Some remarks on gender differences in Turkish colour vocabulary

Kaidi Rätsep

The article focuses on the gender differences in Turkish natives' colour vocabulary. 56 native Turkish speakers completed two tasks, colour listing (i.e. elicitation task) and colour naming task (with 82 colour stimuli). This research confirms previous studies showing that female participants have a larger and more specific colour vocabulary than males. Differences in mean values are statistically significant in the list task.

Generally, male participants were more inclined to use a basic term or a basic term with açak 'light' or koyu 'dark' modifier in the naming task than females, i.e. male participants showed a preference for the use of modifiers.

Keywords: colour listing task, colour naming task, colour vocabulary, gender differences, Turkish

1 Introduction

The focus of this article is on the gender differences in Turkish natives' colour vocabulary. 56 participants completed two tasks, colour listing (i.e. elicitation task) and colour naming task. In the latter 82 stimuli, i.e. 65 standard stimuli selected by Davies and Corbett (1995) and 17 additional from the blue-green region of colour space were used. The research was originally designed to ascertain Turkish basic colour terms (cf. Özgen and Davies 1998, Rätsep 2011)*. From the universalist viewpoint, Berlin and Kay (1969:5-6) defined a basic colour term as a term which is monolexemic and psychologically salient, but with its signification not included in any other colour term and its application is not restricted to a narrow class of objects. A language with a fullydeveloped basic colour terminology usually has eleven basic terms. The Turkish basic colour terms are yesil 'green', san 'yellow', siyah 'black', kurmızı 'red', mavi 'blue', beyaz 'white', mor 'purple', kahverengi 'brown', pembe 'pink', turuncu 'orange' and gri 'grey' (Özgen and Davies 1998, Rätsep 2011). Lacivert 'dark blue', an exceptional basic colour term candidate, was disqualified by Özgen and Davies (1998:919) due to the fact that it was a subset of mavi 'blue'. For ascertaining the possibly basic status of lacivert 17 additional stimuli from the blue-green region of colour space were used in the naming task. In the following analyses the basic colour terms are viewed as simple terms, while the non-basic terms are viewed as specific.

Previous research has indicated that females generally have a larger and more specific colour vocabulary. Does the data support the hypothesis that females have a larger colour vocabulary (list task) and males use more basic terms (naming task)? Which colours are preferred by female participants and which by male participants?

The results of DuBois' (1939: 380-382) study confirm the Ligon's hypothesis of a "colour-naming special factor" rather than a verbal factor accounting for the sex difference in the Woodworth-Wells colour-naming tests.

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Robin Lakoff (1973: 49) remarks on how women make far more precise discriminations in naming colours than men, suggesting that some terms, e.g. beige, ecru, aquamarine, lavender are "unremarkable in a women's active vocabulary, but absent from that of most men". Speculating on the why, she comments on how "men tend to relegate to women things that are not of concern to them, or do not involve their egos" and since fine colour distinction is among these problems, that is relegated to women as a non-crucial decision, as a sop. Lakoff (1975) comments on how these words are not, basically, "feminine", but rather signal "uninvolved" or "out of power" thus "any group in a society to which these labels are applicable may presumably use these words" as they are often considered "feminine", "unmasculine" because women are the "uninvolved," "out of power" group par excellence.

Rich (1977) found that even nuns score higher than the men and that women score higher than men, even if their occupation is the same, which suggests "that this difference is determined quite early in life before adult occupations are chosen". Simpson and Tarrant (1991) concur that women use more specific colour names than men, although in their sample older subjects used more elaborate names thus older men had a more elaborate vocabulary than younger women.

Frank (1990), analysing mail-order catalogues, found that "women's colours" were complex, varied, abstract and expressive, e.g. raspberry sorbet, daffodil yellow, blush, while "men's colours" were simple, straightforward, conventional, real-world, e.g. royal blue, gold, grey. According to Frank (1990) women's colours are red, purple, white, and men's colours are black and brown.

