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PRELIMINARY STUDY OF BASIC COLOUR TERMS  
IN MODERN HUNGARIAN

**Abstract.** Brent Berlin and Paul Kay, in their seminal work "Basic color terms" (1969), supposed that there are exceptionally 12 (instead of 11) basic colour terms in Hungarian. They argued that there are two basic terms — *piros* and *vörös* — for the red region. Our empirical study shows that there are exactly 11 basic colour terms in modern Hungarian. Ranked by the cognitive salience index proposed by U. Sutrop (2001) they are: *piros* 'red', *kék* 'blue', *zöld* 'green', *sárga* 'yellow', *fehér* 'white', *fekete* 'black', *lila* 'purple', *barna* 'brown', *szürke* 'grey', *rózsaszín* 'pink' and *narancssárga* 'orange'. Second term for red *vörös* is not basic in Hungarian. Hungarian encodes the basic colour terms in the universal way.

**Keywords:** Hungarian, basic colour term, empirical study, red.

### 1. Introduction

The basic colour terms are a domain of lexis, empirically relatively well researched in the languages of the world. The intensive research into colour terms was laid foundation to, by Brent Berlin's and Paul Kay's inspiring and much discussion evoking monograph "Basic Color Terms. Their Universality and Evolution" (Berlin, Kay 1969). Subject to this theory the basic colour terms always appear, in every language in a fixed universal sequence, and in the language of a fully evolved colour system (stage VII) they number eleven in total: 'black', 'white', 'red', 'yellow', 'green', 'blue', 'brown', 'grey', 'pink', 'purple', 'orange'. This universalistic evolutionary theory of the emergence of colour terms states that all languages have at least two basic colour terms ('black' and 'white') that correspond to certain criteria of basicness. If a language has three basic colour terms then it has terms for black, white and red; if a language has four basic terms then it has 'black', 'white', 'red' and 'yellow' or 'green'; if a language has five basic terms then it has 'black', 'white', 'red', 'yellow' and 'green', etc. up to eleven basic terms.

In the tradition of B. Berlin and P. Kay, the research of Hungarian colour terms has attracted relatively little attention. This may be accounted for by the fact that B. Berlin and P. Kay already handled the colour terms of the Hungarian language in their aforementioned monograph (1969 : 95).

They asserted basing on tests performed with one subject that in Hungarian there are essentially and exceptionally twelve basic colour terms. In pursuance of their visions, the concept 'red' is encoded by two basic terms — *piros* and *vörös*. Those two colour terms have offered most research matter in respect of colour terms of the Hungarian language.

The interest towards those colour terms was incipient already at the end of the 19th century, when a medical scientist István Csapódi published an article "Vörös és piros" (1899). The discussion was picked up and carried further by József Gárdonyi (1920) and a chemist Pál Selényi (1947), who among others attempted to physically determine the colour of the Hungarian *piros paprika* 'red paprika'. The beginning of the 20th century witnessed the publication of two monographs concerned with Hungarian colour terms (Mátray 1910; Bartha 1937), consummate with the glossary of colour names derived from literary sources. The terms depicting the Hungarian 'red' have caught the fancy also of Slavists and general linguists, e.g. Anna Wierzbicka (1996) and A. E. Moss (1989). The 1990s evidenced separate attempts to research the Hungarian language by means of experimental linguistic-cognitive methods. Robert MacLaury, conjointly with Judit Almási and Zoltán Kövecses released an article in the journal "Semiotica" titled "The Hungarian *piros* and *vörös*" (MacLaury, Almási, Kövecses 1997). They used the same method as employed in their tests by B. Berlin and P. Kay (1969). Another experimental study was carried out by Leslie Barratt and Miklós Kontra, with a view to identifying whether the subjects speaking Hungarian as mother tongue perceive and name the colours differently from their homologues (counterpart) speaking English in the USA (Barratt, Kontra 1996). The empirical method of both researches was weak, or else the number of subjects and their selection turned out insufficient. In classical study by B. Berlin and P. Kay, too the use of only one subject is seemingly inadequate. Actually, the subject was an emigrant living in the San Francisco Bay Area in the USA. Furthermore, there occurred some inaccuracies in spelling of the Hungarian colour terms (e.g. the outdated form *fejér*, which must be spelt *fehér* 'white'), because the authors referred to a dictionary of Hungarian issued in Cleveland and of dubious authority.

The third experimental research was done by Gábor Kiss and Isabel Forbes; first, they requested 98 subjects aged 15—25 to put down as many colour terms in Hungarian as they could recall; second, the same subjects had to name things, items or phenomena, which could be used collaterally with the words *piros* and *vörös* (Forbes, Kiss 1999; Kiss, Forbes 2001). The outcome of research is of questionable worth, particularly with respect to test of written listing. Unfortunately the authors make no mention to whether they conversed with the subjects about the basic colour terms or whether the survey was spontaneous.

It thence transpires that the Hungarian colour terms have been little studied heretofore, empirically, with sufficient number of subjects and proper methods. Because the method of research of colour terms employed by B. Berlin and P. Kay is very costly and time consuming, we opted for Davies-Corbett' field method, by the use whereof the colour terms of e.g. Estonian, Russian, English and many exotic languages have been studied. For collecting the Hungarian material, this method has never been used.

Basic colour term is determined in this work in the same vein, as it was by B. Berlin and P. Kay (1969 : 5–7). Basic colour term is a psychologically salient, in the general case a morphologically simple own word, belonging to the same word class with the prototype colour names and which have the same grammatical potential. The main word can be used, on cognitive base level, in all relevant and appropriate situations (Sutrop 2000b; 2002 : 31–42).

The goal of this work is to establish whether Hungarian has 11 basic colour terms or 12 colour terms, the existence whereof was referred to by B. Berlin and P. Kay (1969 : 95). It needs to be verified, too empirically whether the basic term for denoting white in Hungarian is altogether *fejér*, like the above scientists alleged, and whether the compound colour terms *narancssárga* 'orange yellow; orange' and *rózsaszín* 'colour of rose; pink' are basic terms.

For elucidating the basic colour terms of Hungarian, the field method of I. Davies and G. Corbett is used (1994; 1995), the list task whereof has been complemented by the cognitive salience index (Sutrop 2001).

## 2. Case study: Hungarian colour terms

L a n g u a g e: Hungarian, Finno-Ugric, Uralic.

R e g i o n w h e r e d a t a h a v e b e e n c o l l e c t e d: Budapest, Hungary.

D a t e s: From October 22 to 31, 2002.

T h e e x p e r i m e n t e r: Mari Uusküla spoke Hungarian with subjects. S u b j e c t s: In Budapest, subjected to interview were 40 men and women, averaging 35.8 years of age. Among subjects were 22 women aged 17–71 (average age 33.05 years) and 18 men aged 11–82 (average age 42.66 years). Among subjects were 5 school students (aged 11–17), 5 senior citizens (aged 61–82), and 13 students (aged 21–30).

The respondents (testees) came from the following locations: Budapest, Csömör, Dunaszerdahely (presently Dunajská Streda in Slovakia), Albertirsa, Miskolc, Szany, Tatabánya, Tápiószentmárton, Hajdúszoboszló, Pannónhalma. One subject came from Transcarpathia. All were native speakers of Hungarian. Among 40 subjects was one bilingual subject, coming from Finnish-Hungarian mixed family. Six people of the subjects had the dialectal background (including the Palóc dialect, the western dialect, etc.), some of them could not name their specific dialect — they just knew they were speaking a little dialectally.

