

THE PHONE MAKES US SCREAM: CORPUS STUDY OF ENGLISH AND RUSSIAN

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ABSTRACT

This study explores English and Russian speech verbs with phone prepositional phrases (PPs). It investigates two hypotheses: 1) A phone PP produces an independent construction and 2) A phone PP can be freely added to any speech verb. Two constructions in English and two constructions in Russian are used as the material for the analysis. In both languages I explore the most generally used phone PP and compare it with a PP meaning 'speak into the phone'. I present a new method – statistical profiling, that explores which words occur in a slot of a construction most frequently and how that frequency list for a slot is changed if another slot is filled. This paper shows that English *on the phone* phrase can freely be added to any speech and sound verb, while other phone PPs produce different phone constructions.

[1] INTRODUCTION

This study shows how one small and supposedly insignificant PP can completely change the distribution of the verbs used with it. I explore this question on the example of speech and sound verbs that can be used with phone PPs in English and Russian. In both languages I investigate the most generally used PPs (*on the phone* in English (1) and *po telefonu* 'speak on phone-DAT' in Russian (2)) and compare them with the PPs with preposition *into* (*into the phone* in English (3) and *v telefon* 'into the phone-ACC' in Russian (4)). The structure and examples of those PPs are given in Table 1 on the following page. For the purposes of this paper I consider a verb to be a speech verb if it means a sound that can come out of a person's mouth. Hence, I explore verbs like *breathe* or *sigh* that are usually not considered to be speech verbs. Verbs that denote an act of communication such as *say*, *speak* or *talk* are referred to as neutral speech verbs and are opposed to the verbs that introduce some additional information about the character of communication such as English *shout* and *whisper* or Russian *zagovorit* 'start talking'.

- (1) It feels wrong to sit in my pajamas TALKING ON THE PHONE with a U.S. attorney in D.C., sounding tough about a criminal he's trying to put away. [Huston, James W. *Marine One* (2009)]

PP	Examples
1) on + NP	speak on the phone
2) into + NP	speak into the phone
3) po + NPdat	govorit' po telefonu 'speak on phone-DAT'
4) v + NPacc	govorit' v telefon 'speak into phone-ACC' govorit' v trubku 'speak into receiver-ACC'

TABLE 1: Phone PPs in Russian and English

- (2) Prezident SŠA Buš 12 minut GOVORIL PO TELEFONU s
 president USA Bush 12 minutes talked on the-phone-DAT.SG with
 prem'er-ministrom Slovakii Mikulašem Dzurindoj.
 prime minister Slovakia Mikuláš Dzurinda
 'President of USA Bush for 12 minutes TALKED ON THE PHONE with the prime
 minister of Slovakia Mikuláš Dzurinda.'
 [Janina Sokolovskaja. Ljaščuk idět v Irak. Ukrainskie voennye gotovy k
 otpravke v Persidskij zaliv (2003) //«Izvestija», 2003.02.26]
- (3) One guy called up and just SCREAMED INTO THE PHONE, no contaminated
 blood!
 [One-Horned Unicorn Deer Found in Italy. The Bryant Park Project 8:00-
 9:00 AM. (2008)]
- (4) Počemu ty togda ne skazala? — ZAKRIČAL ON V TRUBKU.
 why you then not say? — shouted he into receiver
 Why didn't you say it then? — SHOUTED HE INTO THE RECEIVER.
 [Olga Zueva. Skaži čto ja tebe nužna . . . // «Daša», Nr. 10, 2004]

It seems that almost any speech or sound verb can be used with phone PP. Such uses raise the interesting theoretical question of whether this PP can be freely added to any speech verb. On the one hand this PP is not always used when a speech verb is used: usually use of a verb like *govorit'* 'talk' does not imply speaking into a phone. This argument appears only if the situation described by the sentence is suitable, i.e. includes a phone. On the other hand when it does appear it is semantically connected to the speech verb – it describes the channel for the movement of sound. Thus it remains unclear whether this PP can be freely added to a speech verb or these are realizations of a special phone construction. These two hypotheses will be evaluated based on statistical profiling.

