

DISSERTATIONES LINGUISTICAE UNIVERSITATIS TARTUENSIS

9

MARI UUSKÜLA

Basic colour terms
in Finno-Ugric and Slavonic languages:
Myths and facts



TARTU UNIVERSITY
PRESS

University of Tartu, Institute of Estonian and General Linguistics; Institute of the Estonian Language; Doctoral School “Linguistics and Language Technology”

Dissertation accepted for the commencement of the degree of Doctor of Philosophy on May 6th, 2008 by the Committee of the Institute of Estonian and General Linguistics, Faculty of Philosophy, University of Tartu

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Commencement: June 30th, 2008 at 12.00 in the University’s Council Hall

This study has been supported by Estonian Science Foundation grants No. 5040 “Structure of the Estonian Vocabulary” and No. 6744 “Language family tree and some lexico-semantic fields (colours, the human being)”, The base funding was from the Institute of the Estonian Language (“Meaning and usage of perceptual and action vocabulary”) and the Doctoral School “Linguistics and Language Technology”. Printing costs have been covered by the Institute of the Estonian Language and the Doctoral School “Linguistics and Language Technology”.



ISSN 1406–5657

ISBN 978–9949–11–891–5 (trükis)

ISBN 978–9949–11–892–2 (PDF)

Autoriõigus Mari Uusküla, 2008

Tartu Ülikooli Kirjastus
www.tyk.ee
Tellimus nr. 218

ACKNOWLEDGEMENTS

Work on the present dissertation was carried out from September 2005 to April 2008 at the Institute of the Estonian Language, Tallinn, Estonia, and from September 2005 also within the framework of the doctoral school “Linguistics and Language Technology”. Collection of the data on Hungarian colour terms had already been started in 2002 during my Bachelor studies at the University of Tartu. The research was supported by the grants “Structure of the Estonian vocabulary” (No. 5040) and “Language family tree and some lexico-semantic fields (colours, the human being)” (No. 6744) from the Estonian Science Foundation, which are gratefully acknowledged. I am also grateful to many people who helped me to carry out and complete this study.

First of all, my sincere thanks go to my supervisor Prof. Urmas Sutrop, an excellent tutor and inspiring role model for me for the past six years. It was he who encouraged me to continue my studies as a PhD student. He contributed to this work with his fruitful ideas, valuable advice and limitless energy. Apart from being my supervisor, Urmas Sutrop is also the co-author of two publications included in the present dissertation. In addition, he helped in the preparation of several of my conference presentations.

In addition, I am indebted to my former and present tutors: Valve-Liivi Kingisepp, Acc. Prof. Tõnu Seilenthal, Ago Künnap, Prof. emer. Haldur Õim, Prof. Karl Pajusalu, and Prof. emer. Mati Ereht at the University of Tartu, Dr. Erzsébet Fejes at Eötvös Loránd University, Budapest (Hungary), Prof. Alberto Nocentini, Dania Amici Burato, and Valeria Salvini at Università degli Studi di Firenze (University of Florence, Italy), Nicola Owtram and David Bowskill at the European University Institute, Florence, Italy. Each of these persons played an important role in my progress over many years.

Numerous people helped me in finding the 320 subjects who were interviewed in Hungary, Finland, the Czech Republic and Italy. My special thanks go to Outi Karanko Pap, Kinga Pap, Anna Sammalkorpi, Veronika and Risto Hassinen, Michael Voříšek, Zuzana Loubet del Bayle, Jaroslava Dejsová, Irena Vaňková and Camilla Salvi.

I thank all the editors who have considered and published my articles in their journals and the anonymous readers for their important comments.

I acknowledge Tiina Randviir, Sirje Ainsaar, and Nicola Owtram for proof-reading my articles in English, Ants Pihlak for translating the article “Preliminary study of basic colour terms in modern Hungarian”, David Barnes for proofreading the introductory part of the dissertation, and Maria-Maren Sepper for editing the extended summary in Estonian.

Many thanks go to my colleagues in the Institute of the Estonian Language, Tallinn: Vilja Oja, Ene Vainik, Maria-Maren Sepper, Kaidi Rätsep, Silja Grünberg, Margit Langemets, Hille Pajupuu, Meelis Mihkla and many others for

their willing support. In particular, I am grateful to Ene Vainik and Kaidi Rätsep for taking the time to read my dissertation with a critical eye.

My deepest gratitude also goes to my parents and grandparents who have always had faith in me and supported the choices I have made in my life.

Above all, I would like to express my deepest love and heartfelt thanks to my husband Lenno, whose love, encouragement, and patience have made this endeavour possible.

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SUMMARY

The present dissertation considers colour naming in three Finno-Ugric (Hungarian, Finnish and Estonian) and two Slavonic (Czech and Russian) languages. The dissertation pursues three main objectives: (1) to establish the basic colour terms in two Finno-Ugric languages, Hungarian and Finnish, and one Slavonic language, Czech; (2) to examine the intriguing case of the two reds, which are allegedly basic in Hungarian according to Berlin and Kay; and (3) to compare the denotata of focal colours of the basic colour terms identified across the three studied languages and relate these to foci in English, Russian and Estonian studied earlier by others.

The theoretical background of this study is the theory of universal basic colour terms put forward by Brent Berlin and Paul Kay (1969). In field studies the author carried out 245 individual interviews in Hungary, Finland, and the Czech Republic. Data was collected using the field method developed by Davies and Corbett (1994, 1995): (i) A list task elicited a variety of colour terms in each language. Based on term frequency and mean position, salience indices of individual colour terms were inferred (Sutrop 2000, 2002), which enabled identification of the terms having basic status. (ii) In a subsequent psycholinguistic experiment, called the ‘colour naming task’, colour term mapping was carried out using the Color Aid Corporation’s set of colour tiles. A further goal of the experiment was the establishment of the focal colours for the basic colour terms in the languages of interest.

The main findings of these experiments are summarised below.

- (1) According to the empirical fieldwork, Hungarian and Czech possess 11 basic colour terms. In Finnish, by comparison, 10 basic colour terms fulfil the criteria of basicness, while the term for purple, *violetti*, although not basic yet can be considered on its way to evolving to basic status.
- (2) Of the two Hungarian terms for ‘red’ I found that only one, *piros*, has basic status. The other term, *vörös*, reveals its cultural salience – via established collocations and connotations – but shows low frequency in elicited lists and when tiles of abstract colour are named. The possibility of two basic ‘reds’ in Czech was also examined since recently, based on work with the Czech National Corpus, it has been argued that two basic colour terms for red also exist in the Czech language (see Schmiedtová & Schmiedtová 2002, 2006). According to my fieldwork in the Czech Republic the basic term for red in Czech is *červená*, while *rudá* plays a subsidiary role, is collocation-specific and connotation-loaded, similar to *vörös* in Hungarian. The question of two reds in Hungarian and Czech presents a semantic question whose solution should be sought on the plane of paradigmatic vs. syntagmatic analysis, i.e. taking into account not only the colour term denotata but also distinct collocations, and as well as positive and negative emotional associations (connotations). It is suggested that the phenomenon could be

tackled in terms of cultural salience, a concept which needs further development (see Rakhilina 2007). The study also refers to a possibility that the phenomenon of two reds in the languages spoken in the geographical neighbourhood is areal. However, further fieldwork also needs to be carried out in other neighbouring languages (in particular, in Slovak and Polish).

- (3) The dissertation also addresses the on-going debate on focal colours, or best examples, of basic colour terms. The universalist position claims that the foci of the colour categories are identical across languages; by contrast the relativist position argues for cultural- and language-specific focal colours; and an intermediate position prefers a weak relativity solution. The latter implies that focal colours in individual languages vary, but the variability is constructed within a certain focal area. The study provides additional evidence for the hypothesis of weak relativity – by demonstrating that the focal colours deviate slightly among the three studied languages and also in comparison with focal colours in English, Russian and Estonian, studied earlier by other researchers using the same stimuli and methods.

LIST OF AUTHOR'S PUBLICATIONS

The dissertation consists of the following list of author's publications referred to in the text as [P1] – [P5].

- [P1] Uusküla, Mari and Urmas Sutrop (2007) Preliminary study of basic colour terms in Modern Hungarian. *Linguistica Uralica*, 43, 2, 102–123.
- [P2] Uusküla, Mari (2007) The basic colour terms of Finnish. *SKY Journal of Linguistics*, 20, 367–397.
- [P3] Uusküla, Mari (2008) The basic colour terms of Czech. *Frames*, 12, 1, 3–28.
- [P4] Uusküla, Mari (2006) Distribution of colour terms in Ostwald's colour space in Estonian, Finnish, Hungarian, Russian and English. *Frames*, 10, 2, 152–168.
- [P5] Uusküla, Mari and Urmas Sutrop (in press) The puzzle of two terms for red in Hungarian. In Jan Wohlgemuth, Orin Gensler, Michael Cysouw (Eds.). *The proceedings of Rara & Rarissima – collecting and interpreting unusual characteristics of human languages, Leipzig (Germany), March 29–April 1, 2006*.

I. INTRODUCTION

I.1. Research question: Objectives of the dissertation

The comprehensive investigation of colour terms in many languages began after the year 1969, when the American anthropologist Brent Berlin and linguist Paul Kay laid the foundation to their famous theory of basic colour terms. They claimed that the number of basic colour terms in every language varies universally from 2 to 11. Nonetheless, they challenged their own universalistic theory by drawing attention to two exceptional languages which may possess 12 basic colour terms: Hungarian has two basic terms for red, *piros* ‘light red’ and *vörös* ‘dark red’, and Russian has two basic terms for blue, *sinij* ‘dark blue’ and *goluboj* ‘light blue’. The basic colour terms in Russian have been thoroughly studied using different linguistic and psycholinguistic methods as well as with extensive fieldwork, whereas the other language in doubt, Hungarian, has attracted less attention. Although the rare phenomenon of two basic terms for red has been mentioned in most linguistic textbooks, Hungarian lacks an empirical fieldwork-based study with a large sample of subjects. The present dissertation was largely motivated by the wish to fulfil this gap in the research. The only, and highly appreciated, exception is the colour term study by Robert E. MacLaury and his associates (1997), who investigated the question of two Hungarian terms for red according to the vantage theory developed by MacLaury. Unfortunately the number of their subjects was insufficient for broad conclusions. The evidence from the empirical data gathered for the present dissertation reveals that the often cited statement that there are two basic colour terms for red has no scientific grounds. Additionally, the semantics of the two Hungarian terms for red have been misunderstood, as the meaning of *vörös* cannot be ‘dark red’ and *piros* does not denote ‘light red’.

Some recent studies have introduced the idea of the Czech language also having two terms for red on a basic level, emerging probably in the wake of the concept of 12 basic colour terms in Hungarian. As this claim has never been supported by an empirical fieldwork investigation of Czech, the language has been included in the research question here. Article [P3] explores the basic colour term inventory in Czech, according to extensive empirical fieldwork in Brno and Prague carried out in 2007, while another article [P5] draws attention to the question of two terms for red and is discussed below.

The present research was largely motivated by the lack of empirical-cognitive fieldwork-based basic colour term studies in Hungarian, but as colour terms in the second largest Finno-Ugric language, Finnish, also needed investigation using empirical field methods, it was added to the research. The only Finno-Ugric language where colour terms have been comprehensively

examined according to Berlin and Kay's theory employing empirical field methodology is Estonian (Sutrop 1995, 2000, 2002).

The empirical field method for investigating basic colour terms was developed by Ian Davies and Greville Corbett (1994, 1995) and will be presented in section 3.

The interviews for this study were conducted as follows: in 2002 and 2003 125 Hungarian native speakers were questioned in Budapest, Budaörs, Balasagyarmat, Ipolyvece, Győr, and Pécs; in 2005 and 2006 68 Finnish participants were examined in Helsinki, Espoo, Lempäälä, and Tuusula; and in 2007 52 Czech native speakers took part in testing in Brno and Prague.

The present dissertation also aims to contribute to the on-going debate on colour category focal colours, or best examples, or prototypes, of English black, white, red, green, yellow, blue, brown, orange, purple, pink, and grey. There are two competing views in this debate. One, the universalist view (Berlin and Kay 1969), claims that the foci and boundaries of colour categories have identical mappings across all languages; by contrast the relativist view (e.g. Saunders and Van Brakel 1997, Saunders 2007) claims that neither universal foci nor boundaries exist and that colour categories are instead defined idiosyncratically within each language/culture. Finally however, the most recent findings provide accumulating evidence for the so-called weak relativity hypothesis (e.g. Regier et al. 2005, 2007) admitting that focal colours may not be identical, but cluster when mapped in a colour chart, and that boundaries of colour categories may vary significantly across languages. Article [P4] addresses this problem.

Article [P5] is devoted to the question of two basic colour terms representing one colour category (red) in Hungarian. It draws attention to the possible interpretation of these two terms, suggesting that only *piros* is a basic term for red, whereas the use of *vörös* is determined by distinct collocations and connotations, including positive and negative emotional associations. Hungarian shares this rare phenomenon of two terms for red with one geographically proximate language – Czech. The issue itself has to be interpreted in terms of linguistic areality, because Hungarian as a Finno-Ugric language and Czech as a West-Slavonic language have no genetic roots. One possible explanation of why Czech has this phenomenon depends on how the course of history has affected the development of the Czech language. The present area of Slovakia was already totally annexed to Hungary in the 10th century, and thus contacts between the neighbouring predecessors of Czechs and Hungarians were obvious and inevitable over a long period. They became particularly strong in the Austro-Hungarian multi-national empire (1867–1918), which embraced the territories of many Slavonic nations, Bohemia and Moravia – two parts of the present-day Czech Republic – included. Although according to law in the Austro-Hungarian Empire every nation had the right to preserve and use its own nationality and language, many areas underwent extensive Magyarisation. As a result, Hungarian literary language had an impact on many Slavonic languages,

including apparently Czech and Slovak. Modern Hungarian dialects have survived in present-day Slovakia and their speakers represent strong minorities in certain districts. Here arises the question of why Hungarian has not influenced Slovak: red in Slovak is always expressed by only one term, *červený*. More fieldwork obviously needs to be carried out on Hungarian as well as on the neighbouring Slavonic languages to discover whether this hypothesis that the phenomenon is areal is correct.

In brief, the present dissertation aims to answer three main questions by delivering new empirical evidence about the colour terms in the Finno-Ugric and Slavonic languages. First, Berlin and Kay claim that the maximum number of basic colour terms is universally 11. Is there a possibility that some languages (Hungarian, Czech) have more lexicalised basic colour categories than foreseen by the theory? Second, if these additional colour terms occur, do they represent a colour word on a basic level, or are they rather bound to some expressions, idioms, etc. and therefore cannot be viewed within the framework of basic colour term theory at all? Third, do colour category boundaries and focal points tend to correspond to each other across some Finno-Ugric and Indo-European languages thus endorsing the universalistic view, or are they rather language-specific, supporting weak relativism? In addition to answering these three main questions, suggestions for the improvement of Berlin and Kay's original basic colour term definition arise in the wake of the new evidence from the Finno-Ugric languages.

Some empirical fieldwork has also been carried out in Florence, Italy, with 75 native Italian speakers, but these results do not concern the present dissertation. They will, however, be used in further research. The basic colour terms of Italian have never been studied using empirical field methods, and moreover the Italian language presents a challenging case to the universalistic basic colour term theory as it contains three different terms to denote the colour category blue. Nevertheless, the semantic relationships among these terms are far from simple and need broad-based linguistic and psycholinguistic analysis. Italian colour terms have been studied by e.g. Kristol (1989) and Grossmann (1988).

The five articles which constitute the body of this dissertation are henceforth referred to in the text as [P1], [P2], [P3], [P4], and [P5].

1.2. Structure of the introductory part

The present dissertation consists of an introductory part and five articles. The introductory part is divided into five sections.

Section 1 consists of three sub-sections. 1.1 introduces the research question and the main aims of this study, 1.2 explains the structure of the dissertation,

and 1.3 provides a brief overview of the articles and clarifies the present author's contribution to the co-authored studies.

Section 2 provides background and consists of two sub-sections. 2.1 describes the basic colour term theory and its developments, while 2.2 presents the original basic colour term definition together with improvements and critiques.

Section 3 describes the research methodology employed, including Davies and Corbett's field method with which the data was gathered, in order to establish the basic colour terms in Hungarian, Finnish, and Czech. Short overviews of a colour vision test and the Ostwald colour system, according to which stimuli were organised, are also presented. In addition, this section introduces the method employed for identifying focal points, or best examples, in a language.

Section 4 highlights the results of the articles ([P1], [P2], [P3], [P4], and [P5]); presents the basic colour terms established in Hungarian, Finnish, and Czech; discusses the similarities and differences in colour naming over six languages – Hungarian, Finnish, Estonian, Czech, Russian, and English; and explains the phenomenon of the two terms for red in Hungarian and Czech in Central Europe.

Section 5 outlines the main theses of this study, which are in correspondence with the results.

Section 6 forms a conclusion, where the main contribution of this study is summarised and evaluated. This section also deals with further research opportunities.

1.3. Brief overview of the articles included and the author's contribution to the co-authored studies

The present dissertation consists of five research articles. The following is a brief overview of the articles, and the author's contribution to the co-authored studies is also clarified. The co-author of [P1] and [P5] has seen and accepted this overview.

The basic colour terms in Hungarian and the investigation of them are the main research issues of [P1]. The fieldwork for this study was carried out in October 2002 with 40 subjects in Budapest, Hungary. The preliminary results for Hungarian basic colour terms are presented. Full results, together with the answers of the 125 subjects, will be published in the future. The author of the dissertation carried out the fieldwork in Hungary, provided all the technical results and described the tasks, while the second author contributed to the introductory and concluding parts. The language of the article is not the authors' own, because it was first written in Estonian and then translated into English by

Ants Pihlak, whose help is highly acknowledged. The English glosses in the tables are provided by the present author.

The basic colour terms of Finnish are examined and discussed in article [P2]. The results are based on fieldwork with 68 subjects carried out by the author in Helsinki, Espoo, Tuusula, and Lempäälä in 2005 and 2006. Article [P2] compares empirically-gathered data with the findings of Mauno Koski (1983), who argued that Finnish might possess only eight lexically-evolved basic colour terms. While the value of the previous study is acknowledged, Koski only worked with dictionaries and dialect collections, using his own intuition to establish the set of basic colour terms in Finnish and obtained different results. The present research offers a new, fieldwork-based approach to the Finnish colour terms.

Article [P3] is devoted to basic colour term research in the Czech language. The special emphasis is on the questions: 1) whether there are two or only one basic colour term for the red category; and 2) whether there is one colour word to indicate both yellow and blue. The field method used for data gathering is the same as in [P1] and [P2]. Fifty-two subjects participated in the testing, which took place in spring 2007 in Brno and Prague.

In [P4], five languages – Estonian, Finnish, Hungarian, Russian and English – were examined with the aim of finding out whether the universal colour foci hypothesis (Berlin and Kay 1969, Kay 1975, Regier and Kay 2007, etc) holds true. This article aims to find the answers to the following questions: 1) how are the basic colour terms distributed in the Ostwald colour space and which colour samples correspond to the best examples (or focal points) in all five languages, and 2) what are the similarities and differences in colour sample naming across five languages. The article is based on a presentation by the author at the student conference in the Leipzig Spring School of Linguistic Diversity in March 2006. The results in section 4 have been amended with data on the Czech language, which was only acquired in 2007, after the publication of article [P4].

Article [P5] concentrates on the much-disputed question of two terms for red, *piros* and *vörös*, in Hungarian. The author of this dissertation carried out a field study in Hungary and calculated all the numerical results, as well as providing analyses of compound words emerging from the fieldwork, and discussing the semantic meaning and etymology of the two terms. The author translated all the articles and other sources available only in Hungarian into English and wrote 2/3 of the article. The cognitive salience index used here was developed by the second author (see Sutrop 2001). Moreover, the second author provided wide etymologies in languages other than Hungarian, suggested the idea of tackling the two words for red in terms of paradigmatic and syntagmatic collocations, and wrote the introductory and concluding parts.