The subjects did not know, until the immediate beginning of the test that the questions referred to the colours and their terms.

C o l o u r v i s i o n: All subjects had normal colour vision. This was verified by use of the *The City University Color Vision Test* (Fletcher 1980). For that the subject is shown ten black tiles, in the middle whereof is a dot of a certain tone of colour surrounded by four dots of colour of different tone. The interviewee must tell which dot is the most similar to the central one: above, down, right or left. The test makes it possible to diagnose almost all anomalies of colour vision like deuteranopia, protanopia, tritanopia etc.

## 2.1. Methods

B. Berlin and P. Kay used in their work the colour array basing on Munsell colour system, where every subject has to find the suitable focal point for the respective colour term (the colour tile best fitting the term) and thereafter the whole area befitting the colour term was elucidated (Berlin, Kay 1969 : 5–7). Interviews performed under this method are time consuming and cost incurring.

**The field method.** In this work, used is the field method of Ian Davies and Greville Corbett (1994; 1995), when interview with one subject takes 20–40 minutes and comprises two parts: the list task and the colour-naming task.

**The list task.** In the list task, the subjects are requested to list as many colour names as they can call to mind. In this study, every subject was asked the question: "*Kérem, mondjon annyi színt magyarul, amennyit tud*" 'Please, recount as many colours in Hungarian, as you know.' All colour terms are recorded in the sequence of naming (cf. Sutrop 2001 : 263–264). After fulfilling the list task the subjects were thanked and they moved to the colour vision task.

**The colour-naming task.** The colour-naming task was performed after the list task and after every colour blindness test. Every subject was shown 65 colour tiles in a random sequence placed on the background of grey cloth and was requested to assign a name to the colour, with each tile. The experimenter asked, indicating every colour tile, the invariable question: "*Milyen színű ez?*" 'What colour is that?' Colour tiles were shown in natural daylight, however not in shade or in direct sunlight (colour tiles must not be shown to subjects in artificial light, for instance in electric light). All answers were recorded. After the tests were performed, the subjects were thanked. The colour tiles of thin plywood sized 5 × 5 cm are covered with *Color Aid Corporation* colour papers. The test used the Ostwald's colour system, not that of Munsell.

**The Ostwald's colour system.** In the Ostwald's colour system the main features of colour are colour tone i.e. *h u e*, content of white i.e. *t i n t* and content of black or blackness i.e. *s h a d e*. The brightness grades of grey scale are also distributed into eight grades subject to tint and black content. Color Aid uses the modification of the Ostwald's colour system, where are 24 chromatic colours — 6 primary colours: Y — yellow, O — orange, R — red, V — violet, B — blue, G — green and their transition tones e.g. YO — yellow-orange, YOY — yellow-orange-yellow. Besides that two extra-system colours Sienna and Rose Red have been used. Every colour tone breaks down into four light variants T1–T4, in which the share of tint increases pro rata, and into three dark variants S1–S3, where the role of black increases.

Co-ordinates CIE of colour tiles used in experiment (lightness, content of red and content of green) are available in the work by I. Davies and G. Corbett (1994 : 70–71).

### 3. Colour terms: results and discussion

As the result of tests 3432 colour names were collected, among them 595 different Hungarian colour names. Referred to different names were all morphological variants (e.g. *krémszín* 'crème colour' and *krémszínű* 'crème coloured', *drapp* 'beige' and *drappos* 'beigeish') and compound names of different type of connection (e.g. *vöröslila* 'red-purple' and *vöröseslila* 'reddish-purple'). The phonetic variants are not treated separately. Notably, as a result of assimilation, in many words the word-end -s has transformed to z-, e.g. *kékeszöld* [kékezzöld] 'bluish-green'.<sup>1</sup>

#### 3.1. The list task

In list task, 40 subjects named altogether 858 colour terms, among which there were 205 different colour names. On average, there were 21.45 colour names per subject. The least number of colour names came to mind of a 24 years old male student (only 9 colour names), 10 colour names was the limit to a 49 years old male banking operator and 36 years old female docent. They did not experience difficulties with giving names to colour tiles.

The most colour names (44) occurred to one 24 years female student, 43 colour names came to the head of one female senior citizen, former singing teacher, and 42 names to a female senior citizen, a former secretary. The most aptitude to recall the colour names among males (31) manifested one 36 years old computer graphic artist, whose daily chore the colours were; 30 names were named, too by a director of 50. Women cited predominantly more colour names than men.

Table 1

The first offered colour terms in the list task

Term	Gloss	Women (22)	Men (18)	Total (40)
<i>piros</i>	red	8	5	13
<i>fekete</i>	black	4	3	7
<i>kék</i>	blue	1	5	6
<i>fehér</i>	white	3	2	5
<i>sárga</i>	yellow	4	1	5
<i>barna</i>	brown	1	0	1
<i>bogár-fekete</i>	bug black	1	0	1
<i>bordó</i>	bordeaux	0	1	1
<i>szivárvány-kék</i>	rainbow blue	0	1	1

Table 1 presents all colour terms taking precedence over those subsequently named. Most frequently the first mentioned colour name was *piros* 'red' (13 times); this holds true for both males and females. To follow were *fekete* 'black' (7 times), *kék* 'blue' (6 times), *fehér* 'white' and *sárga* 'yellow'

<sup>1</sup> Composite colour names are written in this article, for purpose of easier reading and conveniency with a hyphen '-' unlike the Hungarian literary norm, in order to show the concrete meaning of the composite parts of the compound (there sometimes occur omission of hyphen, i.e. the enclitic variant). The meanings of compounds *narancssárga* 'orange yellow; orange' and *rózsaszín* 'colour of the rose; pink' may vary, to the extent of the whole article, i.e.both meanings of those words are supplied collaterally, or only one meaning is provided at a time.

(both named 4 times). Colour name *kék* was mentioned as the first more often by males (5 times), colour name *sárga* however by females (4 times). All colour names, which were cited once only, shall be viewed as odd.

List task characterises every offered colour names by two parameters — frequency of the word, i.e. how many subjects offered that word and the mean position, i.e. in which position in sequence that colour name was offered on average. Calculation of those two independent parameters is not adequate for keeping apart the candidates for basic colour term from those who are not candidates for basic colour term, because either of the parameters yields different results. Therefore the frequency and the mean position both are combined into the integral cognitive salience indices (Sutrop 2001 : 266).

Table 2 highlights the colour terms, which have been named by at least 3 subjects. Indicated in the Table 2 is the frequency of colour terms with respective ranks and the mean position of colour names with their respective ranks and there has also been presented the cognitive salience index  $S = F/(N \cdot mP)$ , where  $F$  is the colour name's frequency in list task,  $N$  the number of subjects (in this case 40) and  $mP$  the mean position (Sutrop 2001 : 267, 273—274). On the basis of cognitive salience index, we obtain the final ranks of colour terms in list task.

Table 2 reveals that both the frequency and the mean position of the word give different candidates for basic colour term. As per frequency, the most often cited have been the colour terms *piros* 'red' and *fekete* 'black' (both 39, the largest possible frequency would have been 40). A jump over threshold in frequency occurs after the 12th most frequent colour name *bordó* 'bordeaux', which has been offered 21 times, and before the 13th most frequent colour name *bézs* 'beige', which has been offered only 15 times. Following suit are colour terms *világoskék* 'light blue' and *drapp* 'beige' (frequency 14) and *sötétkék* 'dark blue' (13). The second Hungarian colour term designating red *vörös* 'red', offered by B. Berlin and P. Kay as basic colour term, and cited only by 12 out of 40 subjects, shares by frequency the 17th—18th places with the colour term designating light yellow *citromsárga* 'lemon yellow', what does not run for the status of Hungarian basic colour term status. On the grounds of their spectacular frequency, there are 12 colour names continuing as candidates for basic term status, besides 11 standard names also the colour name *bordó*.