Yang (2001), who assessed English colour names given by Chinese students majoring in English, found that female students knew more colour terms, gave more specific terms and left fewer colour terms undefined.

2 Subjects

The interviews were conducted in Ankara and Antalya on 17-23 March and 12-26 July 2007 by a native or fluent Turkish speaker. The participants colour vision was tested with The City University Colour Vision Test (Fletcher 1998). Only the data from the participants (N=56) with normal colour vision was included.

Altogether there were 56 native Turkish speakers, 30 females and 26 males. Their ages ranged from 14 to 79. Most of the participants (33%) were young adults (between the ages 19-35). The mean age of female participants was slightly lower (28.7) than that of the male participants (35.6). It must be noted that most of the subjects tested were full-time university students, who were in the middle of obtaining university education.

While 5 different places were given as residence (including İstanbul, Kahramanmaraş and Kırıkkale), most of the subjects resided either in Ankara (40 subjects) or Antalya (16 subjects). 32 different birth places were given, e.g. Ankara (10 subjects), Antalya (7), İstanbul (4), Sivas (4), Çorum (3), Isparta (3), İzmir (2), Kayseri (2), Malatya (2), Adana (Ceyhan), Afyon, Amasya, Balıkesir, Batman, Bolu, Burdur, Diyarbakır, Elazığ, Gazi Mağosa, Hakkari, İskenderun, K. Maraş, Kastamanu, Konya, Kozluk, Silifke, Mersin, Osmancık, Trabzon, Uşak, Van, Yozgat.

All the subjects were native Turkish speakers; some with dialectal background, e.g. Yörük (Yuruk), but most were university students with little or some knowledge of foreign languages. Most subjects did not identify their dialects.

3 Stimuli and Procedure

The field method devised by Davies and Corbett (1995) for the identification of basic colour terms in fieldwork conditions was used.

Each participant completed the list task, followed by the colour naming task. In the list task the participants were asked to list all the colours they knew. There was no time limit. All the answers were written down exactly as said by the participant.

In the naming task the participants were asked to name 65 standard, i.e. the same stimuli used by Davies and Corbett and 17 additional tiles. The tiles measuring 5 x 5 cm were covered with Color-aid Corp. Standard Set of coloured papers. The additional 17 tiles were selected from the blue-green area of colour space to specify the status of *lacivert* 'dark blue'. The 82 tiles were presented one-by-one, on a neutral grey background, in random order and in natural daylight.

4 Results

4.1 List task

The list task results confirm previous studies, which have shown that female subjects have a larger and more diverse colour vocabulary. There were four more female participants (N=30) than male participants (N=26). Female participants listed 611 terms, 146 of them different terms, while male participants listed 368 terms, 72 of them different. Therefore, females listed twice as many different terms as males. The mean average for female participants was 13.06 and for male participants 8.51 terms per list. The mean value for all participants was 11.35. Differences in mean values are statistically significant (p < 0.001). Figure 1 gives an overview of the most frequent terms (\geq 6) in the list task ranked by their mean position from low to high. High frequency usually correlates with low mean position, i.e. basic terms should have lower mean positions than specific or modified terms. In Figure 1 the first specific term is *ela* 'hazel' which precedes only two basic terms *kahverengi* 'brown' and *gri* 'grey'.

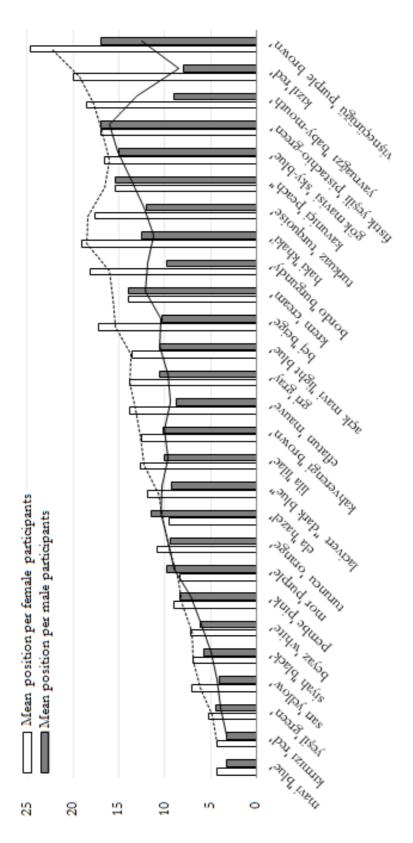


Figure 1: Mean positions (from low to high) per male and female participants

The mean position for male participants was higher than female mean position for 16 terms. Most importantly, for the basic term *mor* 'purple' and the specific term *ela* 'hazel' (see Table 1).