2. BACKGROUND TO THE RESEARCH

2.1. A review of the research problem: The basic colour term theory and recent updates

The study of colour vocabulary universals by Berlin and Kay (1969) was originally designed as an experimental test of the prevailing doctrine of American linguists and anthropologists of extreme linguistic relativity. According to this view, known as the Sapir-Whorf hypothesis, the native language of a person influences and restricts the way one sees the world and therefore the search for language universals is fruitless. Contrary to this hypothesis, Berlin and Kay claimed that there are semantic universals in languages. Although different languages possess a different number of colour terms in their vocabularies, the basic colour terms in a given language are always drawn from a universal set of exactly eleven basic colour terms (Berlin and Kay 1969: 2). These universal categories correspond to English white, black, red, yellow, green, blue, brown, purple, pink, orange, and grey. A language may have eleven or fewer basic colour term categories. They continued:

“A second and totally unexpected finding is the following. If a language encodes fewer than eleven basic color categories, then there are strict limitations on which categories it may encode. The distributional restrictions of color terms across languages are:

1. All languages contain terms for white and black.
2. If a language contains three terms, then it contains a term for red.
3. If a language contains four terms, then it contains a term for either green or yellow (but not both).
4. If a language contains five terms, then it contains terms for both green and yellow.
5. If a language contains six terms, then it contains a term for blue.
6. If a language contains seven terms, then it contains a term for brown.
7. If a language contains eight or more terms, then it contains a term for purple, pink, orange, grey, or some combination of these (Berlin and Kay 1969: 2–3).”

Altogether, Berlin and Kay investigated 98 languages, twenty of which using empirical field methods. However, they often had access to only one native speaker per language. The languages studied empirically were the following: Arabic, Bulgarian, Catalan, Cantonese, Mandarin, English, Hebrew, Hungarian, Ibibio, Indonesian, Japanese, Korean, Pomo, Spanish, Swahili, Tagalog, Thai, Tzeltal, Urdu, and Vietnamese (1969: 7).

Table 1 shows the distribution of all actually occurring types of basic colour lexicons according to Berlin and Kay (1969: 3).

Table 1. The twenty-two actually occurring types of basic color lexicon (after Berlin and Kay 1969: 3).

		Perceptual categories encoded in the basic colour lexicon										
Type	No. of basic color terms	white	black	red	green	yellow	blue	brown	pink	purple	orange	grey
1	2	+	+	-	-	-	-	-	-	-	-	-
2	3	+	+	+	-	-	-	-	-	-	-	-
3	4	+	+	+	+	-	-	-	-	-	-	-
4	4	+	+	+	-	+	-	-	-	-	-	-
5	5	+	+	+	+	+	-	-	-	-	-	-
6	6	+	+	+	+	+	+	-	-	-	-	-
7	7	+	+	+	+	+	+	+	-	-	-	-
8	8	+	+	+	+	+	+	+	+	-	-	-
9	8	+	+	+	+	+	+	+	-	+	-	-
10	8	+	+	+	+	+	+	+	-	-	+	-
11	8	+	+	+	+	+	+	+	-	-	-	+
12	9	+	+	+	+	+	+	+	+	+	-	-
13	9	+	+	+	+	+	+	+	+	-	+	-
14	9	+	+	+	+	+	+	+	+	-	-	+
15	9	+	+	+	+	+	+	+	-	+	+	-
16	9	+	+	+	+	+	+	+	-	+	-	+
17	9	+	+	+	+	+	+	+	-	-	+	+
18	10	+	+	+	+	+	+	+	+	+	+	-
19	10	+	+	+	+	+	+	+	+	+	-	+
20	10	+	+	+	+	+	+	+	+	-	+	+
21	10	+	+	+	+	+	+	+	-	+	+	+
22	11	+	+	+	+	+	+	+	+	+	+	+

The basic colour terms emerge in a fixed order in which seven stages can be differentiated, and which is known as the temporal-evolutionary ordering of basic colour terms (shown in Figure 1).

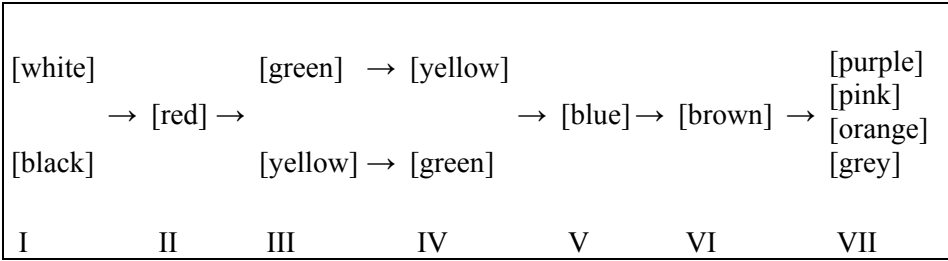


Figure 1. Temporal-evolutionary ordering of basic colour terms. The Roman numbers indicate the corresponding evolutionary stage (after Berlin and Kay 1969: 4)

The rule of Figure 1 can be easily followed: if a language has a basic colour term, then it also has all the basic colour terms to the left of that term. For example, if a language has a basic colour term for brown it also has basic terms for white, black, red, yellow, green, and blue, but may not have developed basic colour terms for purple, pink, orange, and grey.

Data based on fieldwork, as well as the empirical data from dictionaries, suggest that there are indeed languages with only two basic colour terms, e.g. Dani (New Guinea), Murray Island (New Guinea), Ngombe (Congo), Upper Pyramid (New Guinea), etc. (Berlin and Kay 1969: 46), although recently Kay and Maffi have argued that there are no stage I languages in the World Color Survey sample (2005: 535). Stage II languages are Arawak (Surinam), Bantu (Congo), Pomo (United States), Swahili (Tanzania), Tonga (Mozambique) and others. Stage III languages form two subgroups according to the existence of yellow or green terms. The ones with green terms, belonging to the IIIa system, are Ibibio (Nigeria), Hanunóo (Philippines), Somali (Chad) and others, while the IIIb system incorporates Greek (Homeric) (Mediterranean), Pukapuka (Polynesia), Ibo (Nigeria) and others. Languages exhibiting Stage IV terminology (basic terms for white, black, red, yellow, and green) are for example Western Apache (United States), Batak (Sumatra), Eskimo (Canada), Hopi (United States), etc. Stage V languages in Berlin and Kay are Hausa (Nigeria), Mandarin (China), Samal (Philippines) and others. Stage VI languages are Bari (Sudan), Javanese (Sumatra), Malayalam (India), Siwi (Libya), and Nez Perce (United States). Most European languages represent stage VII with 8 to 11 basic colour terms. This initially presented data has been criticised and rearranged by many scholars, including Kay and his associates themselves (see below and e.g. Kay et al. 1997, Kay 1999, Kay 2005, Lyons 1999, MacLaury 1997).

The original evolutionary order of basic colour terms was reviewed and revised by Kay 1975, Berlin and Berlin 1975, Witkowski and Brown 1976, Kay and McDaniel 1978, Kay and Merrifield 1991, MacLaury 1992, Kay and Maffi 2005, Kay 2006 and others. The improvements to the theory mainly concern the earlier stages of the temporal-evolutionary scheme.

Brent Berlin and Elois Ann Berlin (1975) studied the basic colour terms of Aguaruna Jívaro, a language of the people living in the rainforests of north-central Peru. Their most important theoretical finding was that the focal area for lexically undifferentiated GRUE (*green + blue*) differs from that predicated in Berlin and Kay (1969: 17) in that it appears in blue rather than in green (Berlin and Berlin 1975: 61) and therefore contributes to a modification of the original sequence of the evolutionary ordering of basic colour terms. According to their investigation, blue can be lexicalised earlier than predicted by the theory. Figure 2 shows the revised version of the temporal-evolutionary ordering of basic colour terms after Berlin and Berlin (1975: 83). In addition, Berlin and Berlin also highlight the persistence of a term for dark, cool hues suggesting an ancient dichotomy in colour categorisation: light-warm vs. dark-cool, and not only the

brightness contrast suggested by Berlin and Kay (Berlin and Berlin 1975: 81). This argument coincides with Eleanor Rosch Heider’s work on Dani colour terms (a language spoken in New Guinea, considered a stage I language with only two basic colour terms, explained as dark and light by Berlin and Kay), which attested that the focal points (best examples) of *mili* and *mola* are not ‘black’ and ‘white’. Heider’s observations showed that Dani speakers distinguish colour terms according to a light-warm vs. dark-cool pattern (Heider 1972a) rather than a brightness-contrast opposition.

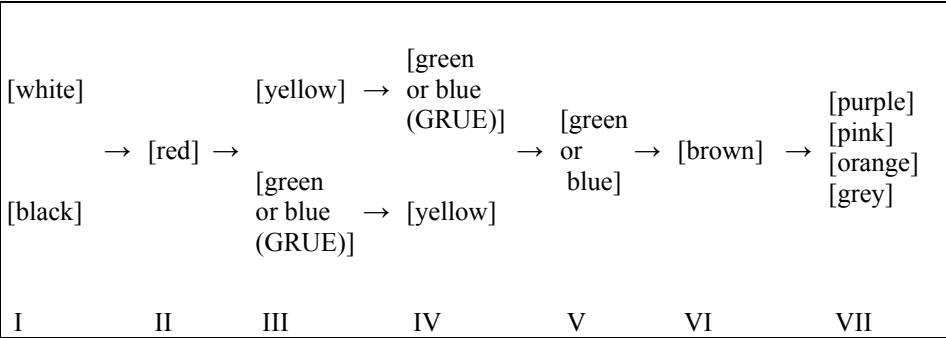


Figure 2. The revised temporal-evolutionary ordering of basic colour terms after Berlin and Berlin (1975: 83)

Kay (1975) demonstrates that all linguistic change has its roots in the heterogeneity of the speech community. The major revisions of the theory after Kay are the recognition of the light-warm, dark-cool, and GRUE categories in early systems, and of the possibility that the category boundaries as well as focus play a role in the evolutionary sequence (1975: 262). Kay describes the revised ordering thus (1975: 260–261):

“Stage I consists of two basic categories: WHITE, which includes white, very light shades of all colors, all warm colors, and may have its focus in either white, red, or pink and BLACK which includes black, some very dark browns and purples, all but the lightest blues and greens, and which probably has variable focus in black and in dark greens and blues. At stage II RED is marked by a basic color term and includes all warm colors with the focus in English focal red. [...] At stage III either the yellow focus is accorded a basic color term (IIIb) or the category GRUE is accorded a basic term (IIIa). In the latter case the focus may be either in green or perhaps in both, but there is no evidence that in any language the focus of GRUE is in what we would call ‘blue-green’. At stage IV and IIIa systems add yellow and stage IIIb systems add GRUE, so that

all stage IV systems contain terms for WHITE, BLACK, RED, GRUE, and yellow, with foci as described for stage III.”

Stages VI and VII remain unchanged with the small exception of the appearance of grey, which may emerge freely in any stage.

Witkowski and Brown (1977) introduced the idea of macrocolour categories (see Figure 3). Macroblack (black-blue-green) and macrowhite (white-yellow-red) oppose light and dark colours in a brightness dimension and warm and cool ones in a hue dimension. Dark colours always associate with cool hues and light colours with warm hues. In addition, they also argued that the composite colour categories – macrored, grue and yellow-green can be found in colour systems, while combinations of blue-yellow, red-blue, and red-green are impossible (Witkowski and Brown 1977: 54).

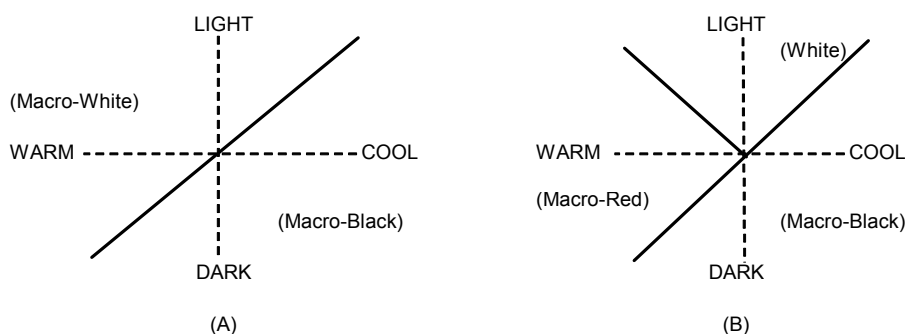


Figure 3. Binary oppositions in the encoding of (A) macroblack and macrowhite, and (B) macrored and white (after Witkowski and Brown 1977: 55).

The next contribution to the development of the theory of basic colour terms was made by Kay and McDaniell in 1978. They suggested that the naming and universal ordering of basic colour terms has its roots in a common set of neurophysiological processes which are innate and apply to the colour perception of all peoples. They proposed that the basic colour term categories should be treated as fuzzy sets, which made it possible to claim that colour-category membership is a matter of degree, in English as well as in many other languages. In English, for example, one can speak of something as a good red, a sort of blue, the best example of green, slightly pink, greenish-yellow, orangish-red, light purple or dark brown. All these expressions indicate the degree to which the referred colour differs from or resembles an ideal example of the root colour term. Obviously, a good red has a high degree of similarity to the norm red, as has the best example of green, while a sort of blue agrees less with the norm blue, and greenish-yellow is a kind of yellow with some greenish overtone,

and dark brown also differs from the norm brown, etc. Kay and McDaniel explain:

“Constructions of these sorts are found in all languages, showing that all speakers-hearers recognize and talk about degrees of color-category membership. Since color categorization is in general a matter of degree, color categories are best regarded as fuzzy sets. The members of the fuzzy set corresponding to each basic color category are chosen from the set of all possible color percepts. The degree to which each percept is a member of a particular category is specified as a value between zero and unity; each category is thus characterized by the function that assigns, to each color percept, a degree of membership in that category (1978: 622–623).”

They also showed that in the neural code for colour one finds four primary chromatic basic colour categories, red, yellow, green and blue, and two fundamental achromatic basic colour categories, black and white. They first introduced the possibility that the early stage colour term systems contain composite categories, i.e. basic colour term systems prior to stage V have at least one term that encodes a fuzzy union of two or more of the six fundamental neural response categories (Kay and McDaniel 1978: 630), whereas the later stage basic colour terms (brown, purple, pink, orange, grey) could be viewed as derived categories or composites of black and yellow, red and blue, red and white, red and yellow, and white and black.

They offer an explanation of the evolution of basic colour terms, which they define as passing through primary, composite, and derived basic colour term categories. At stage I no primary categories are found as they are expressed through composite categories of light-warm (white, yellow, red) and dark-cool (black, green, blue). Stage II splits the light-warm category into white and warm (yellow, red). At stages IIIa and IIIb the following may happen: white and black develop into autonomous categories or are represented by primary colour terms, while yellow-red and green-blue composite categories remain, or alternatively white, red and yellow are all expressed by primary colours, while the black-green-blue category is still present. At stage IV the only composite category is the one consisting of green and blue, all the other categories expressing primary colours. At stage V all primary colours are represented, while at stages VI and VII derived categories emerge, i.e. yellow + black becomes brown, red + white indicates pink, red + blue represents purple, red + yellow emerges as orange, and black + white signifies grey (Kay and McDaniel 1978: 639 after Figure 13).

The next advancement of the theory of basic colour terms was made by Kay, Berlin and Merrifield (1991), who further developed the idea of composite colour categories, introduced by Kay and McDaniel (1978). Kay, Berlin and Merrifield called the terms which correspond to English black, white, red, yellow, green and blue, and to their translations in many other languages,

fundamental neural response (FNR) categories. Their new aim, supported by World Color Survey data (Kay et al. 1991: 14), was to document all the composite categories that can be expressed by the basic colour terms in the languages of the world. They set out a rule to explain the empirical limit of 9 on the 63 logically possible composite categories, i.e. those that might be formed from all possible subsets of the six fundamental neural responses.

“Composite Category Rule: A possible composite category is a fuzzy union of subset of fundamental neural response categories which, in Figure 2 [here Figure 4], forms an unbroken associational chain not crossing the diagonal line (Kay et al. 1991: 16).”

This is the explanation of their Figure 2 (here Figure 4): The six nodes represent the six fundamental neural response categories. The horizontal dimension shows the dimension of hue, while the vertical dimension represents the dimension of lightness. On the horizontal line red shades gradually (through orange) into yellow, yellow shades to green and green to blue. The vertical lines show the privileged associations between yellow and white, and between blue and black. The dotted line through yellow indicates that yellow may be semantically associated with either red or white or both, or with green and through green to colours to the right on the figure. No composite category is found that crosses the dotted line, for example there is no composite category of green, yellow and red, and none which includes green, yellow and white.

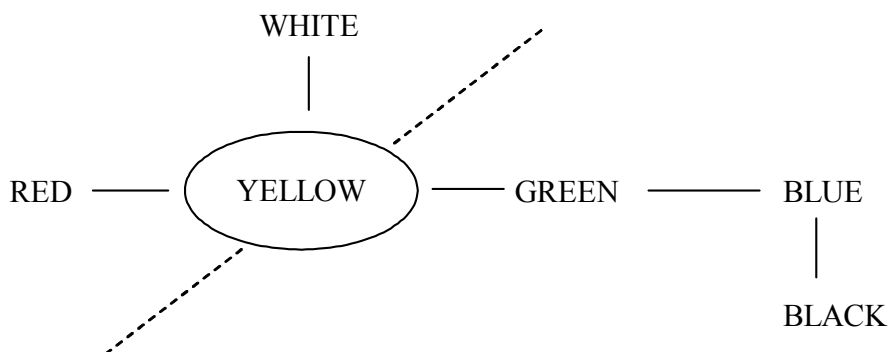


Figure 4. Visual and linguistic relations among fundamental neural response (FRN) categories (after Kay et al. 1991: 15)

All possible composite categories that emerge at the evolutionary stages I to V are presented in Table 2 below.

Table 2. All possible composite categories (after Kay et al. 1991: 17)

Composite category	Attested in World Color Survey
yellow/green/blue/black	No
red/white/yellow	Yes
green/blue/black	Yes
yellow/green/blue	Yes
red/yellow	Yes
green/blue	Yes
white/yellow	Yes
yellow/green	Yes
blue/black	Yes

Kay, Berlin and Merrifield also revised the early stages of basic colour term evolution (Kay et al. 1991: 19). They found two types containing a category associating yellow and green: stage III (type d) contains the terms for white, red and black together, and a category comprising yellow, green and blue; while stage III (type e) contains yellow/green composite and blue/black composite categories.

The Berlin and Kay universalistic theory has recently been strongly criticised. Paul Kay therefore summarised the main points of his revision of the theory in the following way:

“The principle points of revision have been (1) addition of the idea of successively refined partitions of the perceptual color space to the original proposal of successive encodings of focal colors, (2) replacement of the idea of exactly eleven universal perceptual categories with the idea of the six Hering primaries (black, white, red, green, yellow, blue) along with a restricted subset of their possible unions and intersections, (3) recognition that some languages have terms spanning hue and achromatic categories – e.g. a term naming the union of black, green, and blue, or of white, red, and yellow, (4) recognition that there are really two – occasionally overlapping but mostly successive – evolutionary sequences: (i) the division of the disjunctive categories, including those discussed under point (3) into the six Hering primaries and (ii) the subsequent naming of the interjective categories, like pink, purple, brown, orange, and gray, (5) full acceptance of the fact, entertained tentatively in Berlin and Kay (1969), that there is probably nothing magic about the number eleven as an upper limit of the number of basic color terms a language may possess, and (6) recognition of the

“Emergence Hypothesis” according to which not all languages have a complete set of basic color terms, i.e. a set of lexemes of abstract color denotation whose denotata jointly exhaust the perceptual color space (Kay 2006: 118)”

In the same article Kay also recognises the mistakes that were made in the original study: 1) experimental data was only collected from twenty languages, 2) often there was only one subject per language, 3) the data was collected in the San Francisco Bay area, 4) all native collaborators spoke English, and 5) seventeen of the twenty languages studied with fieldwork were written languages, mostly of technologically advanced societies (Kay 2006: 119).