The mean position also expresses the interest in the colour name, however with decrease of frequency, the weight of that feature drops. One of the most frequently offered colour names *piros* (39) recurred in the lists predominantly afore, as the third-fourth (the mean position 3.59, rank of position 1), however the colour term *fekete* of the same frequency will hold, by the rank of mean position (the mean position 6.8) as late as the 6th. Colour term *kék* 'blue' however elevates by the rank of mean position (the mean position 4.1) to the 2nd place, because it was named at the beginning of lists, although it was done 34 times only. Mean rank of position of colour term *halványsárga* 'pale yellow' (7th, the mean position 8.333), *koromfekete* 'pitch black' (8th, the mean position 8.333) and *narancs* 'orange' (9th, the mean position 8.4) can be explained away by the fact that where they were offered (and the frequency shows that very few subjects did that), it happened at the beginning of lists, as the eighth — ninth.

Table 2

The most salient colour names in the list task,  
where Fr — frequency, R — rank, mP — mean position, S — salience

Term	Gloss	Fr	R	Mp	R	S	R
<i>piros</i>	red	39	1.5	3.59	1	0.272	1
<i>kék</i>	blue	34	7.5	4.088	2	0.208	2
<i>zöld</i>	green	36	4.5	5	4	0.180	3
<i>sárga</i>	yellow	35	6	4.886	3	0.179	4
<i>fehér</i>	white	37	3	6.351	5	0.146	5
<i>fekete</i>	black	39	1.5	6.795	6	0.143	6
<i>lila</i>	purple	36	4.5	8.667	10	0.104	7
<i>barna</i>	brown	34	7.5	9.176	11	0.093	8
<i>szürke</i>	grey	33	9	10.727	14	0.077	9
<i>rózsaszín</i>	pink	29	10	10.276	12	0.071	10
<i>narancs-sárga</i>	orange	23	11	10.438	13	0.055	11
<i>bordó</i>	bordeaux	21	12	11.952	16	0.044	12
<i>világos-kék</i>	light blue	14	14.5	13.5	21	0.026	13
<i>citrom-sárga</i>	lemon yellow	12	17.5	12.333	18	0.024	14
<i>drapp</i>	beige	14	14.5	15.643	31	0.022	15
<i>sötét-kék</i>	dark blue	13	16	14.538	26	0.022	15
<i>bézs</i>	beige	15	13	16.8	38	0.022	15
<i>okker</i>	ochre	9	21	11	15	0.02	18
<i>vörös</i>	red	12	17.5	15	29	0.019	19
<i>okker-sárga</i>	ochre yellow	10	19.5	13.5	22	0.019	19
<i>arany</i>	gold	10	19.5	16.7	37	0.015	21
<i>narancs</i>	orange	5	29	8.4	9	0.015	21
<i>bíbor</i>	scarlet	7	24.5	12.714	20	0.014	23
<i>ezüst</i>	silver	9	21	17.111	41	0.013	24
<i>hupi-kék</i>	schrill blue	7	24.5	14	24	0.013	24
<i>méreg-zöld</i>	poison green	9	21	18.333	47	0.012	26
<i>fű-zöld</i>	grass green	8	24	18.75	48	0.011	27
<i>király-kék</i>	royal blue	9	21	21	51	0.011	27
<i>türkiz-kék</i>	turquoise blue	5	29	12	17	0.01	29
<i>türkiz</i>	turquoise	6	25	14.833	27	0.01	29
<i>ciklámen</i>	cyclamen	5	29	12.6	19	0.01	29
<i>világos-zöld</i>	light green	6	25	15.166	28	0.01	29
<i>hó-fehér</i>	snow white	6	25	16.5	34	0.009	33
<i>halvány-sárga</i>	pale yellow	3	43	8.333	7	0.009	33
<i>korom-fekete</i>	pitch black	3	43	8.333	8	0.009	33
<i>khaki</i>	khaki	6	25	17.333	43	0.009	33
<i>vaj-szín</i>	butter colour	5	29	17	39	0.007	37
<i>halvány-kék</i>	pale blue	4	33	14.5	25	0.007	37
<i>tört-fehér</i>	broken white	4	33	15.5	30	0.006	39
<i>világos-barna</i>	light brown	4	33	16	32	0.006	39
<i>mályva-szín</i>	mauve coloured	4	33	16.5	35	0.006	39
<i>szürkés-kék</i>	greish blue	4	33	17	40	0.006	39
<i>tenger-kék</i>	sea blue	4	33	17.25	42	0.006	39
<i>sötét-zöld</i>	dark green	4	33	17.75	45	0.006	39
<i>azur-kék</i>	azure blue	3	43	13.666	23	0.005	45
<i>ég-szín-kék</i>	sky-coloured blue	4	33	18.25	46	0.005	45

Term	Gloss	Fr	R	Mp	R	S	R
<i>encián-kék</i>	gentian blue	3	43	16	33	0.005	45
<i>ibolya-kék</i>	viola blue	4	33	21.5	52	0.005	45
<i>olaj-zöld</i>	oil green	3	43	16.666	36	0.005	45
<i>sötét-barna</i>	dark brown	4	33	22.25	53	0.004	50
<i>mályva</i>	mauve	3	43	17.666	44	0.004	50
<i>halvány-lila</i>	pale purple	3	43	20	49	0.004	50
<i>tűz-piros</i>	fire red	3	43	20	50	0.004	50
<i>orgona-lila</i>	lilac purple	3	43	25	54	0.003	54
<i>bronz</i>	bronze	3	43	25.333	55	0.003	54
<i>moha-zöld</i>	moss green	3	43	28.333	56	0.003	54

Pursuant to the mean position, running for the basic colour term status are only 6 colour names (the mean position  $mP < 8$ ): *piros*, *kék*, *sárga*, *zöld*, *fehér* and *fekete*, of which only four first ones can boast the mean position  $mP < 6$ .

For getting cognitive salience index (S) we can amalgamate the results of frequency and mean position. Just like we did with frequency, we will observe when the numerical crossing of the threshold occurs. The numerical crossover can be noticed after the first colour name *piros* (cognitive salience index 0.272, with the second colour names *kék* 0.208). Appreciably, in evidence with colour name *piros* is the psychologically most salient colour name in Hungarian. In Russian and Estonian the most salient names are respectively *синий* 'blue' and *sinine* 'blue' (Davies, Corbett 1994 : 73; Sutrop 2000 : 149). Thereafter, in evidence is numerical shrinking step by step until colour name *bordó* (cognitive salience index 0.44). The largest leap can be ascertained after colour name *bordó*, at the colour name *világoskék* 'light blue', which can no longer considered candidate for basic colour term.

In list task, the colour term frequency i.e. how many times the colour name was offered, was used multiple times (it testifies to the adherence to the idiolects of the subjects), as well as the mean position (testifies to the psychological salience, including occurrence of colour terms at the beginning of lists) and in amalgamating those parameters, the cognitive salience index was calculated. The candidates for basic colour term, under list task are 12 most frequent colour names: 11 standard basic colour terms *piros*, *kék*, *zöld*, *sárga*, *fehér*, *fekete*, *lila*, *barna*, *szürke*, *rózsaszín* and *narancssárga* and in addition *bordó*.