[2] STATISTICAL PROFILING

Statistical profiling uses Construction Grammar (Fillmore 1989; Goldberg 1995, 2006; Tomasello 2003; Fried & Boas 2005) as its theoretical background. Construction Grammar is a theoretical approach that aims to account for various language phenomena using constructions. A construction is a pairing of a form and a meaning; a construction consists of several elements and has semantic restrictions on them. This approach can be illustrated with the example of the *there*-construction discussed in a recent book by Kuno & Takami (2004). Their study offers a constructional account for several phenomena in English that are usually considered to be connected with Unaccusativity. The authors show that the Construction Grammar approach gives better predictions about the data. For example Kuno & Takami (2004, 58) propose the following list of functional restrictions on the *there*-construction: “The *there*-construction is acceptable to the extent that the string to the left of its logical subject is interpretable as denoting existence, absence, appearance, or non-appearance of the logical subject referent. In addition, when the construction has a presentational force, the existence, absence, appearance, or non-appearance that the construction represents must be observable to the speaker (or the person whose point of view the speaker is representing).”

These restrictions allow the authors to explain some uses of *there*-sentences that contradict the Unaccusativity approach. First, it becomes possible to explain why transitive verbs can be used in the *there*-construction, see (5). Even though the verb *cross* is transitive, *cross someone’s mind* denotes an event of appearing. Second, it explains why *there*-sentences with some unaccusative verbs are not grammatical (6), however a slight change in the sentence makes them grammatical (7). Addition of a locative phrase transforms how the situation is observed. The locative phrase and the verb together serve to denote the existence of the referent. Third, it explains why sometimes a change in a grammatical form affects the grammaticality of a *there*-sentence, see (8). “[T]he progressive form, since it describes an on-going action or event, establishes the speaker as a spectator of the action or event, and this fact in turn contributes to the ‘existence’ interpretation of the string to the left of the logical subject.” [ibid: 53].

- (5) There crossed her mind a most horrible thought.
(Kuno & Takami 2004, 21b from Kayne (1979))
- (6) *There smoldered a flag in a corner of the room.
(Kuno & Takami 2004, 22a)
- (7) In a corner of the room there smoldered a flag that some angry patriot had torn down and ignited. (Kuno & Takami 2004, 23a)
- (8) a. *There swam in the river a young girl with a red headband.
(Kuno & Takami 2004, 46b)

- b. There was swimming in the river a young girl with a red headband.
(Kuno & Takami 2004, 45b)

Thus we see that the constructional approach in the case of *there*-sentences has an explanatory advantage that the unaccusativity approach lacks.

In investigating a construction, the relevant questions are what is the form of the construction, what is the meaning of the construction and what semantic restrictions does a construction have on its slots. While the first two questions are often investigated in the literature on construction grammar, the issue of the semantic restrictions on a slot is less studied. However, the restrictions posed on the whole construction and on its elements are an important part of a construction, because without knowing what restrictions a construction has we cannot explain grammatical and ungrammatical uses of the construction. This paper offers an objective method to find such restrictions using statistical methods – statistical profiling.

Statistical profiling is not the first attempt to apply statistical methods in construction grammar. S. Gries and A. Stefanowitsch have developed a statistical approach called collostructional analysis, which measures the attraction and repulsion of a lexeme for a slot of a construction (Stefanowitsch & Gries 2005, 2003; Gries & Stefanowitsch 2004). For example, Stefanowitsch & Gries (2005) discuss which lexemes are attracted and repulsed in the causative *into*-construction. Using the frequencies of two lexemes filling different slots in the construction (for example *fool* and *thinking*), they can predict what frequency their pairing would have if these events were independent. Comparing that prediction with the actual frequency of the pair, the authors make a conclusion about the attraction or repulsion of the two lexemes in the construction. Two lexemes are attracted if the actual frequency is higher than the prediction. Two lexemes are repelled if the actual frequency is lower than the prediction. For example, Stefanowitsch & Gries show that *fool into thinking* occurs much more frequently than *fool into V-ing* and *V into thinking* would predict.

The semantics of some frames coincides with the semantics of the construction and elements of such frames are attracted to the construction, while some pairs of verbs do not constitute a suitable frame and as a result are repulsed from a construction. Tricking somebody into believing into something is a well formed idea in the mind of the speaker of English and therefore the instances of this frame such as *fool into thinking* or *mislead into believing* appear at the top Stefanowitsch & Gries' list of attracted lexemes. On the other hand, physical aggression is an ineffective way to change someone's mind, and as a result we see that items reflecting this frame such as *force into thinking* or *bully into believing* are repulsed from the construction. Thus a collostructional analysis uncovers the semantic structure of the examples of a construction.