Kay and Maffi contributed to “The World Atlas of Language Structures” (2005) with a short overview of the universalistic theory and provided four maps, where the number of nonderived basic colour categories, number of basic colour categories and the relationships of green-blue and yellow-red colour categories in the world’s languages are shown. These results are found in The World Color Survey, also known as WCS, the collection of which was begun in the late 1970s. The full results of the WCS have not yet been published. Some preliminary results and methodological remarks can be found in Kay et al. 1991, Kay et al. 1997, and Kay and Maffi 1999, 2005. Two broad hypotheses from Berlin and Kay’s theory that have been confirmed by the WCS data can be highlighted: 1) there are universals in colour naming among languages, and 2) the way the world’s languages encode colour categories shows a tendency towards some universal constraints.

The present dissertation remains strictly within the frame of Berlin and Kay’s basic colour term theory and its developments. Therefore, no other parallel theories for colour categories and naming will be discussed. Nevertheless, it should be noted that Berlin and Kay have been criticised by John Lucy (1997), John Lyons (1999), Barbara Saunders (2007), Jaap van Brakel (1994), Anna Wierzbicka (see 2005, 2007 for a recent discussion with Kay 2003), and Debi Roberson and her colleagues (Jules Davidoff, Ian Davies).

If we talk about modifications of the Berlin and Kay hypothesis, we cannot bypass the vantage theory developed by Robert E. MacLaury (e.g. 1992, 1997, 1999, 2002, 2003), especially because he contributed to the investigation of Hungarian colour terms. A vantage theory is a model of categorisation. The data is collected by interviewing one subject at a time in natural daylight. The interview contains three parts: 1) asking a subject to name 330 loose Munsell colour chips presented in random order, 2) eliciting the focus for each offered colour name using a Munsell array, and 3) mapping the colour category by asking the interviewee to put a grain of rice on each chip that he could name with X-term. The mapping is recorded and the request is repeated (MacLaury 1999: 9). MacLaury’s explanation of the vantage theory is:

“Vantage theory is a model of categorization. Precisely, it is a model of the method that a person employs to construct any category, to use it, to change it, or to recall it. The method is implemented by forming a special sort of analogy. The analogy is not the conscious, creative kind, as with ‘an atom is like a tiny solar system’. Rather, it is deeply unconscious and wholly automatic, such that a person can form multiple categories in rapid succession, as quickly as he needs them to think or speak. [...] The analogy pertains between the method by which a person reckons his own position in space-time and the categorizing method, that is, the latter target is derived by equation from the former source. [...] The analogy does not draw upon space-time as an undifferentiated experience, but rather its source consists of the coordinates in reference to which a person composes space-time. [...] Emphases on similarity and difference are equateable with degrees of slow and fast because both pairs of senses are embedded in a continuum. That is, attention to similarity and difference are points on a vast axis that ranges from unity to disparity, while slow and fast, too, are points on an axis, the end points being zero velocity and maximum conceivable speed. [...] attention to similarity is strong to the extent that difference is slight or ignored, and vice versa [...] Because the members of either pair may move along their respective axis in relation to each other, they are inherently mobile. [...] To summarize thus far, vantage theory poses that a category is composed by a deep-seated, unconscious, and automatically expedited analogy to space-time coordinates, which a person processes as fixed landmarks and motion between them. The categorical equivalents are inherently fixed images or abstractions and inherently mobile reciprocals of attention to similarity and difference (MacLaury 2002: 494–495)”.

Contemplating MacLaury’s theory we should also focus on MacLaury et al.’s (1997) findings on two Hungarian terms for red, *piros* and *vörös*, the topic constituting a significant part of the present dissertation. MacLaury and his co-authors (MacLaury, Kövecses, Almási 1997) carried out a field study with nine native Hungarian subjects. Their findings are referred to in the article “The puzzle of two terms for red in Hungarian” [P5]. In his later article, MacLaury (2002: 499) highlights the main results of the field study on the Hungarian ‘reds’: *piros* and *vörös* denote different views of “red”, respectively the dominant vantage and the recessive vantage. He is of the opinion that *piros* is a common name (a basic colour term) denoting red, while *vörös* is a term of cultural importance. These findings are in concordance with the data collected in Hungary by the present author (see [P1]). However, our results differ in our conclusions about the exact colour of *vörös*; according to our study *vörös* can express red, light red and/or dark red (cf. [P1] and [P5]). At the same time our studies agree on many points (cf. MacLaury 2002: 499–502 and [P5]): *piros* is applied to ordinary things and is poor in connotation, while *vörös* is found in poetic expressions, carries rich connotations and is associated with love, anger,

blood, and revolution; *piros* only has links with health and the heart. Although I do not entirely agree with MacLaury et al.'s interpretation of the two Hungarian terms for red (the differences might have been arisen because he had only nine subjects, whereas I observed the language use of 125 participants), his research has to be highly regarded.

Recent literature on colour naming has inclined more towards psychology than linguistics. There are two major views: 1) the universalist view, which claims that colour categories are organised around six universal foci, the so-called Hering primaries of English yellow, red, green, blue, white, and black (Paul Kay and his colleagues stand for this view. See Regier et al. 2005, 2007; Kay and Regier 2006, 2007), and 2) the weak relativist view, which suggests that the categories are determined by the spoken language and that the foci vary significantly among languages (Ian Davies, Debi Roberson and their colleagues argue for this view. See Davies and Corbett 1997; Davies 1998; Roberson 2005; Roberson et al. 2000, 2002, 2004, 2005; Roberson and O'Hanlon 2005).

Responding to their opponents in their most recent article, Regier, Kay and Khetarpal (2007: 1436) revise and update their view as follows:

“However, despite this clustering near the six foci, the best examples of many color categories do fall elsewhere, a finding less easily accommodated by the focal-color account. Moreover, languages with the same number of categories, apparently organized around the same or similar foci, sometimes differ in their placement of category boundaries, which suggests that category boundaries are determined by more than six proposed universal foci.”

Here they actually acknowledge and embrace the main idea of the opposite view that colour naming differences among languages exist. The findings of this dissertation that contribute to the above discussion are provided in section 4 (after [P4]).

2.2. Definition of a basic colour term

‘Basic colour term’ was originally defined by Berlin and Kay, who used the following criteria to differentiate basic colour terms and those colour words that are not basic (1969: 6–7). The definition consists of two groupings of criteria to which a basic term should correspond: the primary criteria (first four characteristics) and the subsidiary criteria.

- “(i) It is monolexemic; that is, its meaning is not predictable from the meaning of its parts. [---]
- (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 informants and across occasions of use, and (3) occurrence in the idiolects of all informants. [---]

These criteria (i-iv) suffice in nearly all cases to determine the basic color terms in a given language. The few doubtful cases that arise are handled by the following subsidiary criteria:

(v) The doubtful form should have the same distributional potential as the previously established basic terms. [---]

(vi) Color terms that are also the name of an object characteristically having that color are suspect, for example, *gold*, *silver* and *ash*. This subsidiary criterion would exclude orange in English, *if* it were a doubtful case on the basic criteria (i-iv).

(vii) Recent foreign loan words may be suspect.

(viii) In cases where lexemic status is difficult to assess [see criterion (1)], morphological complexity is given some weight as a secondary criterion. [---] (Berlin and Kay 1969: 6–7)”

In the present study basic colour term is understood according to this definition, but needs some further comments. As I have argued in my article “Basic colour terms of Czech” [P3] the first criterion has often been misunderstood, because it contains a ‘magic’ word *monolexemic* (see for example Lyons 1999: 50, who declares that basic colour terms have to be lexically simple, i.e. must not be morphologically or syntactically composite). It is commonly thought that only morphologically simple colour words can meet the first criterion for basic colour terms. In fact, this conclusion might be misleading. In my research there are clear examples of basic colour terms that are not morphologically simple words, e.g. *vaaleanpunainen* ‘pink’ in Finnish. *Vaaleanpunainen* actually consists of two parts: *vaalea* ‘light, white’ and *punainen* ‘red’, but it could never be translated into other languages as ‘light red’, because its meaning has become established as ‘pink’. Similar cases are found in Hungarian (see [P1]). The ‘magic’ word *monolexemic* does not mean morphologically, but rather semantically simple. In fact, Berlin and Kay have never stressed that only monomorphemic words can meet the basic colour term criteria. Nevertheless, it might be useful to redefine the concept in a less confusing way.

Galina V. Paramei states that the issue of the two Russian blues raises questions about the proper definition of a basic colour term (2005: 10). Russian has been extensively studied using both linguistic and psycholinguistic methods, and many researchers declare it to be a language with 12 basic colour terms having two different basic terms for blue, *sinij* ‘dark blue’ and *goluboj* ‘light blue’ (e.g. Frumkina 1984, Corbett and Morgan 1988, Davies 1998, Davies and

Corbett 1994, Morgan 1993, Morgan and Corbett 1989, Moss 1989a and 1989b, Moss et al. 1990, Paramei 2005, 2007, Safuanova and Korzh 2007, Winawer et al. 2007). Paramei draws attention to several interesting points about the two Russian blues: the two terms are in no way interchangeable for native speakers; both terms have culture-specific connotations and are usually context restricted; mappings of *sinij* and *goluboj* cover distinct areas; both terms meet the linguistic criteria for the basic colour term, etc. (Paramei 2005). In the wake of these findings she raises the question of whether context restriction of a salient colour term is a well-formed argument for basicness. She also argues:

“The problem of the Russian blues can be accounted for by views that advocate social and cultural constraints of color category evolution. Such constraints imply that color names map onto color appearances in a culturally modal pattern [---] and, in certain language, could emerge as culturally basic. The considerations may be integrated into existing color naming theories as these evolve and are updated (Paramei 2005: 33).”

The issue of cultural salience should be further developed taking into account the Hungarian and Czech basic colour terms for ‘red’ (cf. Rakhilina 2007, Paramei 2005). Both languages appear to have only one basic colour term denoting red, but another one that can be presumed to have culturally salient traits. This question is further considered in section 4.

Robert E. MacLaury has also questioned whether the four main criteria are universally applicable and suggested abandoning non-context-specificity, as it can only differentiate the hue terms in some modern languages, or at least languages that are approaching the highest level in the evolutionary order (MacLaury 1999: 25–26). He cites evidence from Ancient Greek, which contained at least three brightness terms for each basic hue, Classical Latin, which also contextualised hue terms, and modern French, which has two terms for brown, *brun* and *marron*. Sir John Lyons also criticised the original definition, agreeing with MacLaury’s view (Lyons 1999).

In the original basic colour term definition, the first criterion is one of the few that defines the term linguistically, whereas most of the characteristics deal with psychological salience. Some scholars have suggested rejecting all linguistic criteria. For instance, Crawford presents his definition of a basic colour term as follows:

“A basic colour term occurs in the idiolects of all informants. It has stability of reference across informants and across occasions of use. Its signification is not included in that of any other colour term. Its application is not restricted to a narrow class of objects (Crawford 1982: 324).”

Berlin and Kay's original list of the criteria of basic colour terms has also been criticised by A. E. Moss (1989b), Jerome Smith et al. (1995), Urmes Sutrop (2000, 2002) and others, who argue for different weights to be allocated to certain main and/or subsidiary criteria. Sutrop, in particular, defines a basic colour term thus:

“A basic colour term is a psychologically salient, in most cases morphologically simple and native word, which belongs to the same word class and has the same grammatical potential as the prototypical colour term(s). That term denotes a quality of colour at the basic level and is applicable in all relevant domains (Sutrop 2002: 40).”

I find the above two definitions better than the original Berlin and Kay definition, because they stress the importance of psychological salience, which has been considered in my articles ([P1], [P2], and [P3]). I here try to formulate a new basic colour term definition according to my observations as well as other definitions and suggestions:

A basic colour term is a semantically consistent and psychologically salient term, which appears in the idiolects of all language speakers. It has a tendency to occur in the beginning of elicited colour term lists. In reference to a certain colour, native speakers use the term consistently. Its meaning is not included in the meaning of other basic colour terms. In some exceptional cases the term may be restricted to a narrow class of objects, but is granted the basic status if it meets the criteria of psychological salience in the language/culture under consideration.

3. METHODS USED IN THE STUDY

The original procedure for identifying basic colour terms that Berlin and Kay (1969: 5, 7) used for collecting their data consisted of two tasks: 1) the elicitation of the list of basic colour terms, and 2) the colour mapping procedure, in which every subject was asked to indicate both the focal point and the outer boundary of each of his basic colour terms on the Munsell colour chip array. The procedure was repeated with every subject at least three times, at weekly intervals. Berlin and Kay often had only one subject per language. The procedure requires longitudinal interviews with the same interviewees and it is therefore time consuming to test a relatively large number of subjects.

Davies and Corbett (1994, 1995) developed a new field method for identifying basic colour terms, which is based on Berlin and Kay's original procedure (1995: 27). They describe it as a quick, simple and robust method for identifying the likely basic colour terms, designed to be used in the field rather than in the laboratory, requiring no equipment other than a standard set of colour stimuli and a moderate degree of control over how they are presented (Davies and Corbett 1995: 25). They first used this method in various locations in rural southern Africa for a field study of Botswana (cf. Davies et al. 1992). The whole procedure lasts about 15–20 minutes, and thus allows for testing a large number of subjects. This field method has been adapted to the present study and was used to collect the data on Hungarian, Finnish and Czech ([P1], [P2], and [P3]). A detailed description is presented in Davies and Corbett (1994, 1995), as well as in [P1], [P2], and [P3].

The procedure consisted altogether of three tasks. All subjects did the **list task** first, in which they were asked to name as many colours as they know in their native language. The author of this dissertation spoke Hungarian, Finnish and Czech with her subjects. The unvaried question put to each subject was “*Kérem, mondjon annyi színt magyarul, amennyit tud.*” ‘Please, recount as many colours in Hungarian as you know’ in Hungarian [P1], “*Olkaa hyvää, nimittäkää niin paljon värejä suomeksi kuin tiedätte.*” ‘Please, name as many colours as you know in Finnish’ in Finnish [P2], and “*Prosím vyjmenujte všechna jména barev jako češtině znáte.*” ‘Please, name all colour names that you know in Czech’ in Czech [P3]. All the answers were written down as said. The subjects did not know before the test that the questions to come would refer to colours and their names.

Second, the City University Color Vision Test designed by Fletcher (1980) was presented to the subjects. In this test, the subject is shown ten black tiles, in the middle of each of which is a dot of a certain hue surrounded by four differently coloured dots. The interviewee is asked to indicate which dot is the most similar to the central one: above, below, right or left. The test makes it possible to diagnose severe abnormalities of colour vision, such as protonopia,

deuteronopia and tritanopia, as well as the corresponding severe anomalous trichromacies.

If the interviewer detected some abnormality in a subject's colour vision, the colour naming task was continued as for subjects with normal colour vision, but the responses were disregarded in the further analysis.

After the colour vision test **the colour naming task** was carried out. The subjects were shown 65 standard colour stimuli (tiles) selected by Davies et al. (1992: 1097–1100) in a random sequence placed on a grey cloth, in natural daylight, avoiding direct sunlight or deep shade, indoors. The tiles were shown one at a time and the subject was asked to name their colours. Indicating each colour tile the experimenter asked: 'What colour is it?' in Hungarian, Finnish or Czech. The subjects were allowed to say that they could not find a suitable term for a tile. The results of the colour naming task were also used in [P4].

In the colour naming task, 65 standard tiles were used as **stimuli**. Each tile was a 5 x 5 x 0.3 cm wooden square covered with coloured paper. The 65 tiles are a subset of the 219 colours supplied in paper form by the *Color Aid Corporation* and were chosen by Davies et al. (1992). The *Color Aid Corporation* set implements the **Ostwald colour system** (Ostwald 1939), where the main features of colour are colour tone i.e. *hue*, content of white i.e. *tint* and content of black or blackness, i.e. *shade*. The colours in the *Color Aid Corporation* set include 24 chromatic colours (six basic colours: Y – yellow, O – orange, R – red, V – violet, B – blue, G – green; and eighteen transition hues, e.g. YO – yellow-orange, YOY – yellow-orange-yellow). In addition there are seven variants of each hue: each hue breaks down into four lighter variants T1-T4, in which the tint (share of white) increases pro rata, and into three darker variants S1-S3, where the shade (share of black) increases. The tints and shades reflect variation in brightness and saturation, respectively, from the parent hue. There is also a separate scale of achromatic colours ranging from white to grey and black. In addition, some extra-system colours were used, such as Sienna and Rose Red. The CIE–1931 coordinates of the colour tiles used in the experiment (lightness, content of red and content of green) are available in Davies and Corbett (1994: 70–71).

The *Color Aid Corporation* range consists altogether of 219 colours. For the fieldwork in Hungary in 2003 the stimuli were completed with 15 **additional colour tiles** from the pink-purple, red and yellow region to give some disputable colour names a chance (e.g. *vörös*, *rózsaszín*, and *sárga*). These tiles were Life Red, ROR T1, RV S1, R S1, and R T1 (for the red region), Primrose Yellow and Y T1 (for the yellow region), and RVR T1, RVR T2, RVR T3, RVR T4, RV T1, RV T4, and Magenta (pink-purple region). The extra tiles were added to the colour naming task and constructed to the same size criteria as the 65 standard tiles. The 80 (65+15) colour tiles were presented to 85 native Hungarian speakers. The colour naming task for the additional tiles was carried

out in exactly the same way as for the standard 65 tiles. The results of [P5] thus rely partly on the use of the 15 additional tiles.

The selection of subjects was as objective as possible, although for the Finnish and Czech samples it was difficult to find male subjects. Nevertheless, the interviewer took care to find subjects with different levels of education as well as with different occupations.

The interviews took place either at the subjects' homes or in their working places. Many of the pupils and students who participated in the tests were asked at their school or university. In Győr, Hungary, and in Helsinki, Finland, teachers were asked to find interviewees from different sex and age groups, but also with different levels of advancement in their studies, so that the sample would be balanced. The students were interviewed in the Eötvös Loránd University, Budapest (Hungary), University of Pécs (Hungary), University of Brno (Czech Republic), and Charles University Prague (Czech Republic). In Finland no interviews were carried out in university premises, in fact the subjects were hardly ever interviewed in public places. However, the staff of the Budapest University library was so helpful that some of the subjects were interviewed there. No payment was offered to the subjects.

The list task was complemented by **the cognitive salience index** designed by Urmas Sutrop (2001, 2002), which was used to identify the basic colour term candidates in Hungarian, Finnish and Czech in [P1], [P2], and [P3]. The cognitive salience index relates two parameters in the list task: naming frequency and mean position of a colour term. The index was used in this study because it combines the tendency of a basic term to occur at the beginning of the elicited lists (mean position) with its occurrence in the idiolects of all subjects (term frequency) and is therefore relevant to Berlin and Kay's (1969: 6–7) original basic colour term definition. It has been described in detail in Sutrop (2001).

The method presented in [P4] for identifying focal points (of prototypical colours) in five languages – Estonian, Finnish, Hungarian, Russian, and English – is mine. The results of the colour naming task (described above) were considered and compared. The tiles most frequently named with the colours that correspond to English yellow, orange, red, pink, brown, green, blue, purple, and grey in each language were selected as the best examples, or focal points, in the Ostwald colour space. For instance, the colour tile that was named most frequently with the colour name yellow in each language was considered the best example of yellow, etc.

In addition, the variance in colour naming across languages was investigated by identifying the colour tiles which different languages name diversely.

In [P5] I first present some of the results from the list and colour naming task, second, analyse the compound words that emerged in the responses of the 125 Hungarian subjects according to the semantics of their first components, and third, examine the **collocations and connotations** of *piros* and *vörös*. To access

the collocations and connotations no fieldwork was carried out but I relied on dictionaries and some earlier studies (Kiss, Forbes 2001). The scope of the syntagmatic and paradigmatic collocations as defined by Sir John Lyons (see Lyons 1977: 230–269) is then presented and compared with the neighbouring Czech language.