The cognitive salience index (Sutrop 2001) score takes into account the frequency of use in the list task (F), the number of participants (N), and the mean position (mp), i.e. $S = F/(N \times mp)$. More salient terms have a higher salience index (0 > 1). The salience index is higher for males participants for most basic terms (except *pembe* 'pink' and *mor* 'purple'), but as the frequency declines and the mean position (see Figure 1) increases the female participants' cognitive salience index surpasses the male participants' index.

		Mean position			Cognitive salience index		
T	61	Females	Males	Total	Females	Males	Total
Terms	Gloss						
mavi	blue	4.3	3.2	3.8	0.199	0.288	0.235
kırmızı	red	4.3	3.3	3.8	0.199	0.28	0.233
yeşil	green	5.2	4.5	4.9	0.191	0.207	0.197
sarı	yellow	7	4	5.7	0.133	0.228	0.164
siyah	black	6.8	5.8	6.4	0.146	0.161	0.152
beyaz	white	7.1	6.1	6.7	0.141	0.145	0.142
pembe	pink	9	8.3	8.6	0.104	0.074	0.091
mor	purple	8.3	9.7	8.9	0.108	0.071	0.09
turuncu	orange	10.8	9.4	10.2	0.077	0.078	0.077
kahverengi	brown	12.5	10.1	11.5	0.069	0.072	0.07
lacivert	dark blue	11.8	9.3	10.6	0.056	0.075	0.064
gri	grey	13.8	10.6	12.5	0.055	0.062	0.057
lila	lilac	12.6	10	11.3	0.05	0.027	0.041
eflatun	mauve	13.9	8.7	11.8	0.034	0.04	0.035
bordo	burgundy	18.1	9.8	14.3	0.024	0.043	0.03
bej	beige	17.3	10.3	13.8	0.023	0.019	0.022
turkuaz	turquoise	17.7	12	14.8	0.026	0.006	0.019
ela	hazel	9.5	11.4	10.6	0.014	0.017	0.015
krem	cream	14	14	14	0.014	0.011	0.013
yavruağzı	peach	18.5	9	17.4	0.014	0.004	0.009
açık mavi	light blue	13.5	10.5	12.5	0.01	0.007	0.009

		Mean position			Cognitive salience index		
Terms	Gloss	Females	Males	Total	Females	Males	Total
fıstık yeşili	pistachio- green	17	17	17	0.01	0.007	0.008
haki	khaki	19	12.5	14.7	0.004	0.012	0.007
kavuniçi	light pinkish yellow	15.3	15.3	15.3	0.007	0.008	0.007
gök mavisi	sky-blue	16.6	15	16.3	0.01	0.003	0.007
vişneçürüğü	purple brown	24.6	17	22.4	0.007	0.005	0.006
kızıl	red	20	8	18	0.008	0.005	0.006

Table 1: The most salient terms in the Turkish list task (ranked by cognitive salience index)

The female participants preference for listing pink more frequently (93% of females listed it) than the male participants (listed by 58% of males) is hardly surprising. Females also listed *lila* 'lilac' (by 33%), *turkuaz* 'turquoise' (29%), *bej* 'beige' (25%), *yavruağzı* 'peach' (23%) and *mor* 'purple' (21%) more frequently.