### 3.2. The colour-naming task

In the colour-naming task, from 2600 ( $40 \times 65$ ) possible one obtained 2574 answers. Different expressions numbered 520. In 26 cases one could not name the colour. Men had more trouble than women with giving names to colour tiles. In 5 cases one failed to give the name of colour to tile ORO-T3, in 2 cases to colour tile RVR-S1, in 1 case to colour tile Y-S2, YOY-T4, YOY-S2, YO-T3, OYO-hue, O-S1, ORO-S3, RO-T3, ROR-T3, R-T4, R-S3, RVR-S3, VRV-hue and tile Rose Red. One 23 years old male student majoring in philosophy and sociology failed to name seven out of 65 colour tiles, four tiles out of 65 were too challenging to a 67 years old senior citizen.



Neither encountered difficulties with list task. Out of 2574 colour words, the subjects named 914 one-root words, the composite colour words of two roots were 1400 (including *narancssárga* and *rózsaszín*) and composite colour words of three or four roots were 260. Hence the compound words numbered 1660 and simple words 914. The longest compound word in the colour-naming task was *világos-narancs-sárgás-rózsa-szín* 'light orange pink' (verbatim light-orange-yellowish-rose-coloured).

In the list task and the colour-naming task the subjects offered altogether 3432 colour names. In the list task the subjects offered 76 colour names (including *bronz* 'bronze' and *ezüst* 'silver'), which they did not later use in the colour-naming task. In the colour-naming task however they offered 399 new colour names, which did not occur in the list task. Altogether two tests yielded 595 different Hungarian colour names.

Presented in the Table 3 are the names most frequently given to every tile together with respective frequencies. To compare with Estonian, cf. the works by Urmas Sutrop (2000a; 2002), for Russian cf. the writing by Ian Davies and Greville Corbett (1994).

Table 3

Distribution of most frequent terms (hue, tint = T, shadow = S) and their corresponding frequencies (Fr) in the tile naming task							
Code	Hue	Fr	T	Fr	S	Fr	
Y	<i>sárga</i> 'yellow'	19			S2 <i>khaki</i> 'khaki'	7	
	<i>citrom-sárga</i> 'lemon yellow'	13			<i>barna</i> 'brown'	6	
	<i>okker-sárga</i> 'ochre yellow'	3			<i>zöldés-barna</i> 'greenish brown'	4	
YOY	<i>sárga</i> 'yellow'	15	T4	<i>vaj-színű</i> 'butter coloured'	5	S2 <i>drapp</i> 'beige'	7
	<i>narancs-sárga</i> 'orange'	5		<i>vaj-szín</i> 'butter colour'	4		
				<i>sárga</i> 'yellow'	3		
YO	<i>narancs-sárga</i> 'orange'	19	T3	<i>sárga</i> 'yellow'	4	S3 <i>barna</i> 'brown'	25
	<i>sárga</i> 'yellow'	6		<i>barack-szín</i> 'apricot colour'	3	<i>sötét-barna</i> 'dark brown'	6
				<i>bézs</i> 'beige'	3		
				<i>okker-sárga</i> 'ochre yellow'	3		
OYO	<i>narancs-sárga</i> 'orange'	27					
O	<i>narancs-sárga</i> 'orange'	16			S1 <i>barna</i> 'brown'	11	
	<i>narancs</i> 'orange'	3			<i>világos-barna</i> 'light brown'	9	
	<i>rozsdá-barna</i> 'rust brown'	5					
					S3 <i>sötét-barna</i> 'dark brown'	20	
					<i>barna</i> 'brown'	13	

Preliminary Study of Basic Colour Terms in Modern Hungarian

Code	Hue	Fr	T	Fr	S	Fr
ORO	<i>piros</i> 'red'	12	T3 <i>narancs-sárga</i> 'orange'	5	S3 <i>bézs</i> 'beige'	3
	<i>narancs-sárga</i> 'orange'	4	<i>barack</i> 'apricot'	3		
RO	<i>piros</i> 'red'	28	T3 <i>rózsa-szín</i> 'pink'	5	S3 <i>sötét-barna</i> 'dark brown'	23
	<i>tűz-piros</i> 'fire red'	2			<i>barna</i> 'brown'	14
	<i>vörös</i> 'red'	2				
ROR	<i>piros</i> 'red'	21	T3 <i>rózsa-szín</i> 'pink'	13	S3 <i>világos-rózsa-szín</i> 'light pink'	3
	<i>sötét-piros</i> 'dark red'	4	<i>halvány-rózsa-szín</i> 'pale pink'	4	<i>halvány-rózsa-szín</i> 'pale pink'	3
	<i>vörös</i> 'red'	2				
R	<i>bordó</i> 'bordeaux'	9	T4 <i>rózsa-szín</i> 'pink'	17	S3 <i>sötét-barna</i> 'dark brown'	25
	<i>piros</i> 'red'	8	<i>halvány-rózsa-szín</i> 'pale pink'	6	<i>barna</i> 'brown'	4
RVR	<i>ciklámen</i> 'cyclamen'	5			S1 <i>lila</i> 'purple'	12
	<i>lila</i> 'purple'	5			<i>bordó</i> 'bordeaux'	4
					S3 <i>rózsa-szín</i> 'pink'	7
					<i>világos-lila</i> 'light purple'	5
			T2 <i>lilás-rózsa-szín</i> 'purplish pink'	7		
RV	<i>lila</i> 'purple'	17	<i>rózsa-szín</i> 'pink'	7		
VRV	<i>lila</i> 'purple'	21			S3 <i>halvány-lila</i> 'pale purple'	14
	<i>sötét-lila</i> 'dark purple'	8			<i>lila</i> 'purple'	6
	<i>világos-lila</i> 'light purple'	6				
V	<i>lila</i> 'purple'	18				
	<i>sötét-lila</i> 'dark purple'	13				
VBV	<i>lila</i> 'purple'	19	T4 <i>lila</i> 'purple'	10		
	<i>sötét-lila</i> 'dark purple'	11	<i>halvány-lila</i> 'pale purple'	9		
			<i>világos-lila</i> 'light purple'	9		
BV	<i>kék</i> 'blue'	6			S2 <i>sötét-kék</i> 'dark blue'	12
	<i>sötét-kék</i> 'dark blue'	5			<i>sötét-lila</i> 'dark purple'	10
BVB	<i>kék</i> 'blue'	16			S3 <i>szürke</i> 'grey'	16
	<i>sötét-kék</i> 'dark blue'	10			<i>kékes-szürke</i> 'bluish grey'	6
B	<i>kék</i> 'blue'	18	T1 <i>kék</i> 'blue'	24		
	<i>király-kék</i> 'royal blue'	7				