4. RESULTS

In this section the results and the main thesis of the study described in articles [P1] – [P5] will be presented and compared with earlier investigations.

In their famous and much discussed monograph “Basic color terms: Their universality and evolution”, Brent Berlin and Paul Kay (1969) claimed that for any language the maximum number of basic colour terms is 11. However, they weakened their own theory by conceding that Russian and Hungarian may be exceptional in having 12 basic colour terms. According to them Russian has two basic blues – *sinij* and *goluboj* (see Paramei 2005 for a review) – and Hungarian has two basic terms for red – *piros* and *vörös*. In the wake of this tradition, Věra and Barbara Schmiedtová (2002, 2006) as well as some other researchers (e.g. Nagel 2000) have suggested that the Czech language might also possess 12 basic colour terms, with two basic terms for red – *červená* and *rudá*.

My research on Hungarian and Czech colour terms aims to show that these languages have exactly 11 basic colour terms, which they encode in the universal way. Moreover, although these languages share the characteristic of having two different words for red, the second word does not appear at the basic level.

The basic colour terms of Hungarian are established in [P1] as the following (ranked according to Sutrop’s (2001) cognitive salience index): *piros* ‘red’, *kék* ‘blue’, *zöld* ‘green’, *sárga* ‘yellow’, *fehér* ‘white’, *fekete* ‘black’, *lila* ‘purple’, *barna* ‘brown’, *szürke* ‘grey’, *rózsaszín* ‘pink’, and *narancssárga* ‘orange’. The second term for red, *vörös*, is not basic in Hungarian. Not only was its naming frequency very low in the list task but there was also no consensus among subjects as to which colour *vörös* actually refers to in the colour naming task. This result coincides with that of Robert E. MacLaury and his co-authors, who also claim that according to their tests conducted in Hungary with nine native speakers only *piros* is a basic colour term, while *vörös* is not (MacLaury et al. 1997). However, our findings are at odds with their conclusion that *vörös* means ‘dark red’ (see [P5]).

There are also some other differences between the results presented in [P1] and the basic colour terms offered by Berlin and Kay, which may be accounted for by the vernacular of Berlin and Kay’s emigrant subject living in the San Francisco Bay area, and the dictionary they had at their disposal. First, the colour name for white in contemporary Hungarian is *fehér* and not *fejér* as found in Berlin and Kay (1969: 95). Second, Berlin and Kay have a different name for orange, which according to my observations should be *narancssárga* and not *narancs*.

The basic colour terms of Czech are presented in [P3] as follows (ranked by cognitive salience): *bílá* ‘white’, *červená* ‘red’, *žlutá* ‘yellow’, *modrá* ‘blue’, *zelená* ‘green’, *černá* ‘black’, *oranžová* ‘orange’, *fialová* ‘purple’, *hnědá* ‘brown’, *růžová* ‘pink’, and *šedá* ‘grey’. The Czech language does not possess

an additional basic colour term *rudá* for red, so Věra and Barbara Schmiedtová (2002, 2006) are unlikely to be correct in their argument for 12 basic colour terms in Czech with two terms for red. The research carried out to identify the probable candidates for Czech basic colour terms was fieldwork based, while Věra and Barbara Schmiedtová used the Czech National corpus. They underestimated the importance of a field study.

In addition, there is no colour term meaning blue and yellow (*plavá*) as suggested by McNeill (1972: 30; cit. in Van Brakel (1994: 773).

Finnish was included in the research question in order to have another representative of the Finno-Ugric language family for comparison with Hungarian. Finnish had not actually been studied using extensive empirical field methods before. The work on Finnish and closely related languages by Mauno Koski (1983) and Vilja Oja (2001, 2004, 2007a, 2007b) is based on large dialect collections and corpuses, but is highly acknowledged. Ulla Jäppinen (1999) studied colour terms in Finnish texts, but empirical fieldwork on Finnish had not been carried out before the present author's work. Mauno Koski (1983) concluded that Finnish possesses only eight basic colour terms, excluding terms for orange, pink, and purple. Seija Kerttula, who developed the concept of relative basicness, also studied Finnish in her recent article (2007). Her research is based on corpuses and dictionaries and she, like Koski, claims that Finnish possesses 8 basic colour terms (2007: 167). In [P2] I show that Finnish also has lexicalised basic colour terms for orange and pink, although it lacks a developed basic colour term for purple. Following the cognitive salience index, the basic colour terms in Finnish are *punainen* 'red', *sininen* 'blue', *vihreä* 'green', *keltainen* 'yellow', *musta* 'black', *valkoinen* 'white', *oranssi* 'orange', *ruskea* 'brown', *harmaa* 'grey', and *vaaleanpunainen* 'pink'. A case similar to that of Finnish is observed in the Nakh-Daghestanian language, spoken in Daghestan and Azerbaijan, in which pink exists as a lexicalised category, but the category for purple is absent (Davies et. al 1999). Also, Upper and Lower Sorbian have colour systems lacking a term for pink, and Lower Sorbian lacks a basic term for orange (Hippisley and Davies 2005). With regard to Finnish, I suggest that it is developing a basic term for purple which will be lexicalised in the near future. The most probable candidate is *violetti*.

The basic colour terms in the three languages discussed above are shown in Table 3.

As both Hungarian and Finnish have basic colour terms that are not morphologically simple, attention should be drawn to the original basic colour term criteria. I have commented on this issue in section 2.2 and suggested that it would be reasonable to lessen the weight of the first criterion – *monolexemity*, since in some cases this may be misleading. Hungarian and Finnish formulate some basic colour terms through morphologically complex terms which are understood as semantically simple and therefore count as basic.

Table 3. Basic colour terms of Czech, Hungarian, and Finnish in the original Berlin and Kay basic colour term order

Basic colour term category	Czech	Hungarian	Finnish
white	<i>bílá</i>	<i>fehér</i>	<i>valkoinen</i>
black	<i>černá</i>	<i>fekete</i>	<i>musta</i>
red	<i>červená</i>	<i>piros</i>	<i>punainen</i>
yellow	<i>žlutá</i>	<i>sárga</i>	<i>keltainen</i>
green	<i>zelená</i>	<i>zöld</i>	<i>vihreä</i>
blue	<i>modrá</i>	<i>kék</i>	<i>sininen</i>
brown	<i>hnědá</i>	<i>barna</i>	<i>ruskea</i>
orange	<i>oranžová</i>	<i>narancssárga</i>	<i>oranssi</i>
grey	<i>šedá</i>	<i>szürke</i>	<i>harmaa</i>
pink	<i>růžová</i>	<i>rózsaszín</i>	<i>vaaleanpunainen</i>
purple	<i>fialová</i>	<i>lila</i>	-

Article [P4] has a somewhat unexpected finding: the focal points, or the best examples, of colour terms vary in related and non-related languages, a claim which does not support the universalistic theory, but rather the weak relativistic view. A focal point or prototypical colour is understood according to the definitions of Heider (1971, 1972) and Berlin and Kay (1969). Five languages, three from the Finno-Ugric language family (Estonian, Finnish, and Hungarian) and two from the Indo-European family, Slavic and Germanic groups (Russian and English) are considered. Comparison of these languages was made possible by the use of Ian Davies and Greville Corbett's field method. It is described in section 4.

The results collected for Hungarian, Finnish and Czech are mine ([P1], [P2], and [P3]), while the data used for Russian and English are taken from the studies by Davies and Corbett (1994, 1995), and those for Estonian are by Sutrop (2002).

Table 4 presents the variability of the prototypical colours in six languages. The prototypical colours of Czech are included, unlike in article [P4] for which no Czech data was available at the time of publication (fieldwork in the Czech Republic was only carried out in spring 2007). Czech is a West-Slavonic language belonging to the Indo-European language family. The Czech examples provide supporting evidence for the different placement of focal colours in different languages. All the Czech colour terms are given in feminine form in concordance with the feminine noun *barva* 'colour' (cf. Short 1993: 526).

For each basic colour category, the Color Aid code together with the languages that place the prototypical colour in this tile in Ostwald's colour space are shown (following article [P4]). For Finnish, the focal point for purple is also given, as in [P4], despite the argument for its non-basic status in [P2].

The erroneous focal point of blue for Finnish has been corrected here, as explained in [P2]: 391. For Russian, two focal points have been identified for the blue category (after Davies and Corbett 1994). If in some languages the naming frequency for the same colour category is equal, both tiles are presented as best examples, as with Russian yellow (Y and YOY).

Table 4. Focal points in the Ostwald colour space over six languages

Colour category	Color Aid Code of best examples	Colour category equivalents
yellow	Y	Czech <i>žlutá</i> , English <i>yellow</i> , Estonian <i>kollane</i> , Finnish <i>keltainen</i> , Hungarian <i>sárga</i> , Russian <i>želtij</i>
	YOY	Russian <i>želtij</i>
orange	OYO	Czech <i>oranžová</i> , Estonian <i>oranž</i> , Finnish <i>oranssi</i> , Hungarian <i>narancssárga</i> , Russian <i>oranževij</i>
	O	English <i>orange</i>
brown	YO S3	Finnish <i>ruskea</i> , Hungarian <i>barna</i>
	O S3	English <i>brown</i> , Estonian <i>pruun</i> , Russian <i>koričnevij</i>
	OYO S3	Czech <i>hnědá</i>
red	RO	Czech <i>červená</i> , Finnish <i>punainen</i> , Hungarian <i>piros</i> , Russian <i>krasnyj</i>
	ROR	English <i>red</i> , Estonian <i>punane</i>
pink	ROR T3	Czech <i>růžová</i> , Estonian <i>roosa</i> , Russian <i>rozovij</i>
	R T4	English <i>pink</i> , Finnish <i>vaaleanpunainen</i> , Hungarian <i>rózsaszín</i>
purple	RV	English <i>purple</i> , Estonian <i>lilla</i>
	VRV	Czech <i>fialová</i> , Finnish <i>violetti</i> , Hungarian <i>lila</i> , Russian <i>fioletovij</i>
	V	Czech <i>fialová</i> , English <i>purple</i> , Russian <i>fioletovij</i>
blue	BVB	Czech <i>modrá</i> , Finnish <i>sininen</i>
	B	Estonian <i>sinine</i>
	B T1	English <i>blue</i>
	BGB	Estonian <i>sinine</i> , Hungarian <i>kék</i> , Russian <i>sinij</i>
	BGB T3	Russian <i>goluboj</i>
green	G	Estonian <i>roheline</i> , Finnish <i>vihreä</i> , Hungarian <i>zöld</i> , Russian <i>zelenij</i>
	GYG	Czech <i>zelená</i>
	YG	English <i>green</i>
grey	GRAY 2	Estonian <i>hall</i> , Russian <i>seryj</i>
	GRAY 4	Czech <i>šedá</i> , Finnish <i>harmaa</i> , Hungarian <i>szürke</i> , English <i>grey</i>

As can be seen from Table 4, there is no rule for how the languages are grouped, i.e. the placement of the focal points is not influenced by the language family to which languages belong (for further discussion see [P4]). This finding clearly supports the claim by Debi Roberson and her colleagues, who argue for weak linguistic relativity, and therefore goes against the assumption that colour categories have universal foci (cf. Davidoff 2004, 2006, Roberson et al. 2000, 2002, 2004, 2005, Roberson 2005, Roberson and O’Hanlon 2005, etc.).

The article “The puzzle of two terms for red in Hungarian” (here [P5]) concerns the two Hungarian terms for red, *piros* and *vörös*. The results, in brief, are as follows:

1) There are not two basic colour terms denoting red as suggested by Berlin and Kay; only one term, *piros*, corresponds to the basic term, while the other term, *vörös*, cannot be classified as basic at all. Hungarian therefore fits the theory having exactly 11 basic colour terms. This finding is in agreement with that of Robert E. MacLaury and his co-authors, who concluded that *piros* is the general name for red (MacLaury et al. 1997).

2) The empirical data collected in Hungary indicate that *vörös* means ‘light red’, ‘red’, and/or ‘dark red’, with all three meanings being possible, whereas Berlin and Kay interpreted *piros* as ‘light red’ and *vörös* as ‘dark red’. This view has spread in numerous linguistic textbooks and encyclopaedias (e.g. Crystal 1987). MacLaury and his co-authors, who carried out fieldwork with nine Hungarian native speakers, despite leaning towards the vantage theory argued that *vörös* has the meaning of ‘dark red’, but that *piros* cannot be interpreted as ‘light red’ (MacLaury et al. 1997: 75). In my experiment, the darkest red hue (R S1) in the colour naming task did not achieve high frequencies, while the one most frequently described as *vörös* was the colour tile RO (red-orange) (see Table 2 in [P5]). When participants were asked about the exact colour of *vörös* they often declared that it does not differ from the colour of *piros*. Meanwhile *piros* can also indicate arbitrary red colour tiles, not only light red ones. Recently, Anna Wierzbicka (2005) has argued that the colour names in Hungarian, Russian, Polish, or in any language cannot be accessed directly through the lexicons of other languages, reprimanding Berlin and Kay’s paradigm of Anglocentric assumptions. This might be a reasonable claim, and it fits well with the present research as we can see that on the one hand the meaning of *piros* and *vörös* is far from simple, while on the other hand we cannot under any circumstances interpret them as light and dark red.

3) The use of *piros* and *vörös* relates to collocations and connotations. These are presented following Kiss and Forbes (2001), who postulate three groups: i) nouns that are in any case used (mainly) with the colour word *piros*, e.g. *piros alma* ‘red apple’; ii) nouns that are in any case used (mainly) with the colour word *vörös*, e.g. *vörös csillag* ‘red star’; iii) nouns which can be used with either *piros* or *vörös*, e.g. *piros könyv*, *vörös könyv* ‘red book’ (see [P5]). In further research collocations should be discussed as paradigmatic and syntag-

matic relationships between the colour word and its modifying noun (see Lyons 1977: 230–269).

4) The case of two terms for red could be an areal phenomenon in Central Europe (the historical area of the Austro-Hungarian Empire), because of the similarity with the Czech language. As argued before (see [P3]), Czech also possesses two terms for red of which only *červená* is basic, while *rudá* is not.

5) In Czech as in Hungarian the two terms for red cannot be used interchangeably in most cases.

6) *Vörös* in Hungarian and *rudá* in Czech are always associated with socialism and even more so, communism, as the Red Army is *vörös hadsereg* and *rudá armada*; *vörös csillag* and *rudá hvězda* means ‘red star’ – an emblem of some communist countries, etc.

5. MAIN FINDINGS OF THE DISSERTATION

The arguments of this thesis result from the findings of the empirical psycholinguistic research presented in the previous section, and can be formulated as follows:

1) Languages universally have up to 11 basic colour terms; languages like Hungarian and Czech which have been suspected of possessing 12 basic colour terms, including two terms for the red category, have exactly 11 basic colour terms as predicted by Berlin and Kay's theory.

2) If a language has two colour words to express one colour category, one of these colour terms is basic, while the other can be considered rather to be specific to certain collocations and connotations. For example in Hungarian and Czech, of the two colour terms belonging to the same category, only one is a basic term while the other is not. It would be reasonable to further develop the concept of cultural basicness introduced by Galina V. Paramei (2005). Though not basic, the Hungarian and Czech second terms for red are apparently culturally relatively salient; this reveals itself in their collocations and connotations.

3) Focal points do not coincide between related and non-related languages and are rather defined by local linguistic convention. Six languages – Estonian, Finnish, Hungarian, Russian, Czech, and English – were examined in order to find out whether the hypothesis of universal colour foci holds true. The results support the weak relativistic view, since the best examples in one language slightly differ from the best examples in another language.

6. CONCLUSIONS AND RESEARCH OUTLOOK

The present dissertation is an extensive empirical-cognitive study of colour terms in the Finno-Ugric and Slavonic languages: it explores the sets of basic colour terms in Hungarian, Finnish, and Czech through fieldwork involving altogether 245 participants in Hungary, Finland, and the Czech Republic bringing new evidence to light on several questions. It examines the frequently cited statement that there are two basic colour terms for red in Hungarian and investigates their etymology, semantics, morphological potential, and use in context, as well as presenting the nascent idea that the phenomenon of two terms for red is an areal concept, given the existence of two similar terms in the Czech language. Last, but not least, the dissertation strives to show that the focal colour points (those areas that are the best examples a given colour) vary slightly even in languages from highly technological societies with the same number of basic colour terms.

The main contribution of the dissertation is that it questions the continuing occurrence of the *prima facie* intriguing example of the two terms for red and twelve basic colour terms in Hungarian, as well as in the neighbouring Czech language, in one linguistic textbook after another, which has lived its own life since the original study by Berlin and Kay. The puzzle of two terms for red in Hungarian – the basic *piros* and non-basic *vörös* – poses the question of the differentiation between paradigmatic and syntagmatic aspects in the analysis of the basicness of colour terms ([P1]: 121). The same applies to the two terms for red in Czech – basic *červená* and non-basic *rudá*. The phenomenon should be interpreted by taking into account distinct connotations and collocations as well as positive and negative emotional associations.

The following results should also be highlighted. The number of basic colour terms in Hungarian and Czech is 11, as predicted by the basic colour term theory, whereas the Finnish data clearly points to a lack of a basic colour term for purple, although there is strong evidence indicating that the lexicalisation process of a term is in progress.

What might have been done differently? The qualitative nature of the results (although measured using various indices) has not required statistical analysis. However, in future research the data presented could serve as the starting point for this kind of analysis. The variation of focal colour points in different languages needs to be represented in a colour space.

What are the possibilities for further research? One basic colour term in Hungarian, *sárga*, needs further investigation. It seems that its basic status is relatively weak, and conversely *citromsárga* ‘lemon yellow’ appears to be a candidate for basic term status. We suggest that at the boundary with the green category, *citromsárga* ‘lemon yellow’ emerges as a basic, becoming a

counterpart to the basic colour term *narancsárga* ‘orange’, lit. ‘orange-yellow’ (cf. Bogatkin-Uusküla and Sutrop 2005b: 97, [P5]: 113).

Further fieldwork needs to be carried out in Hungarian and Czech to examine the two terms for red and their collocations and connotations for the analysis of their syntagmatic and paradigmatic collocations. Possibly some other neighbouring languages (e.g. Polish, Slovak, Ukrainian) or the languages where the phenomenon of two reds is present (e.g. Bulgarian) also need a field study.

Extensive empirical fieldwork with 75 subjects has already been carried out in Florence, Italy. However, Italian has not been included in the current research, because of the need for more interviews. Italian forms an interesting case, having more than one candidate for the basic colour term denoting blue (*blu* ‘(navy?) blue’, *azzurro* ‘(middle) blue’, *celeste* ‘sky blue’). Nevertheless, the exact set of the basic colour terms of Italian has not yet been established. The blue terms also need examining in terms of their paradigmatic and syntagmatic collocations, and additionally, the accurate meaning of the three blue terms has yet to be established.

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SUMMARY IN ESTONIAN

Põhivärvinimed soome-ugri ja slaavi keeltes: müüdid ja faktid

Lühikokkuvõte

Käesolev väitekirj uurib värvide nimetamist soome-ugri ja slaavi keeltes. Tööl on kolm peamist eesmärki: 1) teha kindlaks põhivärvinimed kahes soome-ugri ja ühes slaavi keeles; 2) kontrollida Brent Berlini ja Paul Kay esitatud intrigeerivat näidet, mille kohaselt on ungari keeles kaksteist põhivärvinime, käsitleda ungari ja tšehhi keele kahte punast kultuuriliselt esilduvate värvinimedena ning seostada kollokatsioonide ja konnotatsioonidega; 3) tõestada, et prototüüpsed värvid erinevates võrdset arvu põhivärvinimesid omavates keeltes on erinevad.