However collocation analysis has several disadvantages. First, this method has a strong preference towards idiomatic use, for example in the *of*-construction the sure winner is *cup of tea* which definitely is an example of idiomatic use, and therefore does not provide much information about semantic restrictions on a slot. Second, the most frequent words such as *do*, *talk* or *walk* disappear from the list of attracted constructions, since they are usually not attracted to a construction with a specific meaning, such as for example causation. For instance, the verb *talk* is not in the list of the verbs attracted to a verbal slot of the *V on the phone* construction. This is a minus because even though these frequent verbs are not attracted to a slot, among all examples of a construction they appear frequently due to their overall frequency. As we know from experimental studies conducted by Goldberg (2006), the items that appear in a slot frequently contribute to our understanding of a construction. The most frequent items appearing in a slot give us information about the most neutral possible filler for the slot, thus, cutting these verbs we lose important information about semantic restrictions on the slot.

Statistical profiling, like collocation analysis, investigates correlations between lexical items occurring in two different slots of a grammatical construction. Yet, statistical profiling concentrated on finding semantic restrictions on a slot solves both problems mentioned above: it is not skewed toward idiomatic use, actually idioms never appear in the results of the statistical profiling, and statistical profiling does not exclude the most frequent items, it only measures if these items are repulsed from a slot of a construction. Statistical profiling of the construction is based on the idea that the distribution of the elements in the slot reflects the semantic requirement on that slot. This predicts that if the distribution of elements in slot₁ is changed significantly when we fill slot₂, we are dealing with an independent construction. To use this method we need to explore which words occur in a slot of a construction most frequently and how the frequency list for slot₁ is changed if slot₂ is filled.

For example, coming back to the phone PP used with speech verbs, statistical profiling predicts that the phone construction should have specific semantic requirements on its elements and particularly on the verb in it. As a result of the semantic requirement, the distribution of verbs possible in the construction has to be different (and the difference is statistically significant) from the distribution of those verbs in general in the corpus, i.e. after filling slot₂ with the phone the distribution of the verbs in slot₁ is changed. On the other hand if these PPs can be added freely to a speech verb, then the distribution of the verbs with the phone PP should be similar to the distribution of the verbs without the phone PP, i.e. filling slot₂ with the phone does not affect distribution of elements in slot₁. The case studies below show the use of this approach to the speech verbs with the phone PPs. For each of the phone PPs there will be a choice between two alternative hypotheses: 1) A phone PP produces an independent construction and 2) A

phone PP can be freely added to any speech verb.

[3] DATA

English and Russian data for this study is collected from corpora. English data and examples for this study are collected from the Corpus of Contemporary American English (CoCA¹), which consists of 385 million words. Russian data and examples for this study are collected from the Russian National Corpus (RNC²), which consists of 140 million words. Table 2 shows how many occurrences of each phone PP were found in the corpus. A speech verb that appears with a PP five or more than five times is included in the list of top speech verbs for that PP. Table 2 also shows how many top speech verbs are found for every phone PP. It can be seen that usually there are eight or nine top speech verbs for a PP, but the PP *v telefon* ‘into the phone’ has noticeably less top speech verbs – only five. To make the data for the Russian PP *v+NPacc* more comparable with data for other phone PPs I explored an additional variant of this PP: *v trubku* ‘into the receiver’, which has twelve top speech verbs.

PP	All occurrences	Top speech verbs
on the phone	7230	8
into the phone	507	9
po telefonu ‘on the phone’	2049	9
v telefon ‘into the phone’	193	5
v trubku ‘into the receiver’	272	12

TABLE 2: Top speech verbs with phone PPs

[3.1] *On the phone*

This section applies statistical profiling to the speech verbs with phone PP *on the phone*. All verbs that appeared in the context of PP *on the phone* in the CoCA are collected (7230 examples). Table 3 on the next page shows the eight verbs that appeared more than four times in this small subcorpus. The column labeled CORPUS shows how many examples of this verb are found in the corpus. The column labeled PREDICTED gives us the number of examples that would occur before the PP, if that distribution were similar to the distribution in corpus. The column labeled OBSERVED shows how many examples of that verb are found in the context of PP *on the phone*. The numbers in the column PREDICTED are calculated using the following mechanism. The eight speech verbs are used most frequently with *into*

[1] <http://www.americancorpus.org>

[2] <http://www.ruscorpora.ru>

the phone are taken (990 examples). The number of occurrences for the same verbs in the corpus is calculated (390 370 examples). For each verb the percentage of its occurrences in the corpus is calculated. For example, for the verb *talk*, which occurs in 256 892 examples in the corpus, this percentage is 65%, since 256 892 is 65% of 390 370. Thus if the distribution with *on the phone* were the same as in the corpus it would occur in 651 examples (65% of 990 examples), however it actually occurs in 741 examples, as can be seen from the column labeled OBSERVED.