Code	Hue	Fr	T	Fr	S	Fr
BGB	<i>kék</i> 'blue'	18	T3 <i>világos-kék</i> 'light blue'	15		
			<i>kék</i> 'blue'	8		
BG	<i>kékes-zöld</i> 'bluish green'	8	T1 <i>kékes-zöld</i> 'bluish green'	7	S2 <i>zöld</i> 'green'	7
	<i>zöldés-kék</i> 'greenish blue'	7	<i>türkiz-kék</i> 'turquoise blue'	7	<i>kékes-zöld</i> 'bluish green'	6
GBG	<i>zöld</i> 'green'	13			S2 <i>türkiz</i> 'turquoise'	4
	<i>kékes-zöld</i> 'bluish green'	5				
G	<i>zöld</i> 'green'	25			S3 <i>sötét-zöld</i> 'dark green'	12
	<i>sötét-zöld</i> 'dark green'	7			<i>méreg-zöld</i> 'poison green'	6
GYG	<i>zöld</i> 'green'	23	T4 <i>világos-zöld</i> 'light green'	16	S1 <i>zöld</i> 'green'	17
	<i>fű-zöld</i> 'grass green'	7	<i>halvány-zöld</i> 'pale green'	5		
			<i>zöld</i> 'green'	5		
YG	<i>zöld</i> 'green'	13			S3 <i>sötét-zöld</i> 'dark green'	11
	<i>világos-zöld</i> 'light green'	13			<i>olaj-zöld</i> 'oil green'	6
YGY	<i>zöld</i> 'green'	9			S3 <i>világos-zöld</i> 'light green'	10
	<i>világos-zöld</i> 'light green'	9			<i>halvány-zöld</i> 'pale green'	9
Rose Red	<i>ciklámen</i> 'cyclamen'	5				
	<i>lilás-piros</i> 'purplish red'	4				
	<i>rózsaszín</i> 'pink'	4				
	<i>sötét-rózsaszín</i> 'dark pink'	4				
Sienna	<i>barna</i> 'brown'	10				
	<i>világos-barna</i> 'light brown'	7				
	<i>rozsdabarna</i> 'rust brown'	5				
WHITE	<i>fehér</i> 'white'	23				
	<i>tört-fehér</i> 'broken white'	4				
	<i>piszkos-fehér</i> 'dirty white'	3				
GRAY-1	<i>világos-szürke</i> 'light grey'	13				
	<i>szürke</i> 'grey'	9				
GRAY-2	<i>szürke</i> 'grey'	15				
	<i>világos-szürke</i> 'light grey'	14				

Code	Hue	Fr
GRAY-4	<i>szürke</i> 'grey'	30
	<i>világos-szürke</i> 'light grey'	4
GRAY-6	<i>szürke</i> 'grey'	17
	<i>sötét-szürke</i> 'dark grey'	14
GRAY-8	<i>fekete</i> 'black'	26
	<i>sötét-szürke</i> 'dark grey'	3
BLACK	<i>fekete</i> 'black'	34

Presented in Table 4 are the most frequent names, which were assigned to all colour tiles in the colour-naming task. The names that were offered less than 10 times are not reflected in this Table. To find the candidates for basic colour terms we will again observe the shrinking of frequency. The first major jump occurs after the colour names *kék* of third frequency, but it is too early. The next larger jump occurs at the colour name *fekete*, presented in the Table in the 10th place. Hence the threshold of candidacy for basic status of colour names TotalFr (aggregate frequency)  $\geq 60$ . By aggregate frequency, running for the status of basic term are 10 colour names *zöld*, *lila*, *kék*, *szürke*, *barna*, *narancssárga*, *sötétbarna*, *piros*, *rózsaszín* and *fekete*. Somewhat unexpectedly, *sötétbarna* occurred in that row. This deviation can be accounted for by the fact that a large number of subjects have named as many as three tiles (O-S3, RO-S3, R-S3) by the name *sötétbarna* 'dark brown'. Estonian subjects have named the same colour tiles (RO-S3 and R-S3) with the colour name *must* 'black' (cf. Sutrop 2000a : 152; 2002 : 78).

Keeping behind the presented aggregate frequency threshold are two actual candidates for basic colour terms *fehér* 'white' and *sárga* 'yellow'. Actually in the whole colour-naming task were only 2 colour tiles, which could be assigned the name *sárga* and one tile, which could be named *fehér*. Because in case of colour tile Y, in evidence was the relatively intensive light yellow, several subjects named it *citromsárga* (cf. Table 5). Colour tiles with the code YOY were also dubbed orange. In case of tile WHITE, in evidence was greyish or soiled white and several subjects named it appropriately. In two cases the colour tiles were named *világosszürke* 'light grey' and in one case *halványszürke* 'pale grey'. Yet, one light grey tile was twice named white.

The ratio of aggregate frequency of colour names and the number of tiles, which were assigned one name (TotalFr/NoTiles), is in good correlation with the candidates for the status of basic term. The larger the ratio numerically, the higher the probability, that in evidence is the candidate for basic term. It is evident in the Table that a large leap is occurring between colour name *fekete* and the other names following it — *szürke* and *piros*. This may be indicative of low consensus prevailing among the subjects. It may be, also that the subjects were too scarce. In the research by Urmas Sutrop on Estonian the ratios shrink step by step (cf. Sutrop 2000a : 155; 2002 : 84).

Table 4

## The most frequent terms in the tile naming task

Term	Gloss	Occurrence in the list task	Total frequency	Dominance frequency	No. of domin. tiles	Frequency/No. of tiles
<i>zöld</i>	green	+	132	48	15	8.25
<i>lila</i>	purple	+	121	21	13	8.64
<i>kék</i>	blue	+	107	24	12	8.23
<i>szürke</i>	grey	+	88	30	6	12.6
<i>barna</i>	brown	+	86	25	9	8.6
<i>narancs-sárga</i>	orange	+	83	27	10	7.55
<i>sötét-barna</i>	dark brown	+	79	68	7	9.87
<i>piros</i>	red	+	71	49	5	11.8
<i>rózsaszín</i>	pink	+	64	–	11	5.33
<i>fekete</i>	black	+	60	60	2	30
<i>világoszöld</i>	light green	+	52	–	8	6.5
<i>sárga</i>	yellow	+	50	19 <sup>2</sup>	7	7.14
<i>sötét-lila</i>	dark purple	–	50	–	8	6.25
<i>sötétzöld</i>	dark green	+	38	–	6	6.33
<i>világoszürke</i>	light grey	+	37	–	5	7.4
<i>halványlila</i>	pale purple	+	31	–	8	3.88
<i>sötétkék</i>	dark blue	+	31	–	4	7.75
<i>világoslila</i>	light purple	–	30	–	8	3.75
<i>kékeszöld</i>	bluish green	+	28	–	5	5.6
<i>fehér</i>	white	+	25	23	2	12.5
<i>világókék</i>	light blue	+	25	–	6	4.17
<i>világosbarna</i>	light brown	+	23	–	8	2.88
<i>sötétrózsaszín</i>	dark pink	–	22	–	9	2.44
<i>halványzöld</i>	pale green	+	21	–	4	5.25
<i>zöldeskék</i>	greenish blue	+	21	–	7	3
<i>türkizkék</i>	turquoise blue	+	21	–	7	3
<i>sötétszürke</i>	dark grey	+	17	–	2	8.5
<i>halványrózsaszín</i>	pale pink	–	16	–	6	2.67
<i>ciklámen</i>	cyclamen	+	16	–	6	2.67
<i>fűzöld</i>	grass green	+	15	–	5	3
<i>okkersárga</i>	ochre yellow	+	15	–	8	1.88
<i>türkiz</i>	turquoise	+	15	–	4	3.75
<i>bordó</i>	bordeaux	+	14	–	3	4.67
<i>citromsárga</i>	lemon yellow	+	14	–	2	7
<i>drapp</i>	beige	+	13	–	5	2.6

<sup>2</sup> In case of colour name *sárga* dominance frequency has been presented, although DI  $\neq 1/2$  (i.e. 20), however 19. This has been made so to calculate the specificity index (SI).

