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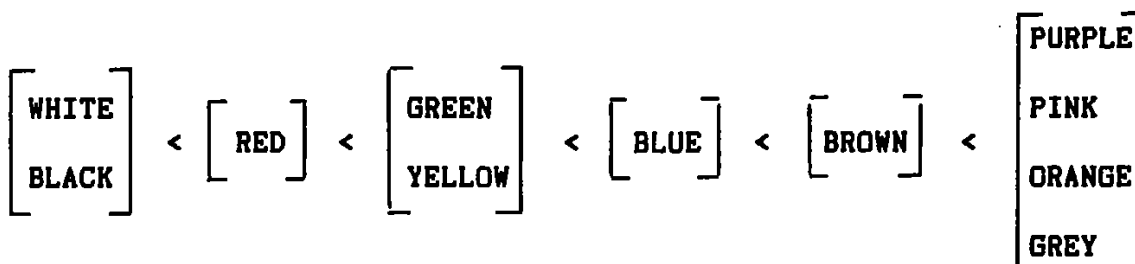
A NOTE ON RUSSIAN BLUES

The aim of this paper is to show that the Russian "blues" - *sinij* (dark blue) and *goluboj* (light blue) - both are to be considered basic color terms, contrary to the proposals of Kay and McDaniel (1978). This is done by using frequency of occurrence in word counts as a measurement of basicity, assuming a strong correlation between frequency and ranking of the positions in the hierarchy of basic color terms of Berlin and Kay (1969).

In the first part I will give a short presentation of the hierarchy of basic color terms and comment on why the Russian "blues" raise a problem to the theory of Berlin and Kay. The second part deals with the measurement of basicity in terms of frequency of occurrence in word counts.

The hierarchy of basic color terms

A general assumption in the work on basic color terminology, following the ideas of Berlin and Kay, is that the inventory of basic color terms in any language will follow from the hierarchy below. The color names in capital letters refer to basic, focal colors.



The hierarchy predicts that if a language has a given basic color, then the colors to its left in the hierarchy will also be included in the inventory of basic color terms of that language. The hierarchy is thus supposed to represent a cross-linguistic set of implicational relations in basic color terminology.

The crucial points is how the concept of "basic color" is defined. Berlin and Kay give the following guidelines (1969, p. 6):

- "(i) It is monolexemic...
- (ii) Its signification is not included in that of any other color term...
- (iii) Its application must not be restricted to a narrow class of objects...
- (iv) It must be psychologically salient for informants. Indices of psychological salience include, among others, (1) a tendency to occur at the beginning of elicited lists of color terms, (2) stability of reference across occasions of use, and (3) occurrence in the idiolects of all informants."

Applied to Russian color terms, the criteria (i) - (iv) give the following candidates for basic color terms (Kulick and Vamling, 1984): *belyj* (WHITE), *čěrnij* (BLACK), *krasnyj* (RED), *zelěnyj* (GREEN), *sinij* (BLUE), *goluboj* (BLUE), *žěltij* (YELLOW), *seryj* (GREY), *koričěnyj* (BROWN), *rozovij* (PINK), *oranžěvyj* (ORANGE) and *fioletovij* (PURPLE). The two last terms seem to have a less certain status as basic color terms.

A language like Russian, that has two "blues", is clearly a problematic case. The theory will not allow BLUE to cover two different terms. *Goluboj* is not included in the signification of *sinij*. An illustration of this are the spectral colors given in the Great Soviet Encyclopedia (vol. 40, p. 276): "*krasnyj, oranžěvyj, žěltij, zelěnyj, goluboj, sinij, fioletovij*".

Kay and McDaniel (1978, p. 640) admit that *goluboj* "is a basic term for some Russian speakers, though probably not for all" and see it as "a potential instance of a twelfth basic color term" - but do not question status of *oranžěvyj* and *fioletovij* as basic color terms.

In the following section I will address the question of the status of *goluboj* as a basic color term, focusing on its frequency

of occurrence. Frequency is seen as a measurement, a "summing up", of at least some aspects of criterion (iv).

Frequency of basic color terms in word counts

A strong correlation has been observed between the frequency of color terms in word counts and the hierarchy of Berlin and Kay. This has been shown to be the case for a number of languages - English, Spanish, German, Russian and Romanian - with rank-order correlations of above 0,8 (Hays et al., 1972).

There are three major word counts for Russian:

- (1) *Častotnyj slovar' russkogo jazyka* (1977)
- (2) Steinfeldt, E.: *Russian Word Count* (1965)
- (3) Josselson, H.: *The Russian Word Count* (1953)

The total running words examined in the word counts are (1) 1 million, (2) 400.000 and (3) 1 million. The lowest frequency (F) listed in the word counts are (1) F=1, (2) F=14 and (3) F=13. The word counts (1) and (2) are based on texts from the 20th century, whereas (3) has source texts from both the 19th and the 20th centuries. Only word count (2) was used in the study of Hays et al.

