lemma for which the second, third etc. should be searched for. For example: "See the word *gebühren* in the microstructure which starts with the lemma *gebären*".

Microstructure

The microstructure (a single dictionary entry) consists of two or more lemmas with (optionally) stylistic or grammatical remarks, their translations (for polysemic lemmas under numbers: 1, 2, ...) and (optionally) of some examples with their translations.

We do not seek very detailed information on subtleties of usage or shades of meaning. The microstructure is as short as possible and as detailed as necessary. Our Dictionary does not replace large bilingual or monolingual dictionaries with lots of detailed information about word use. These dictionaries can be additionally consulted if necessary.

Here, you can see the microstructure as a pair of lemmas *geheim / geheimnisvoll* ('secret / mysterious'):

> **geheim** – тайный, укромный, секретный: ein ~er Ort – укромное место; ~er Befehl – секретный приказ; einen ~en Kummer haben – иметь тайное горе; Geheimer Rat – Тайный Совет; ~e Sitzung – тайное *(секретное)* совещание; ~es Wahlrecht – тайное избирательное право **/ geheimnisvoll** – таинственный

In cases when both lemmas are translated in the same way, synonyms, or supplementary comments of a semantic or combinatorial nature are given:

> **kindlich** ('childish') – детский, связанный с детством **/ kindisch** *неодобр.* ('childlike', disapproving) – *(о взрослом)* детский, ребяческий, инфантильный, по-детски, глупо, по-дурацки, безответственно, нелепо: Das ist aber ~! – Что за ребячество! Как это глупо!

путник (‘walker, traveller – somebody on road at this moment’) – *(derjenige, der im Moment unterwegs ist)* Reisende(-r), Wanderer, Fußgänger, Fahrgast / **путешественник** (‘travellor, at this moment or as profession’) – *(j-d, der sich auf Reisen begibt, auch beruflich)* Reisende(-r), Wanderer

But there are also many word chains which consist of more than only two lemmas, *e.g.*:

Junge m (‘boy’) – мальчик **/ Junge** n (‘cubs’) – детёныш *(животного)* / **Jünger** (‘disciple’) – апостол, приверженец

Also, chains consisting of four or five members are available:

частный (‘privat’, ‘incidental’) **–** 1. Privat-: частное владение – Privatbesitz 2. Rand-, nebensächlich: Это частные детали. – Das sind Nebensächlichkeiten; Das gehört nicht zur Sache. **/ частичный** (‘partly‘) **–** Teil-, teilweise, zum Teil **/ частый** (‘frequent’) **–** häufig; часто – oft, häufig **/ частотный** (‘widespread’) **–** häufig vorkommend, weit verbreitet; *mex.* Frequenz-

Indexes

In the final part of the Dictionary, there are two indexes in order to make it easier for the reader to consult the Dictionary. One Index lists all the lemmas which are not the first members of the microtexts and shows the first lemma corresponding to them. For example (as a short extract from the German and from the Russian part):

Partie > Partei
Partikel n > Partikel f
passieren > passen
Patrone > Patron
peinvoll > peinlich

скрипичный > скрипучий
скрытный > скрытый

ISSN 2237-6321

v. 11 (esp.)
88-117
mar.
2022

скученный > скучный
славен > славный
сладостный > сладкий
слежение > слежка

The other Index contains all the cases where paronyms are translated via the same word in the target language. These cases are especially difficult for L2 learners. In the Index, the translation is the lemma, and the paronyms from the main Dictionary, form the microstructure. *E.g.* (extract from the German-Russian part):

Stuck ('stucco') – лепка, лепнина
süß ('sweet') – сладкий, сладостный
symbolisch ('symbolic') – символический, символичный
teuer ('1. expensive, 2. dear') – дорогой, дорог
touristisch ('touristic') – туристический, туристский
Trägheit ('inertia') – 1. лень, леность 2. инерция физ. 3. инертность

Such cases should encourage the foreign language learner to examine them more closely and possibly look more attentively into the main part of our Dictionary or into another bilingual or monolingual dictionary to find out what the differences between the meanings of the respective lemma in L2 are.