Term	Gloss	Occurrence in the list task	Total frequency	Dominance frequency	No. of domin. tiles	Frequency/No. of tiles
<i>halvány-szürke</i>	pale grey	-	13	-	5	2.6
<i>király-kék</i>	royal blue	+	13	-	5	2.6
<i>lilás-rózsaszín</i>	purplish pink	-	12	-	5	2.4
<i>mályva</i>	mauve	+	12	-	8	1.5
<i>méreg-zöld</i>	poison green	+	12	-	4	3
<i>püspök-lila</i>	bishop purple	+	12	-	4	3
<i>türkiz-zöld</i>	turquoise green	+	12	-	5	2.4
<i>olaj-zöld</i>	oil green	+	11	-	6	1.83
<i>rozsdabarna</i>	rust brown	+	11	-	3	3.67
<i>khaki</i>	khaki	+	10	-	4	2.5
<i>piszkos-fehér</i>	dirty white	+	10	-	4	2.5

Besides the aggregate frequency and the number of colour tile, Table makes mention of the dominance frequency (DFr). In case of aggregate frequency, all colour names have been taken into account, however the dominance frequency is manifest only with those colour terms, which dominate (i.e. dominance index  $DI \geq 1/2$ ). Dominance frequency is used for calculation of specificity index (SI) (cf. Table 5).

Table 5

**Dominant colour terms in the tile naming task**  
SI — specificity index, DI — dominance index

Term	Gloss	SI 1/2	DI 1/10	DI 1/4	DI 1/3	DI 1/2	DI 2/3	DI 3/4
<i>fekete</i>	black	1.00	2	2	2	2	1	1
<i>fehér</i>	white	0.92	1	1	1	1	0	0
<i>sötét-barna</i>	dark brown	0.86	4	3	3	3	0	0
<i>piros</i>	red	0.69	4	3	2	2	1	0
<i>sárga</i>	yellow	0.38	3	2	2	0	0	0
<i>zöld</i>	green	0.36	11	5	5	2	0	0
<i>szürke</i>	grey	0.34	5	4	4	1	1	1
<i>narancs-sárga</i>	orange	0.33	6	3	3	1	1	0
<i>barna</i>	brown	0.29	7	5	3	1	0	0
<i>kék</i>	blue	0.22	8	4	4	1	0	0
<i>lila</i>	purple	0.17	9	6	4	1	0	0
<i>rózsaszín</i>	pink	-	6	2	2	0	0	0
<i>sötét-lila</i>	dark purple	-	5	3	1	0	0	0
<i>világoszöld</i>	light green	-	4	3	2	0	0	0
<i>világoszürke</i>	light grey	-	4	2	2	0	0	0
<i>sötét-kék</i>	dark blue	-	4	2	0	0	0	0
<i>sötét-zöld</i>	dark green	-	4	2	0	0	0	0

Term	Gloss	SI1/2	DI1/10	DI1/4	DI1/3	DI1/2	DI2/3	DI3/4
<i>világos-lila</i>	light purple	–	4	0	0	0	0	0
<i>halvány-zöld</i>	pale green	–	3	0	0	0	0	0
<i>halvány-lila</i>	pale purple	–	2	1	1	0	0	0
<i>bordó</i>	bordeaux	–	2	0	0	0	0	0
<i>ciklámen</i>	cyclamen	–	2	0	0	0	0	0
<i>halvány-rózsaszín</i>	pale pink	–	2	0	0	0	0	0
<i>halvány-szürke</i>	pale grey	–	2	0	0	0	0	0
<i>kékes-zöld</i>	bluish green	–	2	0	0	0	0	0
<i>püspök-lila</i>	bishop purple	–	2	0	0	0	0	0
<i>türkiz</i>	turquoise	–	2	0	0	0	0	0
<i>türkiz-kék</i>	turquoise blue	–	2	0	0	0	0	0
<i>világos-barna</i>	light brown	–	2	0	0	0	0	0
<i>zöldes-kék</i>	greenish blue	–	2	0	0	0	0	0
<i>citrom-sárga</i>	lemon yellow	–	1	1	1	0	0	0
<i>sötét-szürke</i>	dark grey	–	1	1	1	0	0	0
<i>világos-kék</i>	light blue	–	1	1	1	0	0	0
<i>drapp</i>	beige	–	1	0	0	0	0	0
<i>khaki</i>	khaki	–	1	0	0	0	0	0
<i>király-kék</i>	royal blue	–	1	0	0	0	0	0
<i>közép-zöld</i>	medium green	–	1	0	0	0	0	0
<i>lilas-kék</i>	purplish blue	–	1	0	0	0	0	0
<i>lilas-piros</i>	purplish red	–	1	0	0	0	0	0
<i>méreg-zöld</i>	poison green	–	1	0	0	0	0	0
<i>olaj-zöld</i>	oil green	–	1	0	0	0	0	0
<i>pasztell-zöld</i>	pastel green	–	1	0	0	0	0	0
<i>pink</i>	pink	–	1	0	0	0	0	0
<i>piszkos-fehér</i>	dirty white	–	1	0	0	0	0	0
<i>rozda-barna</i>	rust brown	–	1	0	0	0	0	0
<i>sötét-kékes-zöld</i>	dark bluish green	–	1	0	0	0	0	0
<i>sötét-piros</i>	dark red	–	1	0	0	0	0	0
<i>sötét-rózsaszín</i>	dark pink	–	2	0	0	0	0	0
<i>tört-fehér</i>	broken white	–	1	0	0	0	0	0
<i>türkiz-zöld</i>	turquoise green	–	1	0	0	0	0	0
<i>vaj-szín</i>	butter colour	–	1	0	0	0	0	0
<i>vaj-színű</i>	butter coloured	–	1	0	0	0	0	0
<i>zöldes-barna</i>	greenish brown	–	1	0	0	0	0	0
<b>Dominating terms</b>			154	73	61	15	4	2

Table 5 displays the colour names dominating in the colour-naming task, which have been ranked according to specificity index together with dominance index obtained on different values. Also presented in Table is the distribution of dominance.

Colour name is considered dominant, if it has been attributed to one certain colour tile a certain multiple times of the threshold. Dominance index (DI) indicates to how many colour tiles the name superseding the certain threshold has been ascribed. In this work, the dominance index threshold has been calculated as follows:

DI		1/10	1/4	1/3	1/2	2/3	3/4
The threshold for tile	≥	4	10	13	20	27	30

Specificity index shows the ratio of dominance frequency and aggregate frequency ( $SI = \text{DominantFr}/\text{TotalFr}$ ). Dominance frequency has been presented in Table 4. Specificity index characterises the consensus of opinions. Unlike the ratio of aggregate frequency and number of tiles ( $\text{TotalFr}/\text{NoTiles}$ ) the specificity index characterises only the dominating names, because the non-dominating colour terms SI is always equal to zero ( $SI = \text{DominantFr}/\text{TotalFr} = 0/\text{TotalFr} = 0$ ). SI is calculated in this work for DI 1/2.

The consensus of opinions is complete in case of *feke* ( $SI = 1$ ). In Russian, the specificity index is 1 for colour name *белый* 'white' (Davies, Corbett 1994 : 79). In Estonian, too the consensus was the largest in case of *valge* 'white' ( $SI = 0.99$ ) (Sutrop 2000a : 160; 2002 : 84–85). The least, however is consensus in case of *lila* ( $SI = 0.17$ ). For *sárga*, an exception has been made and the specificity index calculated, although the tile Y was called with that name by 19, not by 20 subjects (i.e. 50 %). Colour name *rózsaszín* lacks the specificity index, because one colour tile was called with that name by only 17 subjects. Consequently, the diversity of opinions is large, in case of that colour name.