The following terms were listed only by the female participants *çimen yeşili* 'grass-green', *fiime* 'smokey', *kiremit rengi* 'brownish orange', *parlament mavisi* 'cobalt blue', *şampanya rengi* 'champagne coloured', *askeri yeşil* 'army-green', *camgöbeği* 'pale bluish green', *petrol mavisi* 'petroleum-blue'. Male participants used only two terms that did not appear in the lists of female participants, *bronz* 'bronze' and *metalik gri* 'metallic grey'.

4.2 Naming task

In the naming task the differences in the colour vocabulary were not as large as in the preceding list task. In the naming task female participants named the given stimuli with 481 different colour terms and male participants with 274 terms.

Term	Gloss	Percentage from all possible answers given to stimuli in the naming task (> 1%)				
		Females	Males	Total		
mavi	blue	8.70	8.49	8.59		
yeşil	green	4.59	6.38	5.49		
mor	purple	5.16	4.88	5.02		
açık mavi	light blue	2.89	5.58	4.23		
kahverengi	brown	2.85	3.61	3.23		

Term	Gloss	Percentage from all possible answers given to stimuli in the naming task (> 1%)				
		Females	Males	Total		
gri	grey	2.76	3.56	3.16		
lacivert	dark blue	2.89	3.19	3.04		
pembe	pink	2.40	3.42	2.91		
kırmızı	red	2.36	3.38	2.87		
koyu mavi	dark blue	1.99	3.71	2.85		
açık yeşil	light green	1.91	3.00	2.46		
turuncu	orange	2.52	2.25	2.39		
sarı	yellow	1.95	2.63	2.29		
siyah	black	2.03	2.25	2.14		
koyu yeşil	dark green	0.98	2.81	1.89		
eflatun	mauve	0.85	1.78	1.32		
lila	lilac	1.83	0.70	1.27		
koyu pembe	dark pink	1.10	1.41	1.25		
açık pembe	light pink	0.98	1.45	1.21		
beyaz	white	1.26	1.08	1.17		
yavruağzı	peach	1.54	0.52	1.03		

Table 2: Most frequent terms in the Turkish naming task

Since 17 additional stimuli from the blue-green region of colour space were used in the naming task, it is not surprising that basic terms mavi 'blue' and yeşil 'green' are the most frequent answers given. The modified terms açık mavi 'light blue', koyu mavi 'dark blue', açık yeşil 'light green', koyu yeşil 'dark green' are intervened with other basic terms. Lacivert 'dark blue', sometimes considered the exceptional 12th Turkish basic colour term, is the first specific term. In Table 2 all basic terms with açık 'light' and koyu 'dark' modifiers are more frequent for male participants, even light and dark pink.

The proportion of the use of the following basic terms in the naming task was higher for males yeşil 'green', kahverengi 'brown', gri 'grey', pembe 'pink', kırmızı 'red', sanı 'yellow', and siyah 'black'. The following basic terms were more frequently used by female participants mavi 'blue', mor 'purple', turuncu 'orange' and beyaz 'white'.

It appears that male participants prefer using the specific term *eflatun* 'mauve' in both tasks instead of another newer loanword *lila* 'lilac', which is more salient for female participants.

The Appendix displays the percentage of female and male participants with their most frequently given name to the stimuli. The higher the percentage of use (consensus per stimuli) by participants the more likely that the stimulus is named with a basic colour term. If female and male participants' most frequent terms given to the same stimulus were different, e.g. for stimulus Y-S2 the most frequently given term by female participants was *haki* 'khaki' (10%) and by male participants *kahverengi* 'brown' (23%), then the consensus is more likely to be lower.

For naming some tiles males used basic terms with modifiers as the most frequent term while females used specific or descriptive terms, e.g. açık sarı 'light yellow' and krem 'cream' or kavuniçi 'light pinkish yellow'; açık mavi 'light blue' and turkuaz 'turquoise'; koyu yeşil 'dark green' and petrol yeşili 'petroleum-green' or askeri yeşil 'army green'. In some instances females' most frequent designation for a tile was a descriptive term while males used a basic term, e.g. kiremit rengi 'brownish orange' and kahverengi 'brown'; yavruağzı 'peach' and turuncu 'orange' or pembe 'pink'.