Töö teoreetiliseks taustaks on põhivärvinime teooria, millele panid aluse B. Berlin ja Kay 1969. aastal. Väitekirja uudsuseks on andmete kogumine Ian Daviese ja Greville Corbett' empiirilise välimeetodiga. Autor intervjueeris kokku 245 keelejuhti Ungari, Soome ja Tšehhi Vabariigis.

Tulemused näitavad, et ungari keeles on täpselt üksteist põhivärvinime ning üks põhinimi punase värvi tähistamiseks. Seega on B. Berlin ja Kay poolt esitatud ja sealt mitmetesse keeleõpikutesse ja entsüklopeediatesse jõudnud näide, et ungari keeles on kaksteist põhivärvinime, alusetu. Hiljuti on mõned keeleuurijad leidnud, et ka tšehhi keeles on tõendeid kaheteistkümnepõhivärvinime esinemise kohta, kuid nende uurimus põhineb peamiselt nende intuitsioonil ja töö sõnaraamatutega. Autori välitööga kogutud andmed näitavad, et tšehhi keeles on täpselt üksteist põhivärvinime, sealhulgas vaid üks põhinimi punase jaoks nagu ungari keeles. Kuna soome keeles puudub samuti välitöödel põhinev värvinimed uurimus, võeti käesoleva töö uurimisobjektiks ka soome keel. Küsitluse tulemused kinnitavad, et soome keeles on kümme põhivärvinime ning värvikategooria lilla värvuse tähistamiseks ei ole siiani leksikaliseerunud.

Kahe punase küsimus ungari ja tšehhi keeles on pigem semantiline ega ole vaadeldav põhivärvinime teooriast lähtuvalt. Nähtust on töös seletatud kollokatsioonide ja konnotatsioonidenä ning assotsiatsioonide positiivsete ja negatiivsete emotsioonidega. Samuti on arutletud võimaluse üle, et tegemist on areaalse fenomeniga, kuigi hüpotees vajab kontrollimist edasiste välitöödega Ungari ja Tšehhi naaberriikides kõneldavates keeltes (nt slovaki, poola).

Dissertatsioon püüab samuti panustada päevakajalisse diskussiooni värvide fokaalpunktide üle. Selles on kaks osapoolt. Universalistlik osapool pakub välja, et värvikategooriate piirid ja fookused on universaalsed ning värviruumis samased. Relativistlik osapool aga väidab vastupidiselt, et värvikategooriate fookused varieeruvad keeleli ning on defineeritud vastavalt keeleliste tavadele.

Käesolev uurimus näitab autori kogutud andmete toel, et fokaalpunktid on Euroopas kõneldavates keeltes (soome-ugri ja indo-euroopa keelkondade keeled) paigutunud värviruumis erinevalt.

Uurimuse tulemused pakuvad uut tõendusmaterjali, mis lükkab ümber seni faktidena avaldatud tõekspidamise kahest punasest ungari ja tšehhi keeles.

I. SISSEJUHATUS

I.1. Uurimisülesande püstitus ja töö eesmärgid

Laiaulatuslik värvinimed uurimine maailma keeltes hoogustus pärast seda, kui ameerika antropoloog Brent Berlin ja lingvist Paul Kay panid 1969. aastal aluse põhivärvinime teooriale. Nad väitsid, et igas keeles on universaalselt kaks kuni üksteist põhivärvinime. Samas esitasid nad oma universalistlikule teooriale väljakutse, juhtides tähelepanu sellele, et mõnes keeles võib olla erandlikult kaksteist põhivärvinime. Nad tõid näiteks ungari keele, milles nende arvates võib olla kaksteist põhivärvinime, kaasa arvatud kaks põhinime punase värvi tähistamiseks – *piros* ‘helepunane’ ja *vörös* ‘tumepunane’; ning vene keele, milles on kaksteist põhivärvinime, sealhulgas kaks põhinime sinise tähistamiseks – *sinij* ‘tumesinine’ ja *goluboj* ‘helesinine’. Vene keele põhivärvinimesid on uuritud põhjalikult nii lingvistiliselt kui psühholingvistiliselt, samuti välimeetodiga (vt Frumkina 1984, Corbett ja Morgan 1988, Moss 1989a, 1989b, Morgan ja Corbett 1989, Moss jt 1990, Morgan 1993, Davies ja Corbett 1994, Davies 1998, Paramei 2005, 2007, Safuanova ja Korzh 2007, Winawer jt 2007). Kuigi ungari keelt ei ole siiani piisava arvu keelejuhtidega empiiriliste meetoditega uuritud, võib leida näite kahest põhivärvinimena kasutatavast ungari punasest paljudest keeleteaduse õpikutest. Ainsana on ungari kahte punast empiiriliselt uurinud Robert E. MacLaury ja tema kolleegid (1997), kuid nende keelejuhtide arv ei olnud ulatuslikeks järeldusteks piisav. Käesoleva töö eesmärgiks on uurida ungari keele põhivärvinimesid empiirilise välimeetodiga ning kontrollida B. Berlini ja Kay palju tsiteeritud fakti ungari kahest punasest.

Hiljuti on esitatud mõte, nagu oleks tšehhi keeles samuti kaksteist põhivärvinime, sealhulgas kaks põhinime punase tähistamiseks (Schmiedtová ja Schmiedtová 2002, 2006). Ent kuni käesoleva uurimuseni ei ole tšehhi keele põhivärvinimesid empiiriliste meetoditega uuritud. Sellepärast on tšehhi keele värvinimed uurimisülesandesse lisatud. Artikkel [P3] annab ülevaate tšehhi keele põhivärvinimedest ning artikkel [P5] käsitleb tšehhi keele kahe punase nimetust.¹

¹ Viiele artiklile, mis moodustavad dissertatsiooni põhiosa, viidatakse siin ja edaspidi tekstis kui [P1], [P2], [P3], [P4] ja [P5]. P tuleb ingliskeelsest sõnast *publication* ‘publikatsioon’.

Soome keele kohta puudub samuti empiirilise välitööga kogutud materjalil põhinev uurimus, kuigi soome keele värvinimesid on uuritud sõnaraamatutele, murdekogudele ning korpustele tuginedes (vt Koski 1983, Kerttula 2007, Oja 2007a, 2007b). Ainus soome-ugri keel, mille värvinimesid on piisava hulga keelejuhtidega empiirilise välimeetodiga uuritud, on eesti keel (Sutrop 1995, 2000, 2002). Seetõttu on uurimisülesandes soome-ugri keelkonna teiseks esindajaks (ungari keele kõrval) valitud soome keel.

Andmete kogumiseks on kasutatud Ian Daviese ja Greville Corbett' välimeetodit (1994, 1995), mida tutvustatakse 3. peatükis. Keelejuhte intervjueriti järgmiselt: aastatel 2002 ja 2003 küsitles doktoritöö autor 125 keelejuhti Ungaris (Budapestis, Budaörsis, Balassagyarmatis, Ipolyvecses, Győris ja Pécsis); aastatel 2005 ja 2006 intervjueris autor 68 keelejuhti Soomes (Helsingis, Espoos, Lempääläs, Tuusulas); 2007. aasta märtsis küsitles autor 52 keelejuhti Tšehhis (Prahas ja Brnos). Autor on lõpetanud välitööd 75 keelejuhiga Firenzes, Itaalias, kuid tulemusi ei käsitleta käesolevas dissertatsioonis, vaid võetakse vaatluse alla edaspidi. Itaalia värvinimesid ei ole siiani välimeetodiga uuritud, kuigi itaalia keele kolm erinevat keerulise semantilise tähendusega sõna sinise värvi tähistamiseks vajavad lingvistilisi ja psühholingvistilisi uurimusi. Seni on itaalia värvinimesid uurinud nt Kristol (1989), Grossmann (1988) jt.

Käesolev uurimus püüab anda panuse käimasolevasse värvikategooriate fookusi puudutavasse diskussiooni, millel on kaks opositsiooni. Esimene osapool esindab nn universalistlikku vaadet, mille kohaselt värvikategooriate piirid on kindlad ning värvikategooriate prototüüpsed fookused erinevate keelte värviruumis ühtivad. Nn mõõduka relativistliku vaate järgi ei ole värvikategooriate fookused universaalsed, vaid on defineeritud vastavalt lingvistilistele tavadele. Artiklis [P4] esitatakse viies keele prototüüpsete värvide asukohad Ostwaldi värviruumis.

Artikkel [P5] on pühendatud kahele ungari punasele ning juhib tähelepanu sellele, et ungari keeles võib põhivärvinimeks pidada vaid värvisõna *piros*, kuna värvisõna *vörös* kasutus on seotud kollokatsioonide ja konnotatsioonidega ning positiivsete ja negatiivsete emotsioonidega. Sama fenomeni võib leida ungari keele geograafilises naabruses kõneldavast tšehhi keelest. Tegemist on ilmselt areaalse nähtusega, kuna tšehhi kui slaavi ja ungari kui soome-ugri keel ei ole geneetiliselt seotud. Selle juhtumi puhul võib olla tegemist ajalooliselt tingitud ungari mõjuga tšehhi keelele. Slovakkia praegune ala allus ungari võimudele juba 10. sajandist alates, Tšehhi praeguse vabariigi osad Böömi- ja Määrimaa kuulusid Austria-Ungari keisririiki (1867–1918). Vastavalt Austria-Ungari keisririigi seadustele oli kõikide piirkondade elanikel õigus oma keelele ja rahvusele, kuigi paljud keisririigi osad ungaristusid. Üheks selliseks piirkonnaks oli Slovakkia. Seega on ilmselt nii ungari kirjakeel kui ka ungari murded, mida kõneldakse Slovakkia aladel veel praegugi, tšehhi keele arengut mõjutanud. Teisalt tekib küsimus, miks ungari keel ei ole mõjutanud slovaki keelt, milles on ainult üks sõna punase värvuse tähistamiseks – *červený*. Edaspidi oleks vaja

Ungari naabruses kõneldavaid slaavi keeli uurida välimeetodiga, et teada saada, kas esitatud areaalse nähtuse hüpotees vastab tõele.

Lühidalt on käesoleva dissertatsiooni eesmärk vastata kolmele küsimusele. 1) B. Berlin ja Kay väitsid, et igas keeles on maksimaalselt üksteist põhivärvinime. Kas on võimalik, et mõnes keeles (ungari, tšehhi) on rohkem põhivärvinimesid? 2) Kas lisandunud värvinimed on põhitasandi värvinimed või on nad seotud väljendite ja idioomidega ning neid ei ole võimalik vaadelda põhivärvinime teooriast lähtuvalt? 3) Kas värvide fokaalpunktid vastavad üksteisele mõnedes soome-ugri ja indo-euroopa keeltes, toetades universalistlikku käsitlust, või on need pigem keelespetsiifilised, toetades mõõdukalt relativistlikke vaateid? Vastused neile küsimustele asendavad soome-ugri ja slaavi keelte värvinimetustega seotud müüdid uute, empiirilis-kognitiivsel välitööl põhinevate faktidega. Lisaks kolmele põhiküsimusele arendab käesolev töö soome-ugri keeltest kogutud materjali põhjal B. Berlini ja Kay loodud põhivärvinime definitsiooni.

I.2. Sissejuhatava osa ülesehitus

Käesolev dissertatsioon koosneb põhiosast, mille moodustavad viis ingliskeelset artiklit, ja sissejuhatavast osast, millel on kuus peatükki.

Peatükk 1 koosneb kolmest alapeatükist. Alapeatükk 1.1 defineerib uurimuse eesmärgid, alapeatükk 1.2 tutvustab töö ülesehitust, alapeatükk 1.3 annab lühiülevaate põhiosas esitatud artiklitest ning käsitleb autori panust kaasautorlusega töödes.

Peatükk 2 tutvustab uurimisprobleemi ning koosneb kahest alapeatükist: 2.1 annab ülevaate B. Berlini ja Kay põhivärvinime teooriast ning selle edasiarendustest ning 2.2 esitab B. Berlini ja Kay põhivärvinimede definitsiooni seda kritiseerides ja edasi arendades.

Peatükk 3 kirjeldab lühidalt uurimismeetodeid: Daviese ja Corbett' väli-meetodit, millega autor on kogunud andmed ungari, soome ja tšehhi keelest, värvipimeduse testi, Ostwaldi värvisüsteemi, mille järgi värvitahvlid on organiseeritud. Lisaks esitatakse meetod fokaalpunktide leidmiseks värviruumis.

Peatükis 4 tuuakse välja artiklite peamised tulemused: esitatakse põhivärvinimed ungari, soome ja tšehhi keeles, pööratakse tähelepanu erinevustele ja sarnasustele värvide nimetamisel kuues – eesti, soome, ungari, vene, tšehhi ja inglise – keeles ning tutvustatakse kahe punase eristamise areaalset fenomeni ungari ja tšehhi keeles.

Peatükis 5 formuleeritakse töö põhiväited.

Peatükk 6 koosneb lõpetusest ja ettepanekutest edasiseks uurimistööks.

1.3. Artiklite lühikokkuvõte ja autori panus kaasautorlusega töödes

Käesoleva uurimustöö põhiosa moodustavad viis teaduslikku artiklit. Järgnevalt tutvustatakse neid artikleid lühidalt ning selgitatakse autori panust kaasautorlusega töödes. Kahe publikatsiooni, [P1] ja [P5], kaasautor Urmas Sutrop on allpool olevaga nõus.

Artikkel [P1] käsitleb ungari keele põhivärvinimesid.² Välitööd andmete kogumiseks sooritati 2002. a oktoobris Budapestis, Ungaris. Nende andmete põhjal on artiklis esitatud esialgsed tulemused. Täielikud tulemused, mille saamiseks küsitleti 125 keelejuhti Ungaris, avaldatakse lähitulevikus. Doktoritöö autor viis läbi katsed, arvutas kõik tehnilised tulemused ning kirjeldas välimeetodit. Kaasautor kirjutas sissejuhatuse ja lõpetuse. Artikkel kirjutati eesti keeles, avaldamiseks tõlkis selle inglise keelde dr Ants Pihlak, keda autorid siinkohal tänavad. Ungari värvisõnad on tabelites tõlkinud esimene autor.

Soome põhivärvinimesid käsitleva artikli [P2] andmed on kogutud empiirilise välimeetodiga 68 keelejuhilt Helsingis, Espoos, Lempääläs ja Tuusulas 2005. ja 2006. aastal. Tulemusi võrreldakse Mauno Koski soome keele põhivärvinimede loendiga (1983). Ehkki Koski tööd tuleb kõrgelt hinnata, peab selgitama, et Koski kasutas põhivärvinimede hulga ja nomenklatuuri välja selgitamiseks oma isiklikku intuitsiooni ning murdekogusid, ega kogunud andmeid välimeetodiga, mistõttu tema uurimuse tulemused erinevad käesolevast tööst. Siinne uurimus on uudne oma käsitluse ja meetodi poolest.

Artikkel [P3] uurib põhivärvinimesid tšehhi keeles ning selle eesmärgiks on selgitada, 1) kas tšehhi keeles on tõepoolest kaksteist põhivärvinime ning kaks põhinime punase jaoks, nagu väidavad mõned uurijad, 2) kas tšehhi keeles on ühine värvinimi sinise ja kollase värvi nimetamiseks. Välimeetod andmete kogumiseks on sama nagu publikatsioonidel [P1] ja [P2].

Artiklis [P4] on vaadeldud viie keele – eesti, soome, ungari, vene ja inglise – värvinimesid eesmärgiga kontrollida universaalsete fookuste hüpoteesi (Berlin ja Kay 1969, Kay 1975, Regier ja Kay 2007, jt). Vastatakse kahele küsimusele: 1) kuidas on põhivärvinimed nendes keeltes jaotatud Ostwaldi värviruumis ning millised värvitahvlid vastavad kõige paremini prototüüpsetele värvidele või fokaalpunktidele. 2) Kuidas on samu värvitahvleid nimetatud erinevates keeltes, millised on erinevused ja sarnasused. Artikkel põhineb autori Leipzigi lingvistilise mitmekesisuse kevadkooli raames peetud tudengikonverentsi ettekandel 2006. aasta märtsis. Väitekirja sissejuhatavas osas on artikli tulemusi

² *Värvisõna* ja *värvinimi* tähistavad värve üldiselt ega ole sünonüümid *põhivärvinime* ja *-sõnaga*. Töös esinevad sünonüümsena *põhivärvinimi*, *põhivärvisõna*, (*värvi*) *põhinimi*, mida on samas tähenduses kasutatud ka mujal eestikeelses kirjanduses, sh autori artiklites.

täiendatud ning lisatud fokaalpunktide asukoht tšehhi keeles, kuna tšehhi keele andmed on kogutud pärast publikatsiooni [P4] ilmumist.

Artikkel [P5] keskendub ungari keele kahele punast tähistavale sõnale. Selle eestikeelne variant ilmus 2005. aastal Emakeele Seltsi aastaraamatus (vt Bogatkin-Uusküla ja Sutrop 2005b). Artikli esimene autor viis läbi katsed Ungaris, arvutas tehnilised tulemused, analüüsis välimeetodiga kogutud liitsõnu, käsitles värvisõnade *piros* ja *vörös* semantikat ja etümoloogiat. Kognitiivse esiletuleku indeksi, mida kasutatakse ka artiklis [P5], on loonud kaasautor (vt Sutrop 2001). Tema käsitles ka värvisõnade etümoloogiat teistes artiklis uuritud keeltes ning pakkus välja idee, mille kohaselt võiks kahe punase kasutust ungari keeles seletada paradigmaatiliste ja süntagmaatiliste terminitega ning kirjutas sissejuhatuse ja kokkuvõtte.

2. UURIMUSE TAUST

2.1. Ülevaade uurimisprobleemist: põhivärvinime teooria ja selle edasiarendused

B. Berlin ja Kay kuulus uurimus värvisõnavara universaalidest oli algselt mõeldud eksperimentaalse testina Ameerikas tollal valitsenud ekstreemse relativistliku teooria kontrollimiseks. Vastavalt relativistlikule teooriale, mida tuntakse Sapir-Whorfi hüpoteesina, mõjutab inimese emakeel tema maailmapilti ja sellepärast on keeleliste universaalide otsimine mõttetu. Vastupidiselt sellele hüpoteesile leidsid B. Berlin ja Kay, et keeles on siiski olemas semantilised universaalid, ning olgugi, et erinevad keeled omavad erinevaid põhivärvinimesid, varieerub nende arv universaalselt kahest nimest üheteistkümneni. Need universaalsed kategooriad tähistavad valget, musta, punast, kollast, rohelist, sinist, pruuni, halli, roosat, lillat ja oranži. Nendest kuut esimest võib pidada esmasteks ning viit järgmist sekundaarseteks põhivärvinimedeks. Universaalsete põhivärvinimede areng keeles sõltub kultuuri arengu astmest ning allub kõikjal ühtsele seaduspärasusele.

B. Berlin ja Kay on defineerinud põhivärvisõnade esinemise reeglid keeles järgmiselt.

1. Kõikides keeltes on olemas värvisõnad *must* ja *valge*.
2. Kui keeles on kolm värvisõna, lisandub *punane*.
3. Kui keeles on neli värvisõna, siis sisaldub keeles *roheline* või *kollane* (kuid mitte mõlemad).
4. Kui keeles on viis värvisõna, siis tähistatakse rohelist ja kollast eraldi.
5. Kui keeles on kuus värvisõna, on olemas *sinine*.
6. Kui keeles on seitse värvisõna, lisandub värvisõna *pruun*.

7. Kui keeles on olemas kaheksa või rohkem värvisõna, siis on olemas eri sõnad *lilla*, *roosa*, *oranži* ja *halli* tähistamiseks või mõni nende kombinatsioon (Berlin ja Kay 1969: 2–3).