With the lowest dominance threshold (DI 1/10), 53 different names are dominating in 154 cases, i.e. several colour tiles have been assigned the same name several times. The 25 % threshold (1/4), i.e. when at least 10 subjects have named a certain colour tile with a certain name, are in excess of 21 colour names, which have been given as the name to tiles 73 times. If the consensus of opinions is 50 % (DI 1/2), the colour tiles of the dominating name number only 15 and for the status of basic colour terms, 10 colour names run: *feke*, *fehér*, *szürke*, *sötétbarna*, *piros*, *barna*, *kék*, *zöld*, *narancssárga*, *lila*. The threshold DI 1/2 is usually a criterion, so that the colour term could run for the status of basic term. In this work that threshold has not been superseded by the absolutely certain basic colour term's candidate *sárga*, because as aforementioned, one colour tile was called by that name by 19, not by 20 subjects ( $20 = \text{DI } 1/2$ ). Stuck behind the threshold is also *rózsaszín*. If the consensus of opinions is 67 %, dominating will be only 4 tiles with four names *feke*, *piros*, *szürke* and surprisingly, finding itself in this line is also *narancssárga*. On the level of 75 % consensus (DI 3/4) there are only two colour tiles of dominating name 2 — *feke* and *szürke*.

Under the dominance, running for the status of basic colour terms are 10 colour names, besides the standard names also *sötétbarna*. Unjustly falling out is the colour term *sárga*, we will include it into the colour names. Altogether running, on the basis of dominance frequency and specificity index, for status of basic colour term, 11 colour names: *feke*, *fehér*, *szürke*, *sötétbarna*, *piros*, *barna*, *kék*, *zöld*, *narancssárga*, *lila* and *sárga*. The candidate for basic colour terms *rózsaszín* will be dropped.

### 3.3. The combined analysis

As a result of the list task and the colour-naming task, running for the status of basic colour terms are 13 colour names, of them 11 standard



names: *piros, kék, zöld, sárga, fehér, fekete, barna, szürke, rózsaszín* and *narancssárga*, 1 composite name *sötétbarna* and 1 simple colour term *bordó*. For final analysis we will add also some other colour names like *vörös* and *narancs* (recurrent with Berlin and Kay as basic colour terms of Hungarian), *citromsárga, világoskék* and *sötétkék* (of relatively high frequency in list task) and *sötétszürke, világosszürke, sötétzöld, világoszöld* and *türkiz* (frequent recurrence in the colour-naming task).

The combined analysis of the results of two surveys was carried out with the help of the same methods as in case of basic colour terms of Estonian (Sutrop 2000a; 2002).

We will sum up for every colour name the criterion threshold, which it superseded. In the colour-naming task, the thresholds to be reckoned with are frequency ( $Fr > 20$ ) and the mean position ( $mP < 8$ ). In the colour-naming task the thresholds to be reckoned with are aggregate frequency ( $TotalFr \geq 60$ ), dominance index ( $DI\ 1/2 \geq 1$ ) and specificity index ( $SI > 0.30$ ). On the basis of those criteria the number of thresholds the colour names have superseded may range from 0 to 5. The number of thresholds superseded is indicated by Table 6, column ( $\Sigma$ ). In respect of superseding of at least one threshold the following colour terms will continue running for the status of basic name: *piros, kék, zöld, sárga, fehér, fekete, lila, barna, szürke, rózsaszín, narancssárga, sötétbarna* and *bordó*. No thresholds have been superseded by the following colour terms: *vörös, narancs, citromsárga, világoskék, sötétkék, sötétszürke, világosszürke, sötétzöld, világoszöld* and *türkiz*. Hence it stands proved that in Hungarian, running for the status of basic colour term is only one colour word designating 'red' *piros*, while orange is designated by *narancssárga*, not *narancs*.

Table 6

Summary of the results of the dominant terms in the tile naming task and for the most frequent terms in the list task. Fr — frequency, mP — mean position, DI — dominance index, SI — specificity index

Term	Gloss	List task		Colour tile naming task			Sum $\Sigma$
		Fr > 20	mP < 8	Fr $\geq$ 60	DI 1/2 $\geq$ 1	SI > 0,30	
<i>fekete</i>	black	+	+	+	+	+	5
<i>fehér</i>	white	+	+	-	+	+	4
<i>piros</i>	red	+	+	+	+	+	5
<i>zöld</i>	green	+	+	+	+	+	5
<i>sárga</i>	yellow	+	+	-	-	+	3
<i>kék</i>	blue	+	+	+	+	-	4
<i>barna</i>	brown	+	-	+	+	-	3
<i>lila</i>	purple	+	-	+	+	-	3
<i>narancs-sárga</i>	orange	+	-	+	+	+	4
<i>rózsa-szín</i>	pink	+	-	+	-	-	2
<i>szürke</i>	grey	+	-	+	+	+	4
<i>sötét-barna</i>	dark brown	-	-	+	+	+	3
<i>vörös</i>	red	-	-	-	-	-	0
<i>narancs</i>	orange	-	-	-	-	-	0
<i>bordó</i>	bordeaux	+	-	-	-	-	1
<i>sötét-szürke</i>	dark grey	-	-	-	-	-	0
<i>világos-szürke</i>	light grey	-	-	-	-	-	0

Term	Gloss	List task		Colour tile naming task			Sum Σ
		Fr > 20	mP < 8	Fr ≥ 60	DI 1/2 ≥ 1	SI > 0,30	
<i>sötét-zöld</i>	dark green	–	–	–	–	–	0
<i>világos-zöld</i>	light green	–	–	–	–	–	0
<i>sötét-kék</i>	dark blue	–	–	–	–	–	0
<i>világos-kék</i>	light blue	–	–	–	–	–	0
<i>citrom-sárga</i>	lemon yellow	–	–	–	–	–	0
<i>türkiz</i>	turquoise	–	–	–	–	–	0

The excluded colour terms did not supersede any thresholds. Consequently, the name crossing only one threshold can run for the basic colour term. For us, such a colour term is *bordó*. By definition, it is plausible to doubt whether the colour name can be held a basic colour terms, if it is a late loan word. Colour term *bordó* has been derived from the place name Bordeaux and features in its present form in the Hungarian texts starting from 1897. On the strength of that we may omit it from among the candidates for the status of basic colour terms (nevertheless, a century is a sufficiently long period for a loan word to assimilate). Besides, *bordó* is the candidate for basic colour terms only after the list task, where it could have replaced the old colour name *vörös* (provided *vörös* and *bordó* altogether designate the same colour). In that case the colour term *bordó* has moved, in the Hungarian colour concepts system to the place previously occupied by *vörös*. The similar substitution has also occurred in French, where the old colour term *brun* 'brown' is being gradually ousted by the new colour name *marron* '(chestnut) brown' (cf. Des Lauriers 1992).

Now there are 12 more colour names running for the status of basic colour terms, in addition to standard names also *sötétbarna* 'dark brown'. The colour term *sötétbarna* exceeds in the colour-naming tasks all thresholds and obtains the sum of crossed thresholds 3. *Sötétbarna* 50% domination 3(!) at colour tile (O-S3, RO-S3 and R-S3) is a very strong argument for basic status. The counterarguments are the following. Under the definition the basic name must be mono-lexemic, i.e. its meaning should not derive from the components of the name. Components of the colour name *sötétbarna* suggest that it designates dark and brown (by colour tile it is obvious, that the colour has a reddish hue, because the name dominates in orange reddish region). We might take into consideration the additional criterion of Berlin and Kay definition: if the status of the colour name is doubtful, its morphological intricacy should be taken into account. Because it is a compound word, *sötétbarna* will be dropped off the basic colour terms.