Occasionally, female participants gave a basic term or a simple specific term, while males used basic terms with modifiers, e.g. *mavi* 'blue' and *açık mavi* 'light blue' or *koyu mavi* 'dark blue'; *turuncu* 'orange' and *koyu sarı* 'dark yellow'; *krem* 'cream' and *açık sarı* 'light yellow'; *pembe* 'pink' and *koyu pembe* 'dark pink'; *yeşil* 'green' and *koyu yeşil* 'dark green'.

5 Summary

Similarly to previous research, my research confirms that females have a larger colour vocabulary than males, as the mean position was significantly higher. In general, female subjects made longer lists than males, listed and named a larger number of different terms, and gave more descriptive or specific names to the stimuli.

In the naming task male participants were more inclined to use a basic term or a basic term with a *açık* 'light' or *koyu* 'dark' modifier than females, while female participants used more descriptive or specific terms both in listing and naming tasks.

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Appendix

Standard and additional (*) stimuli with their most frequent term given by female and male participants in percentages. Bold font indicates that the term with the highest consensus (%) was the same for female and male participants.

Color-aid	Term	F (%)	Term	M (%)
Y	sarı 'yellow'	83	san 'yellow'	92
Y –S2	haki 'khaki'	10	kahverengi 'brown'	23
	hardal sarısı 'mustard- yellow'	10		
	kahverengi 'brown'	10		
YOY	san 'yellow'	53	san 'yellow'	65
YOY-T4	krem 'cream'	23	açık sarı 'light yellow'	19
YOY-S2	hardal sarısı 'mustard- yellow'	20	koyu bej 'dark beige'	12
YO	turuncu 'orange'	27	koyu san 'dark yellow'	31
YO-T3	kavuniçi 'light pinkish yellow'	20	açık sarı 'light yellow'	27
YO-S3	kahverengi 'brown'	40	kahverengi 'brown'	50
OYO	turuncu 'orange'	70	turuncu 'orange'	50
0	turuncu 'orange'	67	turuncu 'orange'	54
O-S1	kiremit rengi 'brownish orange'	20	kahverengi 'brown'	42
O-S3	kahverengi 'brown'	60	kahverengi 'brown'	42
ORO	turuncu 'orange'	23	turuncu 'orange'	38
ORO-T3	yavruağzı 'peach'	37	açık turuncu 'light orange'	15
ORO-S3	yavruağzı 'peach'	20	bej 'beige'	15
RO	kırmızı 'red'	83	kırmızı 'red'	77
RO-T3	yavruağzı 'peach'	23	pembe 'pink'	23
RO-S3	kahverengi 'brown'	50	kahverengi 'brown'	42
ROR	kırmızı 'red'	57	kırmızı 'red'	69
ROR-T3	yavruağzı 'peach'	30	pembe 'pink'	46
ROR-S3	açık pembe 'light pink'	13	açık pembe 'light pink'	19
R	koyu pembe 'dark pink'	20	kırmızı 'red'	50
R-T4	pembe 'pink'	33	pembe 'pink'	35
R-S3	kahverengi 'brown'	63	kahverengi 'brown'	54
RVR	pembe 'pink'	27	koyu pembe 'dark pink'	27
RVR-S1	eflatun 'mauve'	13	pembe 'pink'	19
Color-aid	Term	F (%)	Term	M (%)
RVR-S3	açık lila 'light lilac'	23	açık pembe 'light pink'	19
RV	koyu pembe 'dark pink'	23	mor 'purple'	35
RV-T2	pembe 'pink'	53	pembe 'pink'	58
VRV	mor 'purple'	63	mor 'purple'	58