Conclusion

In this paper, we endeavored to discuss the phenomenon of paronymy from the point of view of lexicography and psycholinguistics. We also presented a dictionary that was organized considering this phenomenon.

Malapropism (the mistaken use of incorrect words in place of other words with similar phonetic features) manifests itself through the substitution of paronyms. The paronyms are words which are frequently confused in spoken language and which should be listed and described in the form of dictionaries. In this context, the main question needs to be asked and answered: according to which principles the lemmas are selected?

When creating a keyword list for a dictionary, a selection must be made from the word inventory of a language, strictly in

accordance with methodological guidelines. In our special case, the definition of paronyms must indicate the vector of the search and the selection. What is known about Paronyms in Linguistics? They occur within the same language, belong to the same part of speech, look and sound like each other, normally include the same root but different affixes, often are partly synonymous or have some common sememes. Such pairs as English *sensitive / sensible*, *advice / advise, affect / effect* are paronyms in the generally accepted view. But what about the other cases, where the similarity is not as obvious as here?

We see that the concept of similarity is not clearly defined. Reading psycholinguistic literature and considering many real cases of substitutions lead us to a much broader conception of similarity of words and, as a result, of paronymy. There are many more variants which cause confusion in spoken language than are described above. Not only words with the same root can be confused. And not only basic forms of words are confused, but also finite verbs, participles, gerundives, comparative forms of adjectives etc.

We do not include the pairs like шалфей / шпинат ('sage / spinach') into our Dictionary. But our concept of paronymy is interpreted as broad as possible. We are convinced that verbs like Russian вилять / вихлять ('wiggle, avoid, dodge') are paronyms though they do not have the same root. Their meaning is very similar, and they are confused in the spoken language, also by L1 speakers. Such examples are part of our "slip-of-the-tongue-corpus".

The expansion of the term "paronymy" as basis of our project can also be explained by the fact that our Dictionary is aimed primarily at foreign language learners.

L2 speakers make many more substitutions in the foreign language than L1 speakers, also if L2 speakers are on a high foreign language level. L2 learners make errors, confusing not only "classic" paronyms but also quasi-homonyms with no common semantic properties at all but with the same phonetic first part. Phonetic similarity for L1 and L2 speakers is different, this is proved by many psycholinguistic experiments (see. "dense neighborhoods / sparse neighborhoods").

On the other hand, L2 speakers also confuse words with the same root and similar functions of auxiliary morphemes, like German suffix (*-los, -frei*) and prefix (*un-*).

ISSN 2237-6321

v. 11 (esp.)
88-117
mar.
2022

We chose a "middle way" for our methodology, combining different types of substitutions that we have accumulated in our database over many years.

Dictionaries of paronyms can be used as reference works for all people interested in Linguistics. They can also find application in any class related to the study of the languages involved, as well as to anyone interested in learning them.

For creating such types of dictionaries, the methodology should be aimed at examples which would be based on actual substitutions in the spoken and written language. In this case, these dictionaries would also serve as a valuable source for various psycholinguistic experiments and conclusions.

List of Paronym dictionaries

BEL'ČIKOV, Ju.; PANJUŠEVA, M. **Slovar' paronimov russkogo jazyka.** Moskva: Astrel', 2002.

KOLESNIKOV, N. **Slovar' paronimov russkogo jazyka.** Rostov: Izd. Tbilisskogo universiteta, 1971.

KRASNYCH, V. **Tolkovyj slovar' paronimov russkogo jazyka**. Moskva: Astrel', 2003.

ONLINE RUSSIAN PARONYM DICTIONARY, 2019. Available at: https://paronymonline.ru/. Access:10 jun. 2021.

PAVLOVA, A. & SVETOZAROVA, N. **Paronym-Wörterbuch. Deutsch-russisch und russisch-deutsch**. Berlin: SAXA, 2012.

SNETOVA, G.; VLASOVA, O. **Slovar' paronimov russkogo yazyka**. Moskva: Mir i obrazovanie, 2019.

VIŠNJAKOVA, O. **Slovar' paronimov russkogo jazyka**. Moskva: Russkij jazyk, 1984.