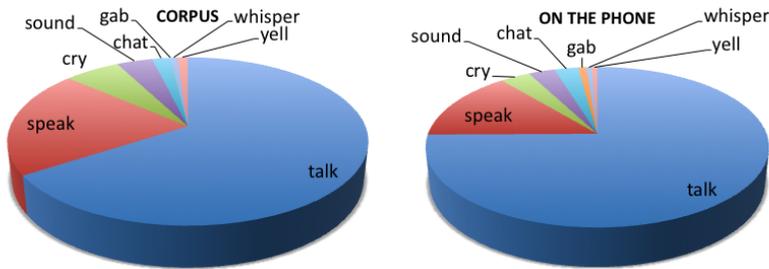
VERB	CORPUS	ON THE PHONE -PREDICTED	ON THE PHONE -OBSERVED
talk	256 829	651	741
speak	80 590	205	140
cry	23 139	59	33
sound	14 929	38	29
chat	7 594	19	26
gab	109	0	9
whisper	2 714	7	6
yell	4 466	11	6
TOTAL	390 370	990	990

TABLE 3: Top speech verbs with the PP *on the phone*

The semantic field of speech and sound in the CoCA is dominated by two verbs: *talk* and *speak*, as the left pie chart of Figure 1 on the following page shows. The same verbs dominate with phone PP *on the phone*, as can be seen from the right pie chart of Figure 1. The two charts in Figure 1 show that the distribution of the speech and sound verbs with *on the phone* is similar to the distribution of these verbs in the corpus. While the chi-square test shows that the difference is statistically significant³ ($\chi^2 = 51.6, 6df, P = 2E - 09$), the effect size index⁴ $w = 0.22$ shows that the size of the effect is small. Thus the second hypothesis is confirmed: English *on the phone* phrases can attach freely to any speech verb. The most frequent speech verbs are frequent in this construction and vice versa. Therefore the PP *on the phone* does not add a lot of specific information and does not pose additional semantic requirements on the verbs used with it.

[3] For this test and all the tests below, both the chi-square test and the calculation of the effect size effect index w are performed using only those verbs which have more than 5 predicted occurrences

[4] The effect size index w for goodness-of-fit chi-square test is discussed in (Cohen 1988/1977), $w = 0.1$ is considered small, $w = 0.3$ medium and $w = 0.5$ large effect size. Thus the effect size with the index $w = 0.22$ can be characterized as medium to small. However, we will see below that the noticeable differences result in the effect size being higher than $w = 0.5$, therefore the effect size with the index $w = 0.22$ might be counted as insignificant.

FIGURE 1: Top speech verbs with the PP *on the phone*[3.2] *Into the phone*

If we look at a similar table for the PP *into the phone*, we see that the distribution in the corpus is as in the previous case dominated by neutral speech and sound verbs: *say*, *speak* and *talk*. Thus the distribution in the CoCA predicts that these verbs should dominate the distribution with the PP *into the phone*: the column labeled PREDICTION gives a prediction of 209 occurrences of *say*, thirteen occurrences of *speak*, thirty occurrences of *talk* and three or less occurrences of other verbs. However, the distribution of the top speech and sound verbs with PP *into the phone* is noticeably different. Neutral speech verbs such as *say* and *talk* appear less frequently than predicted, while verbs of shouting (*scream*, *shout*, *yell*, *bark*) and verbs of whispering (*whisper*, *sigh*, *breathe*) appear more frequently than the corpus predicts.

VERB	CORPUS	INTO THE PHONE -PREDICTED	INTO THE PHONE -OBSERVED
say	1 845 675	209	96
speak	112 668	13	43
scream	21 312	2	29
whisper	18 640	2	22
shout	19 045	2	19
yell	13 531	2	18
talk	262 293	30	17
sigh	13 433	1	9
breathe	23 673	3	7
bark	6 675	1	5
TOTAL	2 336 945	265	265

TABLE 4: Top speech verbs with the PP *into the phone*

The differences between the pie chart on the left and on the right of Figure 2 show that the distribution of the speech and sound verbs with *into the phone* is different from the distribution of the same verbs in the corpus. This difference is statistically significant ($\chi^2 = 135.9, 2d_f, P = 2E - 30$), and the size of the effect is large $w = 0.71$. Thus for this PP the first hypothesis is confirmed: it produces a special phone construction with specific semantic requirements on the verb that can be used in it.