Table I gives the frequencies of a number of color terms in modern Russian (English translations are given in the appendix). The figures for *goluboj* compared to *siniј* and other colors are of particular interest. The pattern is the same in three word counts: the frequency of *siniј* is slightly higher than the frequency of *goluboj*, whereas the frequency of *goluboj* is considerably higher than the frequency of *rozovyј*, *koričnevyyj*, *fioletovyј* and *oranževyyj*.

All three word counts correlate quite well with the hierarchy of Berlin and Kay. The Spearman rank-order correlations are as follows: word count (1) 0,87, word count (2) 0,88 and word count (3) 0,79, based on the positions of the eleven basic colors of Berlin and Kay. When one takes the position of *goluboj* into account, the correlations deteriorate. Assigning *goluboj* the last position in the hierarchy gives the correlations (1) 0,74, (2) 0,82 and (3) 0,75.

There are two obvious counterexamples to the correlations: *goluboj* and *seryј*. As the basic status of *seryј* ¹⁾ is not in

Basic color terms of Berlin & Kay	Word count (1)		Word count (2)		Word count (3)	
	Rank	F	Rank	F	Rank	F
Rank						
1 WHITE	1 Černyj	473	1 Belyj	193	1 Belyj	+
BLACK	1 Belyj	471	2 Krasnyj	162	1 Černyj	422
2 RED	2 Krasnyj	371	1 Černyj	128	2 Krasnyj	384
3 GREEN	3 Zelěnyj	216	3 Zelěnyj	91	6 Seryj	217
YELLOW	4 Sini j	180	4 Sini j	54	3 Zelěnyj	184
4 BLUE	7 Goluboj	139	3 Želtyj	51	4 Sini j	141
5 BROWN	6 Seryj	116	6 Seryj	51	3 Želtyj	134
6 PURPLE	3 Želtyj	109	7 Goluboj	45	7 Goluboj	109
PINK	6 Rozovyj	49	6 Rozovyj	22	6 Rozovyj	89
ORANGE	5 Koričnevyyj	23	5 Koričnevyyj	18	5 Koričnevyyj	25
GREY	6 Fioletovyj	22	6 Fioletovyj	-	6 Fioletovyj	-
7 (Goluboj)	6 Oranževyyj	15	6 Oranževyyj	-	6 Oranževyyj	-
	*Kirpičnyj	23		-		-
	*Višněvyj	18		-		-
	Alyj	17		-		-
	*Malinovyj	14		-		-
	Bagrovyyj	13		-	Bagrovyyj	18
	Lilovyj	12		-		-
	Lazorevyj	4		-		-
	*Limonnyj	4		-		-
	*Kaštanovyj	3		-		-
	*Sirenevyyj	3		-		-
	*Birjuzovyj	2		-		-
	Puncovyj	2		-		-
	*Apel'sinnyj	1		-		-
	*Bordo	1		-		-
	Lazurnyj	1		-		-
	Bež	-		-		-
	Purpurnyj	-		-		-
	*Salatnyj	-		-		-
	Xaki	-		-		-

*Belyj is only included in a special "High Frequency List".

*These adjectives are used to denote both colors and properties of objects, characteristically having these colors. The two uses have not been separated in the word count.

Table I. Frequency of color terms (modern Russian)

question, only the high frequency of *goluboj*, contrary to the low position assigned to it by Kay and McDaniel, is of importance here.

Table II shows the result of word counts of color adjectives in texts of various types from different epochs.

- (4) Giljarovskij, V. A.: *Moskva i moskviči* (early 20th century)
- (5) Turgenev, I. S.: *Otcy i deti*
- (6) *Slovar' jazyka A. S. Puškina*
- (7) Karamzin, N. M.: *Bednaja Liza* and *Ostrov Borngol'm*
- (8) *Pamjatniki moskovskoj delovoj pis'mennosti XVIII veka*
- (9) *Pamjatniki literatury drevnej Rusi XIV - seredina XV veka*
- (10) *Devgenievo dejanie*
- (11) *Povesi' vremennyx let*
- (12) *Slovo o polku Igoreve*

The material is rather limited, but in spite of that, it suggests the same tendency as observed above: the use of *goluboj* is more extensive than of *rozovyj*, *koričnevyyj*, *oranževyyj* and *fioletovyyj*. In the earliest texts, there is no use of *goluboj* nor of the above mentioned color terms.

Some of the word counts are based on the works of only one author but nevertheless there is a clear correlation with the word counts in Table I.

Conclusion

The frequency data in Table I and II correlate quite well with the hierarchy of basic color terms of Berlin and Kay - with the exception of *goluboj*. The tendency is consistent throughout the different word counts, and can be summarized as follows:

		<u><i>Goluboj</i></u>			
<i>Belyj</i>				<i>Rozovyj</i>	<i>Oranževyyj</i>
	<	<i>Krasnyj</i>	<	<i>Seryj</i>	<
		<i>Zelěnyj</i>			
<i>Čěrnnyj</i>				<i>Koričnevyyj</i>	<i>Fioletovyyj</i>
		<i>Želtyj</i>			

The evidence presented in this paper, based on frequency of use and occurrence historically, support the status of *goluboj* as a