References

ANDERSON, J. R. **A spreading activation theory of memory**. Journal of Verbal Learning and Verbal Behavior, 22, p. 261–295, 1983.

BAAYEN, R.; MILIN, P.; RAMSCAR, M. **Frequency in lexical processing**. Aphasiology. Vol. 30, 11, p. 1174–1220, 2016.

BAKER, E.; CROOT, K.; McLEOD, S.; PAUL, R. Psycholinguistic models of speech development and their application to clinical practice. **Journal of Speech, Language, and Hearing Research**. Vol. 44, 3, p. 685–702, 2001.

BRADLOW, A. R.; PISONI, D. B. **Recognition of spoken words by native and non-native listeners: Talker-, listener-, and item-related factors**. The Journal of the Acoustical Society of America, 106, p. 2074–2085, 1999.

BROWN, R.; McNEIL, D. The "Tip of the Tongue" phenomenon. In: **Journal of Verbal Learning and Verbal Behavior**, 5(4), p. 325–337, 1966.

COLLINS, A.; LOFTUS, E. A Spreading Activation Theory of Semantic Processing. **Psychological Review**, 82(6), p. 407–428, 1975.

CONRAD, R.; HULL, A. J. Information, acoustic confusion, and memory span. **British Journal of Psychology**, 55, p. 429–432, 1964.

COPELAND, D.; RADVANSKY, G. Phonological similarity in working memory. **Memory & Cognition**, 29 (5), p. 774–776, 2001.

CUTLER, A.; MEHLER, J., NORRIS, D; SEGUI, J. A language-specific comprehension strategy. **Nature**, 304, p. 159–160, 1983.

CUTLER, A.; WEBER, A.; OTAKE, T. Asymmetric mapping from phonetic to lexical representations in second-language listening. **Journal of Phonetics**, 34(2), p. 269–284, 2006.

DELL, G. S. A spreading activation theory of retrieval in language production. **Psychological Review**, 93, p. 283–321, 1986.

ELLIS, N. Reading, phonological skills, and short-term memory: Interactive tributaries of development. **Journal of Research in Reading**, 13, p. 107–122, 1990.

ELMAN, J. L. On the meaning of words and dinosaur bones: lexical knowledge without a lexicon. **Cognitive Science**, v. 33, p. 1–36, 2009.

FLEGE, J. E. Interactions between the native and second-language phonetic systems. In: P. Burmeister, T. Piske & A. Rohde (Eds.), **An integrated view of language development**: Papers in honor of Henning Wode, 2002. P. 217–243. Trier, Germany: Wissenschaftlicher Verlag Trier.

LEUNINGER, H. **Danke und Tschüss fürs Mitnehmen. Gesammelte Versprecher und eine kleine Theorie ihrer Korrekturen**. Zürich: Ammann, 1996.

LEVELT, W. J. M.; ROELOFS, A.; MEYER, A. S. A theory of lexical access in speech production. **Behavioral and Brain Sciences**, 22, p. 1–75, 1999.

LIN, YI-CHEN; CHEN, HSIANG-YU; LAI, YVONNE C.; WU, DENISE H. Phonological similarity and orthographic similarity affect probed serial recall of Chinese characters. **Memory & Cognition**, vol. 43, p. 538–554. 2015. Available at: https://link.springer.com/article/10.3758/s13421-014-0495-x. Access:10 jun. 2021.

MARSLEN-WILSON, W. D. Functional parallelism in spoken word-recognition. **Cognition**, 25, p. 71–102, 1987.

McCLELLAND, J. L.; RUMELHART, D. E. An interactive activation model of

ISSN 2237-6321

v. 11 (esp.)
88-117
mar.
2022

context effects in letter perception: Part 1. An account of basic findings. **Psychological Review**, 88, p. 375–407, 1981.