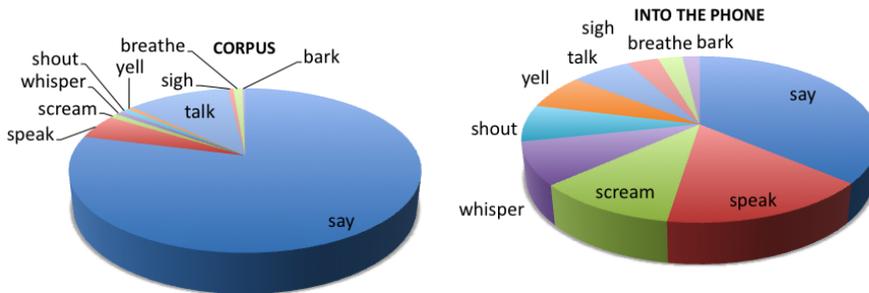


FIGURE 2: Top speech verbs with the PP *into the phone*

[3.3] *Po telefonu* ‘On the phone’

If we turn to the Russian analogue of the English PP *on the phone*, we see that the top speech verbs with the PP *po telefonu* ‘on the phone’ mostly belong to the neutral speech verbs, see Table 5 on the following page. We have seen that in English the PP *on the phone* can freely be added to any speech and sound verbs. Here, the observed numbers of occurrences are noticeably different from what is predicted.

Figure 3 on page 357 shows that the distribution of the speech and sound verbs with *po telefonu* ‘on the phone’ is different from the distribution of the same verbs in the corpus. This difference is statistically significant ($\chi^2 = 1174.1, 5d_f, P = 1E - 251$), and the size of the effect is tremendous $w = 1.37$. The main difference is in the distribution of most neutral verbs *govorit* ‘talk’ and *skazat* ‘say’. While the verb *skazat* dominates in the corpus, the top verbs with with the PP *po telefonu* are dominated by *govorit* ‘talk’.

This difference is affected by punctuality vs. durativity of an event. The nature of the situation of speaking on the phone presupposes that the situation lasts over a period of time. As a result the verbs that denote protracted, “durative” events such as *govorit* ‘talk’ are preferred by this PP, while instantaneous and “punctual” events such as *skazat* ‘say’ are dispreferred. Because of this preference all imperfective speech verbs (*govorit* ‘talk’, *razgovarivat* ‘converse’, *sprašivat* ‘ask’, *boltat* ‘chatter’, *rasskazyvat* ‘tell’, *orat* ‘yell’) are used with the PP *po telefonu* ‘on

VERB	GLOSS	CORPUS	PO TELEFONU -PREDICTED	PO TELEFONU -OBSERVED
govorit'	talk	44 477	190	286
razgovarivat'	converse	4 587	20	153
skazat'	say	76 397	327	57
pogovorit'	talk for a while	6 248	27	41
sprašivat'	ask	330	1	27
boltat'	chatter	920	4	25
rasskazyvat'	tell	6 656	28	17
vyzvat'	send for	4 224	18	7
orat'	yell	726	3	5
TOTAL	144 565	618	618	

TABLE 5: Top speech verbs with the PP *po telefonu* 'on the phone'

the phone' more frequently than the corpus predicts. Between the two perfective verbs the verb *pogovorit'* 'talk for a while', which has a reference to the period of time added by the prefix *po-* is used more frequently than the corpus predicts and the only punctual perfective verb in the list *skazat'* 'say' is used less frequently than overall. Thus the PP *po telefonu* 'on the phone' produces a new independent phone construction sensitive to the durativity of the event.

[3.4] *V telefon* 'into the phone' and *v trubku* 'into the receiver'

There are only five top speech verbs with PP *v telefon* 'into the phone'. However even such a small list shows preferences similar to those we observed for its English analogue *into the phone*. While neutral speech verbs such as *govorit'* 'talk' and *skazat'* 'say' show a decrease compared to the prediction, shouting verbs such as *kričat'* 'shout' and *orat'* 'yell' occur with the PP *v telefon* 'into the phone' more frequently than the corpus predicts.