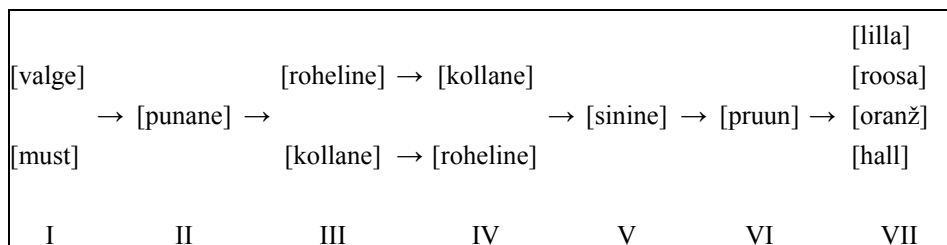
B. Berlin ja Kay uurisid ühtekokku 98 keelt, neist 20 välimeetodiga. Paljude välimeetoditega uuritud keelte keelejuhtide arv piirdus enamasti ühe keelejuhiga. 20 keelt olid järgmised (sulgudes esitatud riik või piirkond, kus neid kõneldakse B. Berlini ja Kay (1969: 7) järgi): araabia (Liibanon), bulgaaria (Bulgaaria), katalaani (Hispaania), kantoni (Hiina), mandariini (Hiina), inglise (USA), heebrea (Iisrael), ungari (Ungari), ibibio (Nigeeria), indoneesia (Indoneesia), jaapani (Jaapan), korea (Korea), pomo (California), hispaania (Mehhiko), suahiili (Ida-Aafrika), tagalogi (Filipiinid), tai (Tai), tzeltali (Lõuna-Mehhiko), urdu (India) ja vietnami (Vietnam).

Tabel 1. Kakskümmend kaks võimalikku põhivärvileksikoni tüüpi B. Berlini ja Kay järgi (1969: 3).

		Värvikategooriad										
	Põhi- värvi- nimede arv	Valge	Must	Punane	Roheline	Kollane	Sinine	Pruun	Roosa	Lilla	Oranž	Hall
1	2	+	+	–	–	–	–	–	–	–	–	–
2	3	+	+	+	–	–	–	–	–	–	–	–
3	4	+	+	+	+	–	–	–	–	–	–	–
4	4	+	+	+	–	+	–	–	–	–	–	–
5	5	+	+	+	+	+	–	–	–	–	–	–
6	6	+	+	+	+	+	+	–	–	–	–	–
7	7	+	+	+	+	+	+	+	–	–	–	–
8	8	+	+	+	+	+	+	+	+	–	–	–
9	8	+	+	+	+	+	+	+	–	+	–	–
10	8	+	+	+	+	+	+	+	–	–	+	–
11	8	+	+	+	+	+	+	+	–	–	–	+
12	9	+	+	+	+	+	+	+	+	+	–	–
13	9	+	+	+	+	+	+	+	+	–	+	–
14	9	+	+	+	+	+	+	+	+	–	–	+
15	9	+	+	+	+	+	+	+	–	+	+	–
16	9	+	+	+	+	+	+	+	–	+	–	+
17	9	+	+	+	+	+	+	+	–	–	+	+
18	10	+	+	+	+	+	+	+	+	+	+	–
19	10	+	+	+	+	+	+	+	+	+	–	+
20	10	+	+	+	+	+	+	+	+	–	+	+
21	10	+	+	+	+	+	+	+	–	+	+	+
22	11	+	+	+	+	+	+	+	+	+	+	+

B. Berlin ja Kay selgitasid välja, et põhivärvikategooriate kombinatsioone võib olla kaksikümmend kaks eri tüüpi. Kõik võimalikud kombinatsioonid on esitatud tabelis 1 (1969: 3). Nende empiirilised andmed tõestasid, et vaid kahe põhivärvinimega keeled tõepoolest eksisteerivad, nt dani keel, mida kõneldakse Uus-Guineas (Berlin ja Kay 1969: 46). Hiljuti on Paul Kay ja Luisa Maffi väitnud, et maailmas ei ole selliseid keeli, milles oleks vaid kaks põhivärvinime (2005: 535).

Värvisõnad avalduvad sõnavaras fikseeritud järjekorras, milles eristatakse seitset staadiumit (Berlin ja Kay 1969: 4). See näitab, et kuigi keeled erinevad arengujärgu poolest, leksikaliseeruvad põhivärvinimed universaalsel moel ja ühtse skeemi järgi (joonis 1).



Joonis 1. Põhivärvinimede evolutsiooniskeem maailma keeltes (B. Berlini ja Kay järgi).

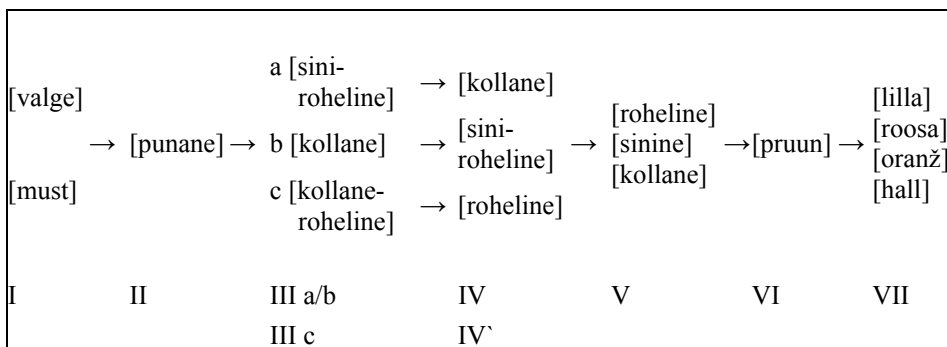
Reegel on lihtsalt jälgitav. Kui keeles on olemas põhivärvinimi, mis asub hierarhias paremal, peavad leksikaalselt olema väljendatud vasakul asuvad põhivärvinimed. Näiteks kui keeles on olemas põhivärvisõna sinise jaoks (V staadium), peavad selles keeles olema ka põhivärvisõnad valge, musta, punase, rohelise ja kollase tähistamiseks; kui aga keeles on olemas põhivärvisõnad roosa, lilla ja halli jaoks (VII arengujärk), peavad keeles olema põhivärvisõnad kõikide värvide tähistamiseks, mis asuvad hierarhias vasakul (I–VI arengujärk).

Algset värvinimede evolutsiooniskeemi, peamiselt selle varasemaid arengujärke, on parandatud (vt Kay 1975, Berlin ja Berlin 1975, Witkowski ja Brown 1976, Kay ja McDaniel 1978, Kay ja Merrifield 1991, MacLaury 1992, Kay ja Maffi 2005, Kay 2006).

Brent Berlin ja Elois Ann Berlin uurisid 1975. aastal põhivärvinimesid aguaruna keeles, mida kõneldakse Põhja-Peruus vihmametsade alal. Olulisim teoreetiline avastus oli, et sini-rohelise, mida nimetatakse ingliskeelse terminiga *grue* (*green*+*blue*), fookus erineb B. Berlini ja Kay poolt välja pakutust. Nimelt on sini-rohelise fokaalpunktiks sinine, mitte roheline nagu seni arvatud. Seega võib mõnedes keeltes sinise nimetus ilmuda arenguskeemi varem, IV staadiumil enne rohelise leksikaliseerumist (Berlin ja Berlin 1975: 61). Teine oluline

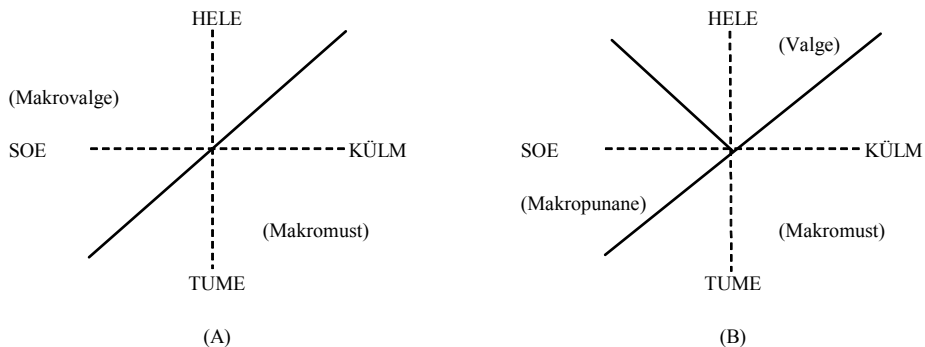
järeldus oli, et kahe põhivärvinimega keeltes tähistavad must ja valge pigem kategooriaid tume-külm ning hele-soe, kui konkreetseid värve (Berlin ja Berlin 1975: 83). Samal seisukohal on Eleanor Rosch Heider Uus-Guineas kõneldava dani keele põhjal (Heider 1972b).

Kay võtab oma 1975. aasta artiklis eespool esitatud väited omaks ning formuleerib uue evolutsiooniskeemi (joonis 2) ning täpsustab erinevaid staadiume järgmiselt. I arengujärgul on keeles kaks põhivärvinime: valge, mille fookus on kas valge, punane või roosa, ja mis tähistab ka kõikide värvide heledaid varjundeid ning kõiki sooje toone. Must, mille fookus on must, tume-sinine või tumeroheline, ja millega märgitakse musta, väga tumedaid pruune ja lillasid, samuti kõiki rohelisi ja siniseid (välja arvatud nende heledad varjundid, mida hõlmab valge). II staadiumil leksikaliseerub kolmanda põhivärvinimena punane, mis hõlmab kõik soojad värvitoonid (k.a kollase ja oranži), ning mille fookus asub punasel. III arengustaadiumil on kaks võimalust: keeles on põhinihetus kollase või sini-rohelise (ingl *grue*) jaoks. Viimase fookuseks võib olla sinine või roheline, mitte kunagi aga ei ole tegemist sinirohelise tooniga. IV staadiumil leksikaliseeruvad kas kollane või sini-roheline. Samuti märgib Kay, et halli nimetus võib ilmned suvalisel staadiumil.



Joonis 2. Põhivärvinimede evolutsioon maailma keeltes Kay (1975) järgi.

Witkowski ja Brown tutvustasid 1977. aastal makrovärvikategooriate (ingl *macrocolour categories*) ideed. Makromust (must, roheline, sinine) ja makrovalge (valge, punane, kollane) on omavahel opositsioonis, mille moodustavad tumedad ja külmad toonid ning heledad ja soojad toonid (1977: 55). Nad pöörasid tähelepanu ka sellele, et nii punane, kollane kui ka sini-roheline (*grue*) võivad keeltes esineda makrokategooriana, kuid makrokategooriad kollane-sinine, punane-sinine ja punane-roheline mitte kunagi (1977: 54). Joonisel 3 on skeem, kuidas makrokategooriad moodustuvad.

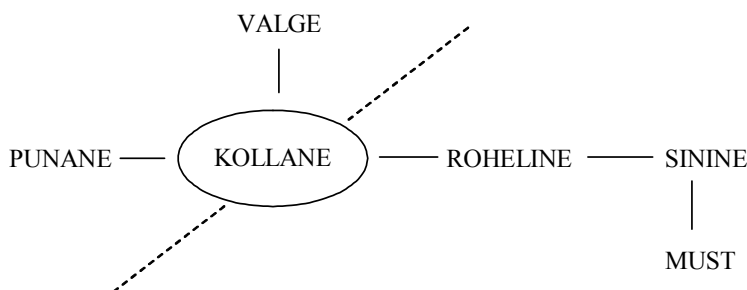


Joonis 3. Makrovärvide kategooriate moodustumise skeem Witkowski ja Browni (1977) järgi.

Kay ja McDaniel tutvustasid 1978. aastal mõtet, et värvikategooriaid võiks vaadelda nn hajusate hulkade teooria (ingl *fuzzy set theory*) taustal, mille kohaselt ühed värvikategooria liikmed on tüüpilisemad kui teised. Loomulikus kõnes osutatakse seda väljenditega, nagu *päris punane*, *tumepruun*, inglise keeles *a good red* või *a sort of blue*. Need ühendid näitavad määra, kuivõrd värv erineb või sarnaneb värviga, mida peetakse kõige esinduslikumaks kategooria näiteks ehk normiks (Kay ja McDaniel 1978: 622–623). Kay ja McDaniel seostavad seda asjaoluga, et närvikoodis (ingl *neural code*) on kuus esmast värvi (ingl *primary colours*), neist neli kromaatilist – punane, kollane, roheline ja sinine, ning kaks akromaatilist värvi – must ja valge. Nad olid esimesed, kes pakkusid välja, et põhivärvinimede evolutsiooniskeemi esimesed neli staadiumit sisaldavad liitkategooriaid (ingl *composite category*), s.t staadiumitel I–IV on keeles vähemalt üks põhivärvinimi, mis on loodud hajuva ühtsuse (ingl *fuzzy union*) põhimõttel (Kay ja McDaniel 1978: 630). Liitkategooriad on vastavuses Witkowski ja Browni (1977) makrovärvikategooriatega. Staadiumite VI–VII põhivärvinimesid käsitlevad Kay ja McDaniel tuletatud kategooriatena (ingl *derived categories*), s.t must ja kollane moodustavad pruuni, punane ja sinine lilla, punane ja valge roosa, punane ja kollane oranži ning valge ja must halli. Teisisõnu seletavad nad põhivärvinimede evolutsiooniskeemi esmaste, liit- ja tuletatud kategooriate kaudu. Näiteks ei ole skeemi I staadiumil ühtki esmast kategooriat, vaid kaks liitkategooriat, milles värvid on grupeeritud hele-soe (valge, kollane, punane; vrd makrovalge) ning tume-külm (must, sinine, roheline; vrd makromust) alusel. II staadiumil jaguneb liitkategooria hele-soe kaheks: esmaseks kategooriaks valge ja liitkategooriaks soe, mis sisaldab kollast ja punast. III staadiumil on kaks arenemisvõimalust: 1) valge ja must esindavad autonoomseid kategooriaid ehk nende jaoks on keeles olemas kaks põhinime, liitkategooriad kollane-punane ja roheline-sinine on veel põhi-

nimedeks jagunemata. 2) Nii valge, kollase kui ka punase jaoks on olemas põhivärvinimed, samas kui liitkategoria must-sinine-roheline (vrd makromust) ei ole jagunenud (Kay ja McDaniel 1978: 639).

Liitkategoriate mõistet arendasid edasi Kay, B. Berlin ja Merrifield (1991), nimetades neid närvitundlikkuse aluskategoriateks (ingl *fundamental neural response categories*), mis vastavad eesti keeles värvinimedele must, valge, punane, kollane, roheline ja sinine. Kay ja kollegid löid liitkategoriate esinemise reegli (ingl *composite category rule*), vt joonis 4 (Kay jt 1991: 16). Sellega püüavad nad selgitada, miks närvitundlikkuse aluskategoriate võimalikust 63 kombinatsioonist esineb maailma keeltes ainult 9 liitkategoriat.



Joonis 4. Närvitundlikkuse aluskategoriate visuaalsed ja lingvistilised seosed Kay, B. Berlini ja Merrifieldi järgi (1991: 16).

Joonisel 4 märgib horisontaaljoon värvitooni dimensiooni, kus punane läheb (läbi oranži värvitooni) üle kollaseks ja kollane (läbi kollakas-rohelise) roheliseks ning roheline muutub (läbi rohekas-sinise) siniseks. Vertikaalsed jooned näitavad heleduse-tumeduse astet ja eelistatud seost kollase ning valge ja sinise ning musta vahel. Katkendjoon näitab, et kollane jaguneb semantiliselt kas punase, valge või mõlema tooni vahel. Teiselt poolt võib kollane seostuda rohelisega ja selle kaudu joonisel paremal asuvate värvitoonidega. Pole leitud ühtegi keelt, milles värvikategoriad ületaksid katkendjoont, s.t maailma keeltes ei leidu värvisõnu, mis hõlmaksid kollase, rohelise ja punase või rohelise, kollase ja valge. Tabelis 2 on esitatud maailma keeltest leitud liitkategoriad.

Tabel 2. Kuue aluskategooria kombinatsioonid maailma keeltes Kay, B. Berlini ja Merrifieldi järgi (1991: 17).³

Liitkategooria	Esinemine <i>World Color Survey</i>'s
kollane/roheline/sinine/must	–
punane/valge/kollane	+
roheline/sinine/must	+
kollane/roheline/sinine	+
punane/kollane	+
roheline/sinine	+
valge/kollane	+
kollane/roheline	+
sinine/must	+

Enamik maailma keelte põhivärvinimesid käsitlevatest uurimustest on alates 1969. aastal ilmunud raamatust kirjutatud B. Berlini ja Kay traditsioonist lähtuvalt. B. Berlini ja Kay pärandist on tähtsamad kaks punkti: 1) kõikides maailma keeltes on universaalne põhivärvileksikon ja 2) põhivärvisõnavaara täiustub kõikides keeltes universaalsel moel. Käesolev uurimus jääb rangelt B. Berlini ja Kay traditsiooni raamistikku ning seepärast paralleelseid värvinimede teooriaid ei käsitleta. B. Berlini ja Kay teooriat on enam kritiseerinud Jaap van Brakel (1994), Barbara Saunders ja van Brakel (1997), John Lucy (1997), John Lyons (1999), Anna Wierzbicka (nt 2005, 2007), Saunders (2007) ning Debi Roberson jt (2000, 2004, 2005), Wierzbicka ja Kay diskussiooni vt Kay (2003).

Käsitledes B. Berlini ja Kay teooria edasiarendusi, peab tähelepanu pöörama MacLaury töödele (1992, 1997, 1999, 2002, 2003), kes on uurinud ka käesoleva uurimuse keskmes oleva ungari keele värvinimesid. MacLaury teooriat nimetatakse vaatepunktide teooriaks (ingl *vantage theory*). Vaatepunktide teooria on kategoriseerimise mudel, mis sõltub aegruumi ning teiste taju ja kognitiivsete vaatepunktide koordinaatidest (MacLaury 2002: 494–495). Andmed kogutakse kolme katsega loomulikus päevavalguses: 1) intervjueeritaval palutakse nimetada 330 Munselli värvikaardi värvitooni talle sobivana tunduva nimega, 2) samal värvikaardil palutakse määrata iga värvisõna fookus (fokaalpunkt), 3) nn kaardistamise protseduur: keelejuhil palutakse asetada riisitera Munselli värvikaardi kõikidele värvitoonidele, mida saab nimetada nimega X (MacLaury 1999: 9). Sama meetodiga uurisid MacLaury ja tema kolleegid ka ungari 9 keelejuhti Ungaris (MacLaury jt 1997). MacLaury juhib tähelepanu välitöödega kogutud tulemustele ka hilisemas artiklis (2002: 499–502): *piros* on dominantne punase nimetus, *vörös* tema retsessiivne paariline, *piros* on punase tavaline

³ Liitkategooriat kollane/roheline/sinine/must siiani *World Color Survey* andmebaasis ei esine, kuid selle ilmnemist mõnedes keeltes peavad Kay jt võimalikuks.

nimetus, *vörös* on kultuuriliselt tähtis punase nimetus ning tihti seotud poeetiliste väljenditega, konnotatsioonidega (armastus, iha, veri, revolutsioon), *piros* esineb teistsugustes, tervise ja südamega seotud väljendites (vrd [P5], Bogatkin-Uusküla ja Sutrop 2005b).

Käesoleva töö autori Ungaris kogutud andmed erinevad MacLaury andmetest punaste semantikaga seotud aspektis. MacLaury väidab, et *piros* ei tähenda ainult helepunast, kuid *vörös* tähistab ainult tumepunast, samas kui siinse autori tulemused näitavad, et *vörös* võib tähendada nii punast, helepunast kui ka tumepunast ([P5], Bogatkin-Uusküla ja Sutrop 2005b). Erinevusi autori ja MacLaury tulemuste vahel võib põhjendada informantide oluliselt suurema arvuga, kuna autor uuris 125 emakeelse ungarlase keelekasutust, MacLaury ja tema kolleegid intervjuerisid 9 keelejuhti.