MELL, R.; STORJOHANN, P. A Corpus-assisted Approach to Paronym Categorisation. In: Kosem, Iztok/Tiberius, Caroline/Jakubíček, Miloš/Kallas, Jelena/Krek, Simon/Baisa, Vít (Hg.), **Electronic lexicography in the 21st century.** Proceedings of the 5th eLex 2017 conference in Leiden (19.09.-21.09.2017). Brno: Lexical Computing CZ s.r.o, p. 342–376. 2017. Available at: https://ids-pub.bsz-bw.de/frontdoor/deliver/index/docId/6425/file/Mell_Storjohann_A_copus_assisted_approach_2017.pdf. Access:10 jun. 2021.

NORMAN, B. K tipologii obmolvok v spontannoj russkoj reči. In: Gridina, T. (Ed.), **Lingvistica creativa-5**. Ekaterinburg: Ural'skij gosudarstvennyj pedagogičeskij universitet, p. 160–179, 2020.

OVCHINNIKOVA, I.; PAVLOVA, A. Lexical substitution and paraphasia in advanced dementia of the Alzheimer Type. **Psychology of Language and Communication**, Vol. 21, 1, p. 306–324, 2017.

PAGE, M. P. A.; MADGE, A.; CUMMING, N.; NORRIS, D. G. Speech errors and the phonological similarity effect in short-term memory: Evidence suggesting a common locus. **Journal of Memory and Language**, 56 (1), p. 49–64, 2007.

PÁL, A. **The Role of Cross-Linguistic Formal Similarity in Hungarian-German Bilingual Learners of English as a Foreign Language**. Dis. Dr. phil. Potstdam, 2000. Available at: https://d-nb.info/963210610/34. Access:10 jun. 2021.

SCHILLER, N. Phonology in the Production of Words. In: K. Brown (Ed.), **Encyclopedia of Language & Linguistics**, Second Edition, vol. 9, p. 545–553, 2006.

SCHNÖRCH, U. Wie viele Paronympaare gibt es eigentlich? Das Zusammenspiel aus korpuslinguistischen und redaktionellen Verfahren zur Ermittlung einer Paronymstichwortliste. **Sprachreport** Jg. 31, H.4, p. 16–26. 2015. Available at: https://ids-pub.bsz-bw.de/frontdoor/deliver/index/docId/4479/file/Schnoerch_Wie_viele_Paronympaare_2015_4.pdf. Access:10 jun. 2021.

SLIMANI, T. Description and evaluation of semantic similarity measures approaches. **International Journal of Computer Applications**, 80(10), p. 25–33, 2013.

SMITS, E.; SANDRA, D.; MARTENSEN, H.; DIJKSTRA, A. Phonological inconsistency in word naming: Determinants of the interference effect between languages. **Bilingualism: Language and Cognition**, 12 (01), p. 23–39, 2009.

STAMER, M. K.; VITEVITCH, M. S. Phonological similarity influences word learning in adults learning Spanish as a foreign language. **Bilingualism: Language and Cognition**, 15(3), p. 490–502, 2012.

STORJOHANN, P. Cognitive descriptions in a corpus-based dictionary of German paronyms. **Yearbook of the German cognitive linguistics association** (2017), no. 5, p. 107–118. 2017. Available at: https://ids-pub.bsz-bw.de/frontdoor/deliver/index/docId/6988/file/Storjohann_Cognitive_descriptions_2017.pdf. Access:10 jun. 2021.

SWINNEY, D. Lexical access during sentence comprehension: (Re)consideration of context effects. **Journal of Verbal Learning and Verbal Behavior**, 18, p. 645–659, 1979.

WEBER, A.; BROERSMA, M. Spoken word recognition in second language acquisition. **The Encyclopedia of Applied Linguistics.** Malden, MA: Wiley-Blackwell, 2013. Available at: http://www.mirjambroersma.nl/pdfs/Weber__Broersma__2012.pdf. Access:10 jun. 2021.

WILSHIRE, C. Serial order in phonological encoding: An exploration of the 'word onset effect' in laboratory-induced errors. **Cognition**, 68, p. 143–166, 1998.

WILSHIRE, C. The "Tongue Twister" Paradigm as a Technique for Studying Phonological Encoding. **Language and Speech**, 42(1), p. 57–82, 1999.

ISSN 2237-6321