VERB	GLOSS	CORPUS	PREDICTED	OBSERVED
kričat'	shout	28 993	3	25
govorit'	talk	344 097	30	17
skazat'	say	421 203	37	16
otvetit'	answer	2 836	0	7
orat'	yell	4 983	1	6
TOTAL	802 112	71	71	

TABLE 6: Top speech verbs with the PP *v telefon* 'into the phone'

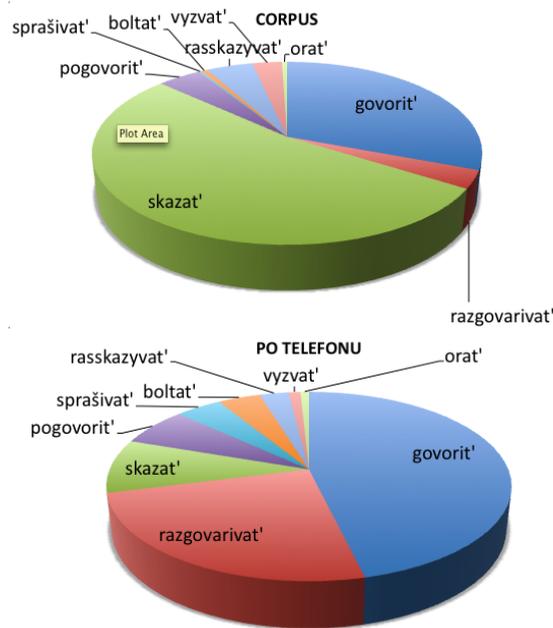


FIGURE 3: Top speech verbs with the PP *po telefonu* ‘on the phone’

Even though the five top speech verbs give us some indications about the behavior of this phone PP, there is, as I mentioned above, not enough data for comparison. To make the data on the phone PP with the preposition *v* more representable I investigate an additional example of that PP using *trubku* ‘receiver’ as a filler for the NP slot. The PP *v trubku* ‘into the receiver’ has twelve top speech verbs, and clearly presents an expansion of the list of top speech verbs with the PP *v telefon* ‘into the phone’. Table 7 on the following page represents the speech verbs that occur with the PP *v trubku* ‘into the receiver’ more than four times.

It can be seen from Table 7 that there are only eight different roots from which the twelve top speech verbs with the PP *v trubku* ‘into the receiver’ are derived: *burk-* ‘mutter’, *govor-* ‘talk’, *krik-* ‘shout’, *molk-* ‘remain silent’, *or-* ‘yell’, *otvet-* ‘answer’, *šept-* ‘whisper’ and *skaz-* ‘say’. Six verbs are produced using a bare verb root and verb ending and six other verbs are derived using a prefix or a suffix. Among the suffixes we see *za-* which has an ingressive meaning and is glossed as ‘start V-ing’ (see Sokolova (2009) and references therein) and *pro-* which has the meaning of producing a quantum and is glossed as ‘V something’ (see Krongauz (1998) and references therein). The only suffix present in the data is *-nu-*, which has a semelfactive meaning (see Janda & Makarova (2009) and references therein). However, as a speech verb its meaning is close to the quantum verbs:

VERB	GLOSS	CORPUS	PREDICTION	OBSERVED
kričat'	shout	28 993	6	69
skazat'	say	421 203	89	36
govorit'	talk	344 097	72	29
zakričat'	start shouting	13 212	3	16
otvečat'	answer	110 143	23	12
prokričat'	shout something	1 488	0	10
orat'	yell	4 983	1	7
progovorit'	talk about something	483	0	7
prošeptat'	whisper something	5 047	1	6
burknut'	mutter something	1 510	0	5
zagovorit'	start talking	13 505	3	5
molčat' ⁵	remain silent	40 581	9	5
TOTAL		908 245	207	207

TABLE 7: Top speech verbs with PP *v trubku* 'into the receiver'

'mutter once' means 'mutter a quantum of information', so in section 4 examining the semantics of these verbs the verb *burknut* 'mutter once' is grouped with the verbs that mean 'produce a quantum of information'.

The semantic field of speech and sound in the RNC is dominated by three verbs: *govorit* 'talk', *skazat* 'say' and *otvečat* 'answer'. The first pie chart of Figure 4 on the next page shows those verbs which dominate the chart. In contrast, the environment of *v trubku* 'into the receiver' is dominated by a different verb — *kričat* 'shout'. We can see from Figure 4 that *kričat* 'shout' occurs with the PP *v trubku* 'into the phone' ten times more often than the corpus predicts. The distribution in the corpus predicts that *kričat* *v trubku* 'shout into the receiver' should appear six times, while it is actually found in sixty-nine occurrences.