19th century

F	Word counts: ²⁾	(4)	(5)	(6)
235	<i>Belyj</i>	55	25	155
203	<i>Černyj</i>	31	18	154
130	<i>Krasnyj</i>	43	20	67
83	<i>Zelěnyj</i>	11	10	62
74	<i>Sinij</i>	7	1	66
53	<i>Goluboj</i>	11	7	35
38	<i>Zěltyj</i>	7	11	20
33	<i>Seryj</i>	15	7	11
23	<i>Rozovyj</i>	9	5	9
3	<i>Koričnevyyj</i>	1	2	-
18	<i>Alyj</i>	1	2	15
12	<i>Bagrouyj</i>	1	-	11
8	<i>Lazurnyj</i>	-	-	8
7	<i>Bagrjanyj</i>	-	-	7
4	<i>Lilovyj</i>	3	1	-
2	<i>Malinovyj</i>	-	1	1
1	<i>Lazorevyj</i>	-	-	1

18th century

F	Word counts:	(7)	(8)
42	<i>Belyj</i>	8	34
19	<i>Černyj</i>	5	14
19	<i>Krasnyj</i>	-	19
13	<i>Seryj</i>	-	13
11	<i>Zelěnyj</i>	7	4
5	<i>Goluboj</i>	2	3
5	<i>Sinij</i>	2	3
4	<i>Zěltyj</i>	2	2
3	<i>Rozovyj</i>	3	-
1	<i>Koričnevyyj</i>	-	1
5	<i>Alyj</i>	3	2
2	<i>Lazorevyj</i>	2	-
1	<i>Puncovyj</i>	-	1

15th-14th centuries

F	Word counts:	(9)	(10)
11	<i>Černyj</i>	10	1
10	<i>Belyj</i>	9	1
10	<i>Zelenyj</i>	6	4
6	<i>Sinij</i>	5	1
5	<i>Čerulenyj</i>	1	4
3	<i>Seryj</i>	3	-
3	<i>Bagrjanyj</i>	3	-
1	<i>Bagrouyj</i>	1	-

13th-12th centuries

F	Word counts:	(11)	(12)
11	<i>Čerulenyj</i> ³⁾	5	6
8	<i>Sinij</i>	-	8
7	<i>Černyj</i>	4	3
6	<i>Belyj</i>	4	2
3	<i>Seryj</i>	-	3
3	<i>Bagrouyj</i>	3	-
1	<i>Zolotoj</i> ⁴⁾	1	-
	<i>Bagrjanyj</i>	-	1

Table II. Frequency of color terms (12th-19th cent.)

basic color term - a status that is firmer than the basic term status of *rozovyj*, *koričnyj*, *oranžovyj* and *fiolětovyj*. The Russian "blues", both having the status of basic color terms and not being included in the signification of one another, provide an exception to the hierarchy of Berlin and Kay.

NOTES

- 1) *Seryj* is allowed - as a "wild card" - to appear in higher positions in the hierarchy (Kay and McDaniel, 1978, p) 639).
- 2) Occurrences of modified color terms, i.e. *tëmno-krasnyj* (dark red), have not been included)
- 3) *Krasnyj* was used only in the sense of "beautiful" in earlier times) The term for RED was *červlenyj*, up to approximately the 15th-16th centuries (Kulick and Vamling, 1984, p) 89).
- 4) I have included this occurrence of *zolotoj* (golden) as it has been translated into modern Russian as "yellow": "*Esli že ne sobljudem my čego-libo iz skazannogo ran'se, pust' ja i te, kto so mnoju i podo mnoju, budem prokljaty ot boga, v kotorogo veruem, - v Peruna i v Volosa, boga skota, i da budem želty, kak zoloto /zolatj, jako zoloto/, i svojim oružiem posečeny budem.*" (pp. 86-87).

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- Turgenev, I.S. : 1862, *Otcy i deti*, Moskva 1937.

Appendix

English translations of Russian color terms

<i>Alyj</i>	Scarlet
<i>Apel'sinnyj</i>	Orange
<i>Bagrovyyj</i>	Crimson
<i>Bagrjanyj</i>	Crimson
<i>Bež</i>	Beige
<i>Belyj</i>	White
<i>Birjuzovyj</i>	Turquoise
<i>Bordo</i>	Bordeaux
<i>Čerulenyj</i>	Red
<i>Černyj</i>	Black
<i>Fioletovyj</i>	Violet; purple
<i>Goluboj</i>	(Light) blue
<i>Kaštanovyj</i>	Chestnut
<i>Kirpičnyj</i>	Brick
<i>Koričnevyyj</i>	Brown
<i>Krasnyj</i>	Red
<i>Lazorevyj</i>	Azure
<i>Lazurnyj</i>	Azure
<i>Lilovyj</i>	Lilac-colored; purple
<i>Limonnyj</i>	Lemon
<i>Malinovyj</i>	Raspberry
<i>Oranževyyj</i>	Orange
<i>Puncovyj</i>	Crimson
<i>Purpurnyj</i>	Dark red
<i>Rozovyj</i>	Pink
<i>Salatnyj</i>	Light green
<i>Seryj</i>	Grey
<i>Sinij</i>	(Dark) blue
<i>Sirenevyyj</i>	Lilac-colored
<i>Xaki</i>	Kaki