The most salient names in Hungarian are *piros*, *fekete* and *zöld* (exceeding all 5 prescribed thresholds). Following are those superseding 4 thresholds *fehér* and *kék* and surprisingly, this line includes also the so-called secondary basic colour terms *szürke* and *narancssárga*. In this connection we may ascertain that *narancssárga* designating orange is a basic colour word taken root in literary Hungarian and hence we may assert that the basic colour name may also be a compound word.

The basic colour names superseding 3 thresholds *sárga*, *barna* and *lila*. Colour term *sárga* does not cross two colour-naming task thresholds, because lacking was such colour tile, which 50% of the interviewees (DI 1/2) would have called with the name *sárga*. The response of only one

subject fell short (it was named 19 times, not 20 times), which would have given the 1/2 dominance index.

Only 2 thresholds (frequency list task and aggregate frequency colour-naming task) were crossed by the colour term *rózsaszín*. Evidently, in case of that colour word, in evidence is the lowest status basic colour terms candidate. Yet we may say that *rózsaszín* is the basic colour term, because the list task places it by cognitive salience index in the 10th place, before *narancssárga*. The colour-naming task however lacked consensus with respect to colour, which could be designated in Hungarian by the word *rózsaszín*. Most of all, 17 times, this name was assigned to colour tile R-T4, 13 times the same name was assigned to colour tile ROR-T3. There are valid reasons to assume that the term designating 'pink' *rózsaszín* 'the colour of rose' is associating also the colour of the cabbage rose (*Rosa centifolia*).

Consequently the Hungarian language has 11 basic colour terms — *piros, kék, zöld, sárga, fehér, fekete, lila, barna, szürke, narancssárga* and *rózsaszín* (Table 7). The 12th basic name *vörös* offered by B. Berlin and P. Kay, is by no means a basic colour word of Hungarian. In the first place, its naming frequency was very low in list task, and in the second place, there was no whatsoever consensus of opinions, which colour might be *vörös* in the colour-naming tasks.

Table 7

Basic colour terms of Hungarian after B. Berlin and P. Kay (1969) and our study

B. Berlin and P. Kay (1969)	Our study	English gloss
<i>fejér</i>	<i>fehér</i>	white
<i>fekete</i>	<i>fekete</i>	black
<i>piros</i>	<i>piros</i>	red <sub>(1)</sub>
<i>vörös</i>	–	red <sub>2</sub>
<i>zöld</i>	<i>zöld</i>	green
<i>sárga</i>	<i>sárga</i>	yellow
<i>kék</i>	<i>kék</i>	blue
<i>barna</i>	<i>barna</i>	brown
<i>lila</i>	<i>lila</i>	purple
<i>rózsaszín</i>	<i>rózsaszín</i>	pink
<i>narancs</i>	<i>narancssárga</i>	orange
<i>szürke</i>	<i>szürke</i>	grey

The Hungarian language meets fully and exclusively the last, the seventh stadium of Berlin-Kay development scheme. The second basic colour term *vörös* for 'red' offered by B. Berlin and P. Kay is, under this research, by no means the basic colour term of Hungarian. In the first place, its naming frequency was very low in list task, and in the second place, there was no whatsoever consensus of opinions, which colour might be *vörös* in the colour-naming tasks. This result coincides with the opinion of Robert E. MacLaury and his colleagues that the Hungarian *piros* is basic word and *vörös* is not (1997).

Secondly, in the modern Hungarian the name for 'white' (*fehér*) differs from that offered by B. Berlin and P. Kay (*fejér*). The difference may evidently

be accounted for by the vernacular of B. Berlin and P. Kay's emigrant subject and the specificities of the dictionary they had at their disposal. Thirdly, B. Berlin and P. Kay have a different name for 'orange'. The Hungarian *narancs* means also the fruit orange and *narancs-sárga* is orange-yellow. Evidently, this difference is also due to the emigrants' language use. For instance regarding the Russian emigrants in the USA, one has referred to the assimilation of use of Russian colour terms with those of English (Andrews 1994). In English *orange* means both the fruit and the colour.

In his inspiring paper, Ferenc Kiefer (2005) recently asked: "Is there such thing as Hungarian semantics?". Among other examples he also discussed the basic colour terms and concluded that Hungarian semantic does exist just like Hungarian phonology, morphology and syntax do. In this paper our task is not to analyse the semantics of Hungarian colour terms, but we are in opinion that the puzzle of two Hungarian terms for red — the basic *piros* and non-basic *vörös* — is a semantic one and has nothing to do with the theory of basic colour terms. The semantic use of two colour terms for red in Hungarian (syntagmatic and paradigmatic) could be an areal phenomenon because a similar use of two terms for red — *červená* and *rudá* — can also be found (at least) in Czech.

#### **4. Summary**

In the list task and the colour-naming tasks 40 subjects offered altogether 3432 Hungarian colour names. Among them there were 595 different colour names. In the list task 858 colour names were offered, of which different were 205. In the colour-naming task 40 subjects assigned to 65 colour tiles altogether 2574 colour names, of which 520 different names. In 26 cases the colour tile was not assigned a name. In the list task the subjects offered, among others 76 colour names, which did not occur in the later performed colour-naming task. In the colour-naming task there were 399 new colour names offered, which did not feature in the list task. Curiously 40 Hungarian subjects named altogether 595 different colour names, 80 Estonian subjects have however offered 759 different colour names (Sutrop 2000a).

Hungarian has 11 basic colour terms: *piros* 'red', *kék* 'blue', *zöld* 'green', *sárga* 'yellow', *fehér* 'white', *fekete* 'black', *lila* 'purple', *barna* 'brown', *szürke* 'grey', *rózsaszín* 'pink' and *narancssárga* 'orange'. Colour term *vörös* 'red<sub>2</sub>' is not a basic colour term in Hungarian. The Hungarian language meets fully and exclusively the last, the seventh stadium of Berlin-Kay development scheme.

The Davies-Corbett' field method used in this work was easy to master and efficient. The results on different languages obtained by that method could be compared. The cognitive salience index places in sequence the basic colour terms and it was in good correlation with combined analysis of the results of the list task and the colour-naming task.

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МАРИ УУСКЮЛА, УРМАС СУТРОП (Таллинн)

**ПРЕДВАРИТЕЛЬНОЕ ИССЛЕДОВАНИЕ БАЗОВЫХ ТЕРМИНОВ  
ДЛЯ ОБОЗНАЧЕНИЯ ЦВЕТОВ  
В СОВРЕМЕННОМ ВЕНГЕРСКОМ ЯЗЫКЕ**

Б. Берлин и П. Кей в своей весьма обстоятельной монографии «Базовые цветообозначения» (1969) пришли к заключению, что в венгерском языке используется 12 (вместо 11) базовых цветообозначений. Свое предположение они аргументировали тем, что для названия красного цвета существуют два основополагающих термина — *piros* и *vörös*. Однако наше эмпирическое исследование показало, что в современном венгерском языке для названия цветов используется именно 11 базовых терминов. Их когнитивная значимость приведена в известном указателе, предложенном У. Сутропом (2001), установлен следующий порядок: *piros* 'красный', *kék* 'голубой', *zöld* 'зеленый', *sárga* 'желтый', *fehér* 'белый', *fekete* 'черный', *lila* 'фиолетовый', *barna* 'коричневый', *szürke* 'серый', *rózsaszín* 'розовый', *narancs-sárga* 'оранжевый'. Другой термин для красного цвета *vörös* не входит в число базовых цветообозначений. В венгерском языке базовые обозначения цветов кодируются универсальным способом.