The two charts in Figure 4 clearly show that the distribution of the speech and sound verbs with 'into the phone' is different from the distribution of the same verbs in the corpus. This difference is statistically significant ($\chi^2 = 725.78, 4df, P = 9E - 156$), and the effect size is gigantic $w = 1.87$. Thus the first hypothesis is confirmed: these are examples of use of a specific phone construction with specific semantic requirements on the verb that can be used in it. The most frequent speech verbs are not frequent in this construction and the verbs that are most frequent in this construction are not frequent overall. We see that both Russian and English show tendency for shouting and whispering speech verbs, when the preposition meaning 'into' is involved in phone PP. The interesting question arises as to why these verbs are preferred by such PPs.

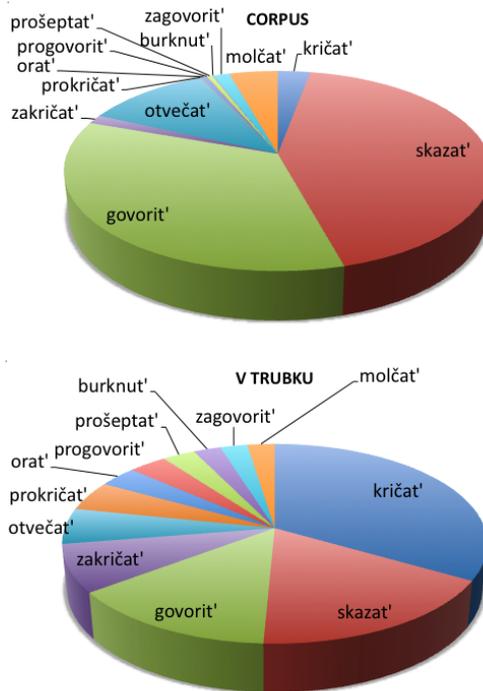


FIGURE 4: Top speech verbs with the PP *v trubku* ‘into the receiver’

[4] WHY DO WE SCREAM INTO THE PHONE?

Most neutral verbs from the list of the top speech verbs of the PP *into the phone* – say and talk – show a decrease compared to the prediction. Therefore, the PP *into the phone* repels neutral speech verbs,⁶ see Table 8.

VERB	INTO THE PHONE -PREDICTED	INTO THE PHONE -OBSERVED
say	209	96
speak	13	43
talk	30	17

TABLE 8: Neutral verbs with the PP *into the phone*

Among the verbs that can be used with *into the phone* the most prominent items

[6] Yet, it is interesting, that the neutral speech verb *speak* occurs in this construction more frequently than the corpus predicts. The reason for that should be clarified in future studies.

are non-neutral speech verbs: shouting verbs (like *scream*, *shout*, *yell*, *bark*, see Table 9) and whispering verbs (like *whisper*, *sigh* and *breathe*, see Table 10).

VERB	INTO THE PHONE	INTO THE PHONE
	-PREDICTED	-OBSERVED
scream	2	29
shout	2	19
yell	2	18
bark	1	5

TABLE 9: Shouting verbs with the PP *into the phone*

VERB	INTO THE PHONE	INTO THE PHONE
	-PREDICTED	-OBSERVED
whisper	2	22
sigh	1	9
breathe	3	7

TABLE 10: Whispering verbs with the PP *into the phone*

For Russian, I have investigated in more details the PP *v trubku* ‘into the receiver’, which has more top speech verbs and therefore gives us more material for comparison. Most neutral verbs from the list – *skazat’* ‘talk’, *govorit’* ‘say’, *otvečat’* ‘answer’ and *molčat’* ‘remain silent’ – show a decrease compared to the prediction. Therefore, the Russian PP *v trubku* ‘into the receiver’ like its English analogue repels neutral speech verbs, see Table 11.

VERB	GLOSS	PREDICTION	OBSERVED
skazat’	say	89	36
govorit’	talk	72	29
otvečat’	answer	23	12
molčat’	remain silent	9	5

TABLE 11: Neutral verbs with the PP *v trubku* ‘into the receiver’

Among the verbs that can be used with *v trubku* ‘into the receiver’ the most prominent items are also non-neutral speech verbs: shouting verbs, whispering verbs and quantization verbs. Shouting verbs are presented by verbs like *kričat’* ‘shout’, *zakričat’* ‘start shouting’ or *prokričat’* ‘shout something’ and whispering

verbs in Russian are presented by only one verb *prošeptat'* 'whisper something', see Table 12.