VRV-S3	lila 'lilac'	57	lila 'lilac'	19
V	mor 'purple'	93	mor 'purple'	58
VBV	mor 'purple'	63	mor 'purple'	54
VBV-T4	lila 'lilac'	43	eflatun 'mauve'	27
BV	mor 'purple'	37	lacivert 'dark blue'	50
	•		koyu lacivert 'dark dark	
BV-S2	mor 'purple'	43	blue'	19
BVB	mavi 'blue'	23	koyu mavi 'dark blue'	46
BVB-S3	gri 'grey'	47	gri 'grey'	58
В	mavi 'blue'	53	mavi 'blue'	54
B-T1	mavi 'blue'	77	mavi 'blue'	77
BGB	mavi 'blue'	57	mavi 'blue'	73
BGB-T3	mavi 'blue'	23	açık mavi 'light blue'	42
BG	yeşil 'green'	20	yeşil 'green'	35
BG-T1	turkuaz 'turquoise'	23	yeşil 'green'	27
		•	açık mavi 'light blue'	27
	petrol yeşili 'petrol		,	
BG-S2	green'	23	koyu yeşil 'dark green'	46
GBG	yeşil 'green'	43	yeşil 'green'	54
GBG-S2	açık yeşil 'light green'	27	açık yeşil 'light green'	31
G	yeşil 'green'	57	yeşil 'green'	62
G-S3	yeşil 'green'	30	koyu yeşil 'dark green'	54
GYG	yeşil 'green'	53	yeşil 'green'	69
GYG-T4	açık yeşil 'light green'	33	açık yeşil 'light green'	54
GYG-S1	yeşil 'green'	53	yeşil 'green'	38
YG	yeşil 'green'	27	yeşil 'green'	42
	askeri yeşil 'army			
YG-S3	green'	20	koyu yeşil 'dark green'	38
YGY	açık yeşil 'light green'	17	açık yeşil 'light green'	42
	yeşil 'green'	17		
	fıstık yeşili 'pistachio-			
	green'	17		
YGY-S3	açık yeşil 'light green'	33	açık yeşil 'light green'	35
ROSE	ا-1-1 ما مماره ه	22	January 1 11	2 5
RED SIENNA	pembe 'pink' kiremit rengi	23	kırmızı 'red'	35
BROWN	'brownish orange'	33	kahverengi 'brown'	31
WHITE	beyaz 'white'	70	beyaz 'white'	65
GRAY-1	beyaz 'white'	27	gri 'grey'	31
Color-aid	Term	F (%)	Term	M (%)
GRAY-2	gri 'grey'	33	gri 'grey'	50
GRAY-4	gri 'grey'	77	gri 'grey'	58
GRAY-6	gri 'grey'	57		54
		-	gri 'grey'	
GRAY-8	siyah 'black'	67	siyah 'black'	73

BLACK	siyah 'black'	100	siyah 'black'	92
SIENNA	kiremit rengi			
BROWN	'brownish orange'	33	kahverengi 'brown'	31
BV-T1*	mavi 'blue'	20	mor 'purple'	31
BV-T2*	lila 'lilac'	27	mor 'purple'	19
BV-S1*	mor 'purple'	63	mor 'purple'	54
BVB-				
T1*	mavi 'blue'	43	mavi 'blue'	50
BVB-T2*	mavi 'blue'	43	açık mavi 'light blue'	46
BVB-T3*	mavi 'blue'	40	açık mavi 'light blue'	58
BVB-S1*	mavi 'blue'	27	mavi 'blue'	27
B-T2*	açık mavi 'light blue'	37	açık mavi 'light blue'	62
B-T3*	mavi 'blue'	33	açık mavi 'light blue'	42
B-T4*	açık mavi 'light blue'	43	açık mavi 'light blue'	50
B-S1*	mavi 'blue'	30	mavi 'blue'	38
B-S2*	mavi 'blue'	30	koyu mavi 'dark blue'	38
B-S3*	lacivert 'dark blue'	60	lacivert 'dark blue'	42
BG-T2	turkuaz 'turquise'	27	açık mavi 'light blue'	31
Cobalt				
Blue*	mavi 'blue'	53	mavi 'blue'	46
Navy				
Blue*	lacivert 'dark blue'	50	lacivert 'dark blue'	35
Cyan				
Blue*	mavi 'blue'	67	mavi 'blue'	54