Hiljuti on põhivärvinimede uurimine kandunud pigem psühholoogia kui keeleteaduse valdkonda, lingvistilisest aspektist pole uudset lisandunud. Viimase aja diskussioon on põhiliselt keskendunud värvifookuste uurimisele. Universalistid, keda esindavad Paul Kay ja tema kolleegid, väidavad, et värvide fookused ehk fokaalpunktid on universaalsed, s.t langevad erinevates keeltes kokku (vt Regier jt 2005, Kay ja Regier 2006, Kay ja Regier 2007, Regier jt 2007). Nende vastased, mõõduka relativismi esindajad, nagu Debi Roberson, Ian Davies jt, väidavad, et värvide fookused võivad erinevates keeltes varieeruda ning sõltuvad keelelistest tavadest (Davies ja Corbett 1997, Davies 1998, Roberson 2005, Roberson jt 2000, 2002, 2004, 2005, Roberson ja O'Hanlon 2005). Võib öelda, et sellega seavad mõõdukad relativistid kahtluse alla fookuste universaalsuse. Käesoleva väitekirja artikkel [P4] täiendab seda diskussiooni.

2.2. Põhivärvinime definitsioon

Põhivärvinime defineerisid esmakordselt B. Berlin ja Kay nelja põhikriteeriumiga ja viie lisakriteeriumiga (1969: 6–7).

- 1) Värv põhiniimi peab olema monolekseemne, s.t tema tähendus ei tohi olla tuletatav põhiniime komponentidest.
- 2) Põhinime tähendus ei tohi sisalduda ühegi teise värvisõna tähenduses. Põhivärvinimed on kõikehõlmavad, teised värvisõnad on põhivärvinimede sünonüümid või hüponüümid.
- 3) Põhivärvisõna peab saama kasutada kõikide objektide kirjeldamiseks. Sõnad, millega saab kirjeldada ainult suletud klassi objektide värvust (nahk, juuksed, erinevate loomade värvused), ei ole põhivärvinimed.
- 4) Põhivärvinimi peab olema psühholoogiliselt esilduv. Esilduvust iseloomustavad muuhulgas näitajaid nagu i) kalduvus esineda loetelude alguses; ii) esinemisstabiilsus nii katseisikute kui ka kontekstis; iii) kuulumine kõigi katseisikute idiolekti.

Värvi põhinime staatuses kahtlemise korral tuleb silmas pidada ka järgmisi kõrvalkriteeriumeid.

- 5) Kahtluse all olev värvisõna peab täitma kõik eespool nimetatud kriteeriumid.
- 6) Värvinime korral, mis on mingi konkreetse objekti nimetuseks, tuleb värvinime pidada objektist lähtuvaks ja kahelda, kas värvinimi kuulub põhivärvinimedele hulka.
- 7) Põhivärvinime staatuses tuleks kahelda, kui värvisõna puhul on tegemist hilise laenuga.
- 8) Kui värvi põhinime staatuses kaheldakse, tuleb arvesse võtta ka värvisõna morfoloogilist komplitseeritust. Selle kriteeriumi kohaselt ei saa põhivärvinimeks pidada liitsõnu ja tuletusliitega moodustatud värvinimesid.

Põhivärvinime mõistetakse käesolevas uurimuses vastavalt B. Berlini ja Kay definitsioonile. Autor on seda määratlust kommenteerinud tšehhi põhivärvinimesid käsitlevas artiklis [P3] ning selgitanud, et esimest kriteeriumit on sageli tervikuna valesti mõistetud, kuna see sisaldab sõna *monolekseemne*. Tavaliselt arvatakse, et monolekseemsus on seotud sõnade morfoloogilise lihtsusega, s.t näiteks liitsõna ei saa olla mingil juhul põhivärvinimi. See väide ei ole õige. Käesolevas uurimuses on mitmeid näiteid põhivärvinimedest, mis ei ole liitsõnad, nt soome *vaaleanpunainen* 'roosa'. *Vaaleanpunainen* koosneb kahest lekseemist – *vaalea* 'valge' ja *punainen* 'punane', kuid ei tähenda heledat punast, vaid tähistab hoopis roosat värvi. Ungari keeles on samuti kaks liitsõnalist põhivärvinime. Seega ei tähenda monolekseemsus mitte morfoloogilist, vaid semantilist lihtsust. B. Berlini ja Kay definitsioonist ei saa järeldada, et põhivärvinimeks võivad kandideerida ainult monomorfeemsed sõnad ning otstarbekohane oleks defineerida põhivärvinimi vähem segadust tekitaval viisil.

Galina Paramei on argumenteerinud, et vene keele kahe sinise esinemine põhivärvinimena esitab väljakutse põhivärvinime definitsioonile (2005: 10). Vene keelt on põhjalikult uuritud lingvistiliste ja psühholingvistiliste meetoditega (vt Frumkina 1984, Moss 1989a, 1989b, Corbett ja Morgan 1989, Morgan ja Corbett 1989, Moss jt 1990, Morgan 1993, Davies ja Corbett 1994, Davies 1998) ning enamik uurijaid on arvamisel, et vene keel moodustab oma kaheteistkümnepõhivärvinimega (omades kahte põhinime sinise tähistamiseks) B. Berlini ja Kay teooria erandi. Paramei juhib tähelepanu mitmele huvitavale vene sinistega seotud asjaolule: *sinij* ja *goluboj* ei ole omavahel kontekstis vahetatavad, mõlemad värvisõnad on seotud kultuurispetsiifiliste konnotatsioonidega ja sellepärast on nende kasutus tihti piiratud (kitsendatud). Värvide kaardistamisel on täheldatud, et keelejuhid tähistavad nende värvinimedega erinevaid värviruumi alasid ning mõlemad täidavad põhivärvinime lingvistilised kriteeriumid (Paramei 2005). Nendest tulemustest lähtuvalt esitab Paramei küsimuse, kas psühholoogiliselt esilduv värvinimi, juhul kui ta on ainult teatud kontekstis kasutatav, ei võiks olla samuti põhivärvinimi. Paramei võtab samuti kasutusele kultuurilise põhivärvinime mõiste (2005: 33). Mõistet ei saa kasuta-

da ungari ja tšehhi keele punaseid värvinimesid käsitledes, kuna ungari ja tšehhi keeles on vaid üks põhitasandi punast tähistav põhivärvinimi, vastavalt *piros* ja *červená*. Ungari *vörös* ja tšehhi *rudá* on kultuuriliselt esilduvad värvinimed ning esinevad ainult kitsas markeeritud kontekstis. Küsimust puudutatakse lähemalt 4. peatükis.

MacLaury on samuti seadnud kahtluse alla, kas algse põhivärvinime definitsiooni neli esimest kriteeriumit on universaalselt kasutatavad, ning teinud ettepaneku välja jätta kriteerium, mille järgi peab põhisõnaga olema võimalik kirjeldada kõiki objekte (s.t sõna kontekst ei ole piiratud). MacLaury põhjendab oma arvamust sellega, et see kriteerium aitab modernsetes Euroopas kõneldavates keeltes põhivärvinimesid eristada mittepõhinimedest, kuid ei kehti näiteks vanakreeka ja klassikalise ladina keele värvisõnade kohta (MacLaury 1999: 25–26). Vanakreeka keeles on ühe värvitooni kirjeldamiseks vähemalt kolm värvisõna, millel tehakse vahet heleduse-tumeduse alusel. Lähemalt on vanakreeka ja ladina värvinimedest kirjutanud John Lyons (1999), kes on samuti kritiseerinud kontekstilise kitsenduse kriteeriumit põhivärvinime definitsioonis.

B. Berlini ja Kay põhivärvinime definitsioonis on esimene kriteerium ainus, mis defineerib põhivärvinime ka lingvistiliselt, teised kriteeriumid puudutavad psühholoogilist esilduvust. Mõned keeleteadlased on seetõttu välja pakkunud, et põhivärvinime tulekski defineerida ainult psühholoogilist esilduvust silmas pidades (nt Crawford 1982: 324). B. Berlini ja Kay definitsiooni on kritiseerinud ka nt Anthony E. Moss (1989b), Jerome Smith (1995) ja Urmas Sutrop (2000, 2002). Põhivärvinime defineerib autor järgmiselt:

põhivärvinimi on semantiliselt ühtne ja psühholoogiliselt esilduv, väljendub kõikide keelekasutajate idiolekti(de)s ning esineb katseloeteludes esimes(t)ena nimetatud värvinimedega hulgas. Värvitahvlitele nime andes kasutavad keelejuhid põhivärvinime üksmeelselt. Põhivärvinime tähendus ei sisaldu ühegi teise põhivärvi nimetuses. Kui värvinimi täidab psühholoogilise esilduvuse kriteeriumi, ehkki kirjeldab teatud suletud klassi objekte, võib selle arvata põhivärvinimeks.

3. UURIMISMEETODI KIRJELDUS

Meetod, millega B. Berlin ja Kay oma keelejuhtidelt informatsiooni kogusid, koosnes algselt kahest osast: 1) värvide nimetamiskatsest ja 2) värvide kaardistamise katsest, kus igal informandil paluti tuvastada värvide fookus (fokaalpunkt) ja märkida värvi välimine piir, nii et kõik värvid, mida saab ühe värvisõnaga nimetada, jääksid selle sisse (Berlin ja Kay 1969: 5, 7). Katseid korraldati iga keelejuhiga vähemalt kolm korda nädalase ajavahemikuga. B. Berlinil ja Kayl oli sageli ainult üks informant keele kohta; meetodiga muutuks

suurema hulga keelejuhtide testimine raskeks, kuna testid tuleb sooritada samade inimestega pika aja vältel.

Davies ja Corbett (1994, 1995) lõid uue välimeetodi, mis põhineb B. Berlini ja Kay meetodil, kuid on lihtsam ja kiirem ning võimaldab hõlpsalt tuvastada võimalikke põhivärvinimesid, nõudes vaid standardset komplekti värvitahvleid. Meetod on eelkõige mõeldud kasutamiseks välitöödel, mitte laboratooriumis. Davies ja tema kolleegid (1992) kasutasid seda meetodit bantu keele uurimiseks Lõuna-Aafrikas. Uue välimeetodiga võtab ühe keelejuhi testimine aega 15–20 minutit. Meetodi detailne kirjeldus on esitatud nii Daviese ja Corbett' töödes (1994, 1995) kui ka artiklites [P1], [P2] ja [P3]. Meetodit on kasutatud käesoleva uurimuse andmete kogumiseks, kui sooritati intervjuud Ungari, Soome ja Tšehhi Vabariigis.

Protseduur koosneb ühtekokku kolmest osast. Kõik intervjueeritavad sooritavad esimesena **loetelukatse** (ingl *list task*), kus neil palutakse nimetada nii palju värve, kui nad teavad ja suudavad meelde tuletada. Ajalimiit ei ole piiratud. Dissertatsiooni autor rääkis oma keelejuhtidega vastavalt ungari, soome ja tšehhi keeles. Igas keeles esitati keelejuhtidele küsimus *Palun nimetage nii palju värve kui te teate*, ungari keeles [P1] *Kérem, mondjon annyi színt magyarul, amennyit tud*, soome keeles [P2] *Olkaa hyvää, nimittäkää niin paljon värejä suomeksi kuin tiedätte* ja tšehhi keeles [P3] *Prosím vyjmenujte všechna jména barev jako češtině znáte*. Kõik vastused kirjutati üles nii nagu keelejuhid ütlesid.

Loetelukatset on täiendatud Urmas Sutropi loodud **kognitiivse esiletuleku indeksiga** (2001, 2002), mida kasutati artiklites [P1], [P2] ja [P3] põhivärvinimede kindlaks tegemiseks ungari, soome ja tšehhi keeles. Kognitiivne esiletuleku indeks ühendab loetelukatse kaks olulist parameetrit – sõna esinemisageduse ja sõna keskmise positsiooni, s.t mitmendana on mingit värvinime keskmiselt nimetatud. Indeksit on käesolevas töös kasutatud, kuna see ühtib B. Berlini ja Kay põhivärvinime definitsiooniga (1969: 6–7), tuues esile sõnad, mida on nimetatud nimekirjas eespool, ning näitab ära värvinime kasutuse kõikide keelejuhtide poolt (tähistab kuulumist kõikide keelejuhtide idiolekti(desse)). Kognitiivset esiletuleku indeksit on detailselt kirjeldanud Sutrop (2001).

Teiseks sooritasid kõik intervjueeritavad **värvipimedustesti** (Fletcher 1980). Sama testi kasutasid Davies ja tema kolleegid (1992). Selleks näidatakse informandile kümmet musta tahvlit, mille keskel on teatud värvitooniga punkt ja selle ümber neli erinevat tooni värvipunkti. Uuritavalt küsitakse, missugune punkt on keskmisega kõige sarnasem: üleval, all, paremal või vasakul. Test võimaldab diagnoosida peaaegu kõiki värvinägemise anomaaliaid, nagu protanoopia, deuteranoopia, tritanoopia jt.

Kui autor tuvastas mõnel oma intervjueeritavatest kõrvalekaldeid värvitajus, jätkati samal viisil nagu teistegi keelejuhtidega, kuid hiljem nende informantide vastuseid arvesse ei võetud.

Pärast värvipimeduse testi jätkati intervjuusid **nimeandmiskatsega** (ingl *colour naming task*). Nimeandmiskatses näidatakse keelejuhtidele 65 värvitahvlit juhuslikus järjekorras. Testid viiakse läbi siseruumis loomulikus hajutatud päevavalguses, hoidudes seejuures nii otsesest päikesevalgusest kui varjust. Värvitahvlid paigutatakse üksteise järel juhuslikus järjekorras heledalt riidest alusele. Iga tahvlit keelejuhile näidates esitati küsimus: *Mis värv see on?* vastavalt ungari, soome ja tšehhi keeles. Keelejuhid võisid mitte vastata, kui nad ei leidnud värvile sobivat nime. Nimeandmiskatsega kogutud tulemusi on lisaks kasutatud artiklis [P4].

Värvitahvlid suurusega 5x5 cm on valmistatud vineerist ja kaetud Color Aid Corporationi värvipaberitega. Color Aid on modifitseerinud Ostwaldi värvisüsteemi, milles värvi põhitunnusteks on värvitoon (ingl *hue*), valge sisaldus (ingl *tint*) ja musta sisaldus (ingl *shade*) (Ostwald 1939). Color Aidi värvisüsteemis on 6 põhivärvist kombineeritud 24 kromaatilist värvi: Y – *yellow* ‘kollane’, O – *orange* ‘oranž’, R – *red* ‘punane’, V – *violet* ‘lilla’, B – *blue* ‘sinine’, G – *green* ‘roheline’ ning nende vahetoonid, nt YO – kollakas-oranž, YOY – kollakasoranžikaskollane. Iga värvitoon jaguneb neljaks heledaks variandiks T1–T4, milles proportsionaalselt suureneb valge osatähtsus, ja kolmeks tumedaks variandiks S1–S3, milles suureneb musta osatähtsus. Lisaks on kasutatud kaht süsteemipärast värvi *sienna* ‘sieena’ ja *rose red* ‘roos-punane’. Akromaatiline värviskaala jaguneb vastavalt valge ja musta sisaldumisele astmeteks. Color Aid Corporationi värvipaberite hulgas on kokku 219 värvi, millest Davies ja kolleegid (1992) on välja valinud 65 värvitahvlit.

Töö autor täiendas ungari värvinimede uurimise spetsiifikast lähtudes valikut 15 värvitahvli võrra. Et lisaeesmärgiks oli uurida kollakas-punakat ning lillakat spektrit, lisati värvitoone just sellest spektriosast. Punakast spektrist võeti juurde tumepunaseid värvitahvleid, et kinnitada või ümber lükata, et tänapäeva ungarlased kirjeldavad värvisõnaga *vörös* valdavalt tumepunast värvitooni (Kálmán 1990, Sipőcz 1994, MacLaury jt 1997, Kiss ja Forbes 2001, De Bie-Keréjártó 2003). Lisati järgmised punased tahvlid: *life red* ‘tulepunane’, ROR T1, RV S1, R S1 ja R T1. Lillakas-roosadest toonidest võeti kasutusele tahvlid RVR T1, RVR T2, RVR T3, RVR T4, RV T1, RV T4 ja *magenta* ‘kaaliumpermanganaat’ ning kollastest toonidest Y T1 ja *primrose yellow* ‘nurmenukukollane’. 2003. aastal paluti Ungari 85 keelejuhil kirjeldada nimeandmiskatses 80 värvitahvlit, mis tegi katse ajalise kestuse poole pikemaks. Saadud tulemusi on kirjeldatud artiklis [P5].

Keelejuhtide valik oli nii objektiivne kui võimalik, kuigi Soomes ja Tšehhis oli raske leida meesinformante. Autor otsis küsitletavaid, kellel oli erinev haridustase ning kes töötasid erinevatel elualadel. Intervjuud viidi läbi kas keelejuhtide kodus või nende töökohas. Õpilasi ja üliõpilasi küsitleti koolis või ülikoolis. Győris, Ungaris, ja Helsingis, Soomes, paluti õpetajatel leida oma õpilaste seast sobivad võimalikult erineva edasijõudmise astmega keelejuhid.

Samuti pöörati tähelepanu sellele, et poiste ja tüdrukute arv oleks võrdne. Väga harva küsitleti keelejuhte avalikus kohas. Tasu intervjuueeritavatele ei pakutud.

Meetod, mida on kasutatud artiklis [P4] prototüüpsete värvide asukoha määratlemiseks värviruumis, pärineb autorilt. Selleks on võrreldud Daviese ja Corbett' välimeetodil põhineva nimeandmiskatsega saadud eesti, soome, ungari, vene ja inglise keele tulemusi. Värvitahvlid, mida igas keeles on enim nimetatud põhivärvisõnaga punaseks, kollaseks, rohelineks, siniseks, lillaks, roosaks, pruuniks ja halliks, esindavad prototüüpseid värve ehk fokaalpunkte (fookuseid) selles keeles. Näiteks kõige enam kollaseks nimetatud värvitahvlit peetakse kollase parimaks näiteks ehk prototüüpseks värviks ehk fookuseks (fokaalpunktiks). Lisaks on pööratud tähelepanu sellele, et erinevates keeltes nimetatakse ühte ja sama värvitahvlit sageli erinevalt.

Artiklis [P5] on esmalt esitatud mõned ungari loetelu- ja nimeandmiskatse tulemused ning seejärel analüüsitud liitsõnu, mida keelejuhid nendes katsetes kasutasid, arvestades liitsõnade esimeste komponentide semantikat. Lisaks on vaadeldud värvisõnade *piros* ja *vörös* kollokatsioonid ja konnotatsioonid, mille uurimiseks välitõid läbi ei viidud, andmed pärinevad teiste autorite töödest (Kiss ja Forbes 2001). Nende andmete põhjal on esitatud Lyonsi süntagmaatiliste ja paradigmaatiliste kollokatsioonide ulatus ning võrreldud seda geograafilises naabruses kõneldava tšehhi keelega, mis jagab ungari keelega sarnast nähtust.

4. TULEMUSED

Käesolevas peatükis esitatakse artiklite [P1]–[P5] peamised tulemused ning võrreldakse neid varasemate uurimustega.

Kuulsas ja palju diskussiooni tekitanud monograafias „Värvide põhiniimed: nende universaalsus ja evolutsioon“ väitsid B. Berlin ja Kay, et universaalselt on igas keeles maksimaalselt üksteist põhivärvinime. Samas leidsid nad, et ungari ja vene keeles on kaksteist põhivärvinime. Nende andmetel on vene keeles kaks põhiniime sinise jaoks – *sinij* ja *goluboj* (vt diskussiooni Paramei 2005) ja ungari keeles kaks põhiniime punase jaoks – *piros* ja *vörös*. Sellest traditsioonist lähtuvalt pakkusid Věra ja Barbara Schmiedtová (2002, 2006) ning Sebastian Nagel (2000), et ka tšehhi keeles on kaksteist põhivärvinime, sealhulgas kaks põhiniime punase tähistamiseks – *červená* ja *rudá*.

Autori kogutud tulemused näitavad selgelt, et nii ungari kui ka tšehhi keeles on kummaski täpselt üksteist põhivärvinime ning need keeled ei ole seega erandlikud. Kuigi mõlemas keeles on punase värvi tähistamiseks kaks nime, ei avaldu need põhitasandil.