VERB	GLOSS	PREDICTION	OBSERVED
kričat'	shout	6	69
zakričat'	start shouting	3	16
prokričat'	shout something	0	10
orat'	yell	1	7
prošeptat'	whisper something	1	6

TABLE 12: Shouting and whispering verbs with the PP *v trubku* 'into the receiver'

Quantization verbs can be divided into two classes: first, verbs that mean to 'produce a quantum of information' (like *progovorit'* 'talk about something' or *prošeptat'* 'whisper something') and second, those that mean to 'start speaking' (like *zakričat'* 'start shouting' or *zagovorit'* 'start talking'), see Table 13. Three verbs *prokričat'* 'shout something', *zakričat'* 'start shouting' and *prošeptat'* 'whisper something' belong both in the shouting and whispering class and in the quantization class, and therefore appear both in Table 12 and Table 13. We are not able to see the class of quantization verbs in the English list of the top speech verbs with *into the phone*, because in Russian the quantization meaning is introduced by verbal prefixes and English lacks mechanisms parallel to Russian prefixation.

VERB	GLOSS	PREDICTION	OBSERVED
zakričat'	start shouting	3	16
prokričat'	shout something	0	10
progovorit'	talk about something	0	7
prošeptat'	whisper something	1	6
burknut'	mutter something	0	5
zagovorit'	start talking	3	5

TABLE 13: Quantization verbs with the PP *v trubku* 'into the receiver'

The preference for these verbs can be explained by the nature of the situation of talking into the phone. It is important to note that the person who utters a sentence like (9) is not a participant in the communication, but an observer. That person cannot be the destination point for the message said into the phone. On the contrary, this person is located near the participant who is the source of information in the communication into the phone and observes him or her speaking.

- (9) V sosednem kupe poslyšalsja golos, KRIČAŠČIJ V TELEFON.
 in next compartment heard voice shouting into phone
 In the next compartment there was heard a voice SHOUTING INTO THE PHONE.
 [V.P. Kataev. Vremja, vpered! (1931-1932)]

There are three possibilities for the observer to participate in the communication. First, the speaker is talking to the listener, but the speaker is talking too loud and the observer hears it even though he or she might not be interested, as it happens in (9). This type of situation explains the raise in frequency for shouting verbs, such as *shout* or *yell*. Second, the speaker might be aware of the observer and intentionally might want to exclude the observer from the communication on the phone. In this case the speaker would speak in a low voice. This type of situation explains why whispering verbs occur frequently with PPs meaning ‘into the phone’. Third, the speaker can participate in two communications at the same time: one with the listener on the phone and one with the observer. In this case it is not clear for whom the pronounced sentence is intended: for the speaker or for the observer. Thus such cases need disambiguation of the channel of communication. However, such disambiguation is not always necessary. If we are dealing with a continuing communication then channel disambiguation is not needed, but if the communication has just started or there has been produced a quantum of communication, then the channel needs to be chosen, because for this new piece of information the intended addressee is not clear. Thus when we use verbs like *govorit’* ‘talk’ or *skazat’* ‘say’, which refer to continuous communication, we do not need to mention if that was into the phone or not. However, if we use verbs like *progovorit’* ‘talk about something’ or *zagovorit’* ‘start talking’, which denote quantized communication, then we need to specify which channel was used for this communication. As a result, the verbs which mean ‘start talking’ or ‘say a quantum’ occur more frequently with PPs *v trubku* ‘into the receiver’, which is a way to choose the channel.

Thus, the verbs attracted to the English *into the phone* and the Russian *v telefon* ‘into the phone’ or *v trubku* ‘into the receiver’ are shouting verbs, whispering verbs and quantization verbs. The preference for such verbs reflect the nature of the situation of communicating into the phone.

[5] CONCLUSIONS

Summing up it can be concluded that English *on the phone* can be added freely to any speech verb. Russian *po telefonu*, *v telefon* (*v trubku*) and English *into the phone* cannot be added freely to a neutral speech verb and produce independent constructions. Russian *po telefonu* ‘on the phone’ has a preference for durative speech verbs. ‘Into the phone’ in both languages is used as an element of a phone construction that has a preference for shouting and whispering verbs both in Russian

and English, and quantization verbs in Russian.

Statistical profiling used in this study explores the idea that if a slot is filled and that changes the distribution of elements in another slot significantly, then we are dealing with a new construction. Based on the construction grammar approaches, it can be assumed that significant change in the filling of a slot results from any restriction posed on that slot, therefore such change signals that we are facing a new construction that is characterized with new restrictions. Statistical profiling provides a measure of how far the construction has moved on the scale of the syntax vs. lexicon continuum (Croft 2001, 17). In addition it demonstrates what kind of restrictions on the variable the new construction has.

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