Artikli [P1] ülesandeks on ungari keele põhivärvinimede välja selgitamine. Vastavalt kognitiivse esiletuleku indeksile on need järgmised: *piros* 'punane', *kék* 'sinine', *zöld* 'roheline', *sárga* 'kollane', *fehér* 'valge', *fekete* 'must', *lila* 'lilla', *barna* 'pruun', *szürke* 'hall', *rózsaszín* 'roosa' ja *narancssárga* 'oranž'.

Teine punase nimetus, *vörös*, ei ole ungari keeles põhivärvinimi, kuna selle nimetamissagedus oli loetelukatses madal ning nimeandmiskatses puudus keelejuhtidel üksmeel, millist värvitahvlit võiks just selle nimega nimetada. Siinkohal ühtib autori arvamus MacLaury ja tema kolleegidega, kes väidavad Ungaris üheksa küsitletavaga läbi viidud testide põhjal samuti, et ungari keeles on põhivärvinimi ainult *piros* (MacLaury jt 1997). Samas erineb autori arvamus MacLaury ja tema kolleegide omast selle poolest, et *vörös* ei tähista kindlalt tumepunast (Bogatkin-Uusküla ja Sutrop 2005b, [P5]).

Samuti erinevad autori saadud tulemused B. Berlini ja Kay esitatud värvinimedest, ilmselt kuna nende andmed pärinevad ühelt San Franciscos elanud ungari emigrandilt. Põhivärvinimi valge tähistamiseks on *fehér*, mitte *fejér*, mida peetakse tänapäeval vananenud vormiks, oranž tänapäeva ungari keeles on aga *narancssárga*, mitte *narancs* nagu arvasid B. Berlin ja Kay (vt Bogatkin-Uusküla ja Sutrop 2005b: 97).

Põhivärvinimed tšehhi keeles on vastavalt kognitiivse esiletuleku indeksile järgmised: *bílá* 'valge', *červená* 'punane', *žlutá* 'kollane', *modrá* 'sinine', *zelená* 'roheline', *černá* 'must', *oranžová* 'oranž', *fialová* 'lilla', *hnědá* 'hall', *růžová* 'roosa' ja *šedá* 'hall'. Tšehhi keel ei oma põhivärvinimena kahte punast ega värvinimetust *plavá*, mis peaks tähistama nii kollast kui sinist (vt McNeill 1972: 30).

Soome keele põhivärvinimesid ei ole varem empiirilise välimeetodiga uuritud. Koski (1983), kes pakkus välja, et soome keeles puuduvad põhivärvinimed roosa, oranži ja lilla tähistamiseks, tugines sõnaraamatute andmetele ja oma isiklikule intuitsioonile. Käesoleva töö autor on artiklis [P2] tõestanud, et soome keeles on leksikaliseerunud põhivärvinimed ka roosa ja oranži jaoks, kuid puudub põhivärvinimi lilla tähistamiseks. Kõige tõenäolisem on, et selle tühiku täidab edaspidi värvinimi *violetti*. Soome keeles on 10 põhivärvinime (järjestatud vastavalt kognitiivse esiletuleku indeksile): *punainen* 'punane', *sininen* 'sinine', *vihreä* 'roheline', *keltainen* 'kollane', *musta* 'must', *valkoinen* 'valge', *oranssi* 'oranž', *ruskea* 'pruun', *harmaa* 'hall' ja *vaaleanpunainen* 'roosa'.

Tšehhi, ungari ja soome keele põhivärvinimed on esitatud tabelis 3.

Kuna nii ungari kui ka soome keeles on morfoloogiliselt kompleksed põhivärvinimed, tasub pöörata tähelepanu B. Berlini ja Kay algsele põhivärvinime definitsioonile. Alapeatükis 2.2 on argumenteeritud, miks monolekseemsuse kriteeriumit on sageli valesti mõistetud. Ungaris ja Soomes läbi viidud testid kinnitavad, et monolekseemsus tähendab semantilist ühtsust, s.t sõna tähendus ei sõltu selle komponentidest. *Vaaleanpunainen* ei tähenda mitte valget või heledat punast, vaid alati ainult roosat.

Tabel 3. Põhivärvinimed tšehhi, ungari ja soome keeles vastavalt B. Berlini ja Kay järjestusele.

Põhivärvi kategooria	tšehhi	ungari	Soome
valge	<i>bílá</i>	<i>fehér</i>	<i>valkoinen</i>
must	<i>černá</i>	<i>fekete</i>	<i>musta</i>
punane	<i>červená</i>	<i>piros</i>	<i>punainen</i>
kollane	<i>žlutá</i>	<i>sárga</i>	<i>keltainen</i>
roheline	<i>zelená</i>	<i>zöld</i>	<i>vihreä</i>
sinine	<i>modrá</i>	<i>kék</i>	<i>sininen</i>
pruun	<i>hnědá</i>	<i>barna</i>	<i>ruskea</i>
oranž	<i>oranžová</i>	<i>narancssárga</i>	<i>oranssi</i>
hall	<i>šedá</i>	<i>szürke</i>	<i>harmaa</i>
roosa	<i>růžová</i>	<i>rózsaszín</i>	<i>vaaleanpunainen</i>
lilla	<i>fialová</i>	<i>lila</i>	–

Artikli [P4] tulemused on mõnevõrra ootamatud: värvide prototüüpsed näited (fokaalpunktid) nii sugulas- kui ka mittesugulaskeeltes varieeruvad. Seni arvasid universalistliku vaate esindajad, et värvide fookused langevad erinevates keeltes kokku. Saadud tulemus aga toetab hoopis mõõdukalt relativistlikku teooriat, mille järgi fokaalpunktid on defineeritud keelesiseselt. Fokaalpunkti e prototüüpse värvi mõiste võtsid kasutusele B. Berlin ja Kay ning seda arendas edasi Eleanor Rosch Heider (1971a, 1972). Väitekirja autor võttis artiklis vaatluse alla keeled, mida on uuritud Daviese ja Corbett' välimeetodiga: kolm soome-ugri keelt (eesti, soome, ungari) ning kaks indo-euroopa keelt (vene ja inglise). Nende keelte võrdlus on võimalik tänu ühtse välimeetodi kasutamisele, mida on kirjeldatud 4. peatükis.

Tabel 4 näitab prototüüpsete värvide variatiivsust kuues keeles. Ungari, soome ja tšehhi värvinimed on võetud autori artiklitest [P1], [P2] ja [P3]. Inglise ja vene keele andmed on saadud Daviese ja Corbett' töödest (1994, 1995) ning eesti keele andmed Sutropi tööst (2002). Tšehhi keel on tabelisse liidetud, kuna artikli [P4] publitseerimise ajal andmed selle keele kohta puudusid (välitööd tegi autor 2007. aasta kevadel). Tšehhi keel kuulub indo-euroopa keelte lääne-slaavi harusse. Tšehhi keele lisamine tabelisse näitab selgelt, et fokaalpunktid erinevates keeltes ei ühti. Kõik tšehhi värvinimed on esitatud naissoovormis, kuna *barva* 'värv' on naissoost sõna (vt Short 1993: 526).

Tabel 4. Fokaalpunktid Ostwaldi värviruumis kuues keeles.

Värvikategooria	Fokaalpunkti värvitahvli Color Aid kood	Värvikategooria nimed
kollane	Y	tšehhi <i>žlutá</i> , inglise <i>yellow</i> , eesti <i>kollane</i> , soome <i>keltainen</i> , ungari <i>sárga</i> , vene <i>želtýj</i>
	YOY	vene <i>želtýj</i>
oranž	OYO	tšehhi <i>oranžová</i> , eesti <i>oranž</i> , soome <i>oranssi</i> , ungari <i>narancssárga</i> , vene <i>oranževýj</i>
	O	inglise <i>orange</i>
pruun	YO S3	soome <i>ruskea</i> , ungari <i>barna</i>
	O S3	inglise <i>brown</i> , eesti <i>pruun</i> , vene <i>koričnevýj</i>
	OYO S3	tšehhi <i>hnědá</i>
punane	RO	tšehhi <i>červená</i> , soome <i>punainen</i> , ungari <i>piros</i> , vene <i>krasnyj</i>
	ROR	inglise <i>red</i> , eesti <i>punane</i>
roosa	ROR T3	tšehhi <i>ružová</i> , eesti <i>roosa</i> , vene <i>rozovýj</i>
	R T4	inglise <i>pink</i> , soome <i>vaaleanpunainen</i> , ungari <i>rózsaszín</i>
lilla	RV	inglise <i>purple</i> , eesti <i>lilla</i>
	VRV	tšehhi <i>fialová</i> , soome <i>violetti</i> , ungari <i>lila</i> , vene <i>fioletovýj</i>
	V	tšehhi <i>fialová</i> , inglise <i>purple</i> , vene <i>fioletovýj</i>
sinine	BVB	tšehhi <i>modrá</i> , soome <i>sininen</i>
	B	eesti <i>sinine</i>
	B T1	inglise <i>blue</i>
	BGB	eesti <i>sinine</i> , ungari <i>kék</i> , vene <i>sinij</i>
	BGB T3	vene <i>goluboj</i>
roheline	G	eesti <i>roheline</i> , soome <i>vihreä</i> , ungari <i>zöld</i> , vene <i>zelenýj</i>
	GYG	tšehhi <i>zelená</i>
	YG	inglise <i>green</i>
hall	GRAY 2	eesti <i>hall</i> , vene <i>seryj</i>
	GRAY 4	tšehhi <i>šedá</i> , soome <i>harmaa</i> , ungari <i>szürke</i> , inglise <i>grey</i>

Tabelis on kolm veergu: esimene märgib põhivärvinime kategooriat, teises veerus on näidatud fokaalpunkti Color Aidi kood, kolmas veerg esitab värvikategooriale vastavad värvinimed kuues keeles. Artiklis [P4] on soome põhivärvinimena esitatud ka *violetti*, kuigi hiljem on autor argumenteerinud, et see ei ole põhivärvinimi (vt [P2]). Vene keele siniste jaoks on kaks fokaalpunkti, millest üks vastab värvinimele *goluboj* ja teine värvinimele *sinij*. Kui kahte värvitahvlit on nimetatud võrdselt sama nimega, on sellel värvinimel kaks fokaalpunkti (nt vene *želtýj* märgib nii värvitahvlit Y kui ka tahvlit YOY).

Nagu tabelist 4 nähtub, ei ole võimalik reeglistada keele fokaalpunkte, s.t keeled, mis kuuluvad samasse keelkonda või harusse võivad erineda värvide fokaalpunktide tähistamise poolest (põhjalik diskussioon on esitatud artiklis [P4]). Artikli tulemused toetavad mõõdukalt relativistlikku teooriat, mille esindajad on Debi Roberson ja tema kolleegid (vt Roberson jt 2000, 2002, 2004, 2005, Davidoff 2004, 2006, Roberson 2005, Roberson ja O'Hanlon 2005).

Artiklis [P5] käsitletakse ungari keele kahte punast tähistavat värvinime *piros* ja *vörös*. Eesti keeles on artikkel ilmunud Emakeele Seltsi aastaraamatus (Bogatkin-Uusküla ja Sutrop 2005b). Tulemused võib kokku võtta järgmiste punktidenä.

- 1) Ungari keeles ei ole kahte põhivärvinime punase tähistamiseks nagu arvasid B. Berlin ja Kay. Ainult *piros* on põhivärvinimi. Värvinime *vörös* ei saa ühelgi tingimusel lugeda põhivärvinimeks. Seega pole ungari keel B. Berlini ja Kay teooriast lähtuvalt erandlik. Autori seisukoht ühtib siinkohal MacLaury ja tema kolleegide (1997) arvamusega, et punast värvi tähistab põhitasandil ainult *piros*.
- 2) Värvinimi *vörös* võib tähistada punast, helepunast ja/või tumepunast – kõik kolm on võimalikud. B. Berlin ja Kay tõlkisid värvinime *piros* inglise keelde kui helepunase ja värvinime *vörös* kui tumepunase. MacLaury vaatepunktide teooria kohaselt ei ole *piros* helepunane, kuid *vörös* tähistab tumepunast. Autor lisas Ungaris läbi viidud katsetesse lisatahvleid punase värvispektrist, millest tumedaim oli värvikoodiga R S1. Seda värvitahvlit värvinimega *vörös* ei nimetatud. Samas oli värvinime *vörös* nimetamissagedus suurim tahvli RO puhul, mis tähistab oranžikas-punast värvi. Kui intervjuueerija palus oma keelejuhtidel kirjeldada, mis värv on *vörös*, ütlesid paljud, et see ei erine värvist *piros*. Ei ole õige väita sedagi, et *piros* tähistab ainult helepunast, kuna keelejuhid kasutasid sõna *piros* üldiselt punase värvi nimetamiseks, s.t seda kasutati suvaliste punaste värvitahvlite nimetamiseks. Wierzbicka (2005) on väitnud, et ungari, poola ja vene värvinimesid ei saa defineerida inglise keele kaudu, kuna nende tähendus on spetsiifiline. See võib olla oluline väide ungari punaste semantika mõistmisel, kuna neid ei saa mitte mingil juhul tõlkida kui hele- ja tumepunane.
- 3) Värvinimede *piros* ja *vörös* kasutus on seotud kollokatsioonide ja konnotatsioonidega. Need on rühmitatud Kissi ja Forbes' (2001) järgi kolme gruppi. Esimeses on nimisõnad, mida alati või peamiselt kasutatakse ainult värvinimega *piros*, näiteks *piros alma* 'punane õun', teise kuuluvad nimisõnad, mida kasutatakse värvisõnaga *vörös*, näiteks *vörös csillag* 'punatäht', ning kolmandasse gruppi kuuluvad nimisõnad, mida võib kasutada mõlema värvisõnaga. Edaspidises uurimuses oleks otstarbekas toetuda Lyonsi süntagmaatiliste ja paradigmaatiliste kollokatsioonide teooriale (Lyons 1977: 230–269).
- 4) Kahe punase värvisõna kasutus võib olla areaalne fenomen Kesk-Euroopa ajaloolisel Austria-Ungari keisririigi alal, sest ka tšehhi keeles on punasel

kaks nimetust. Nagu juba eespool mainitud, on ka tšehhi keeles põhivärvinimi ainult *červená*.

- 5) Tšehhi keeles, nagu ka ungari keeles, ei saa kahe punase nimetusi väljendites vabalt varieerida.
- 6) Nii *vörös* ungari keeles kui ka *rudá* tšehhi keeles on alati seotud „punastega“, s.t sotsialismi ja kommunismiga. Näiteks on punaarmee ungari keeles *vörös hadsereg*, tšehhi keeles *rudá armada*; *vörös csillag* ja *rudá hvězda* aga tähistavad punatähte.

5. UURIMUSE PÕHITEESID

Käesoleva uurimuse teesid põhinevad välimeetodiga kogutud andmetel ja need pakuvad uudset materjali põhivärvinimede interpreteerimiseks. Uurimuse põhiteesid võib sõnastada järgmiselt.

- 1) Igas keeles on universaalselt kuni üksteist põhivärvinime, kaasa arvatud ungari ja tšehhi keeles, mida siiani on peetud kaheteistkümne põhivärvinimega keeleks ja väidetud, et mõlemas keeles on punase värvikategooria tähistamiseks kaks põhivärvinime.
- 2) Kui keeles on kaks värvinime ühe värvikategooria tähistamiseks, on üks nendest nimedest põhivärvinimi, teine aga seotud kollokatsioonide ja konnotatsioonidega. Näiteks on ungari ja tšehhi keele kahest punasest värvisõnast üks põhitasandi nimi, teine aga mitte.
- 3) Värvide fookused ehk fokaalpunktid ühes keeles ei vasta värvide fokaalpunktile teises keeles, olenemata sellest, kas need keeled on sugulaskeeled või ei ole, ning on ilmselt sõltuvuses keelelistest tavadest. Autor uuris fokaalpunkte kuues keeles – eesti, soome, ungari, vene, tšehhi ja inglise –, et kontrollida universaalsete fookuste hüpoteesi, mille esitasid B. Berlin ja Kay. Tulemus aga toetab mõõdukalt relativistlikku teooriat.

6. LÕPETUS JA EDASISED UURIMISVÕIMALUSED

Käesolev töö on empiirilis-kognitiivne soome-ugri ja slaavi keelte uurimus, milles selgitatakse välimeetodit kasutades põhivärvinimed ungari, soome ja tšehhi keeles. Tulemused põhinevad 245 keelejuhilt saadud vastustel, keda küsitleti Ungaris, Soomes ja Tšehhis. Tähelepanu pööratakse sageli tsiteeritud väitele, et ungari keeles on kaks punast tähistavat põhivärvisõna, ning uuritakse nende sõnade etümoloogiat, semantikat, tehakse kindlaks nende morfoloogiline potentsiaal ja vaadeldakse kasutust kontekstis, samuti tutvustatakse uudset ideed, et nähtus võib olla areaalne, kuna tšehhi keeles kasutatakse kahte punase värvi nimetust sarnaselt. Peale selle näitab käesolev uurimus, et värvide fokaalpunktid erinevates keeltes varieeruvad.

Esiletõstmist vajavad järgmised tulemused: ungari ja tšehhi keeles on üksteist põhivärvinime. Soome keele andmed viitavad selgelt, et soome keeles on praegusel hetkel kümme põhivärvinime ning puudub põhinimetust lilla tähistamiseks. Samas on kindel, et soome keeles toimub areng, mille käigus lilla nimetus leksikaliseerub.

Mida oleks võinud teha teisiti? Tulemuste kvalitatiivne iseloom, kuigi arvu-
tatud erinevate indeksite abil, ei nõua iseenesest statistilist analüüsi, kuigi tule-
vases andmetöötluses võiks seda rakendada. Fokaalpunktide erinevust saaks
kindlasti esitada värviruumis.

Millised on edasised töö suunad? Edasi tuleks uurida ungari värvinime *sárga* 'kollane', mille staatus põhivärvinimena tundub olevat 125 keelejuhi keeletajus ebakindel, kuna selle asemel kasutatakse värvinime *citromsárga* 'sidruni-
kollane'. Autor on koos oma kolleegi Urmas Sutropiga juba varem viidanud
võimalusele, et see värvinimi moodustab analoogia alusel sümmeetrilise paari
põhivärvinimega *narancssárga* 'oranž', otsetõlkes 'apelsinikollane' (vt
Bogatkin-Uusküla ja Sutrop 2005b: 97, [P1: 113]).

Tšehhi ja ungari kaks punast värvinime vajavad edaspidi uurimist välimeeto-
ditega – tuleks kindaks teha nende nimetuste süntagmaatilised ja paradigmaa-
tilised kollokatsioonid. Mõned naabruses kõneldavad keeled, nagu slovaki ja
poola, ning keeled, milles samuti esineb kaks värvinime punase tähistamiseks,
nt bulgaaria, vajaksid samuti välimeetodiga uurimist.

Firenzes, Itaalias, on läbi viidud põhjalikud välitööd 75 itaalia keelejuhiga,
kuid tulemusi ei ole käesolevas töös käsitletud. Itaalia keeles on sinise nimetuse
jaoks mitu põhivärvinime kandidaati: *blu* '(tume?) sinine', *azzurro* '(keskmise)
sinine', *celeste* 'taevasinine, helesinine', mistõttu itaalia keele põhivärvinimede
täpset arvu ei ole veel õnnestunud kindlaks teha. Sinise värvisõnad vajaksid
samuti vaatlemist süntagmaatiliste ja paradigmaatiliste kollokatsioonide teoo-
riast lähtuvalt. Lisaks oleks vaja selgitada kõikide siniste nimetuste täpne
semantiline tähendus.

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Education

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Additional courses

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| 2000 | University of Debrecen, Hungary |
| 2001–2002 | Eötvös Loránd University, Hungary |
| 2006 | Leipzig Spring School on Linguistic Diversity and Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany |
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Professional experience

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Research interests and grants

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Täienduskoolitus

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Teenistuskäik

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