THE PORTRAYAL OF WOMEN COMPARED TO MEN IN TECHNOLOGICAL PRODUCT PRINT ADVERTISEMENTS IN TURKEY

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ABSTRACT

This study aims to find out the differences between women and man portrayals in technological product print advertisements with the help of Content analysis method. A sample of ten technology and computer magazines was selected with judgmental sampling method. Ten monthly computer magazines published in Turkey have been analyzed for a period of five months. The technological product ads in these periodicals were identified and classified according to depiction of the sexes and the type of values portrayed. Each advertisement in selected magazines was determined as units of analysis.

The results of this study indicate that the depiction of sex roles in technological product advertisements is more equitable than has been found in previous research. Women have been represented more then man unlike the results of a previous study on e-commerce and women.

Key Words: Marketing, Advertising, Technology, Women, Content Analysis, Role Stereotypes

Türkiye'de Teknolojik Ürün Reklamlarında Kadın ve Erkek Portreleri

ÖZETt

Bu araştırma Türkiye'de dergilerde yeralan teknolojik ürün reklamlarında kadın ve erkeğin portresindeki farklılıkları tespit etmek amacı taşımaktadır. Bu araştırmada içerik analiz metodu kullanılmıştır. Türkiye'de yayınlanan teknoloji ve bilgisayar dergilerinden on tanesi bu araştırma için seçilmiş ve beş ay boyunca analiz edilmiştir. Bu dergilerdeki teknolojik ürün reklamları belirlenmiş ve kadın ve erkek temsiline ve içerdiği değerlere göre sınıflandırılmıştır. Bu şekilde seçilen her ilan bir analiz birimi olarak belirlenmiştir.
Araştırmanın sonucu olarak kadın ve erkeğin teknolojik ürün ilanlarında önceki çalışmaların aksine daha eşit düzeyde temsil edildiği görülmektedir. Basılı ilanlarda teknoloji ve kadını inceleyen önceki araştırmanın aksine bu araştırma sonucuna göre teknolojik ürün ilanlarında kadınlar erkeklerden daha fazla yeralmıştır.

Anahtar Kelimeler: Pazarlama, Reklam, Teknoloji, Kadın , İçerik Analizi, Olumsuz Sınıflandırma

Introduction

Throughout history men have been the buyers of technological products while women have been used in advertisements targeting men. In Turkey, men still mostly purchase technological products, and the number of men working in IT departments is more than the number of women.

The aim of this research is to ascertain the distinctions between the portrayals of men and women appear in advertisements of technological products in magazines.

Nowadays, contemporary and professional businesswoman has a new and different role in the business world. Vuslat Doğan Sabancı, and Ümit Boyner, the former presidents of TÜSİAD (Turkish Industry and Business Association) are good examples of this type of successful businesswoman. The professional businesswoman believes in her own needs for economic development, and enhances her life style and career options. She believes in self-expression, self-actualization and personal satisfaction. In order to make advertisements that target this type of woman effectively, advertisers have to understand how to communicate with these women in environments both in business and outside business while considering their level of income, decision power and influence. There is a widespread belief that upholds that advertisement reflects existing values and social norms of a culture. In other words, advertisement is an important source about the values, beliefs, style and daily activities of a culture (Novak, 1990). As the cultural role of woman change in time, the portrayal of woman in advertisements must evolve reflecting this change.

The comparative data on the education and employment of women against men in Turkey was taken from State Institute of Statistics 2013 "Statistical Indicators 1923-2013) report.

Assuming that, in 2007 employees working in positions who are able to make major acquisitions of the technological products that are the subject of the research should graduate from Technical Sciences and Mathematics and Sciences in 2001, the technological product buyers by sex is in Table 1. It can be assumed that there are 54 female graduates entering business life against 100 male graduates.

Table 1. Technological Product Buyers by Sex

Undergraduate class of 2001	Total	Women	Men	Women (%)	Men (%)
Mathematics and Sciences	12.381	6.327	6.054	51%	49%
Technical Sciences	16.027	4.850	11.177	30%	70%
TOTAL Math & Technical Sciences	**28.408**	**11.177**	**17.231**	**39%**	**61%**

2002-2003 new registry, undergraduate student and graduate student numbers reveal important differences between sexes. Level of education by sex is presented in Table 2, men students outnumber women students almost always at least by 11 % although the men and women population in general is 51% and 49% respectively.

Table 2. Level of Education by Sex

Level of Education	Total	Women	Men	Women (%)	Men (%)
Students of Post graduate programs	82.484	32.585	49.899	40%	60%
New registration to Post graduate programs	36.295	15.261	21.034	42%	58%
Graduated from post graduate programs	16.433	7.306	9.127	44%	56%
New registration to PHD programs	5.491	2.145	3.346	39%	61%
PhD. Graduates	2.815	1.055	1.760	37%	63%

In 2000, In Turkey, employment and population by sex statistics are in Table 3. 14 percent of the population employed in professions like Architecture, and Engineering are women (64,891 women), and 86 percent are men (386,379 men).

Table 3. Population and Employment by Sex

Population and Employment (2000)	Total	Women	Men	Women (%)	Men (%)
Architecture and Engineering Employment	452.270	64.891	387.379	14%	86%
Employed population	25.997.131	9.358.967	16.638.164	36%	64%
Population	67.803.927	33.457.192	34.346.735	49%	51%
Unemployed population	41.806.796	24.098.225	17.708.571	58%	42%

In the 2011 parliamentary elections, 77 women are elected and 459 men. There are 1 female parliamentarians against every 6 male parliamentarians.

In the light of these researches, starting from the fact that in Turkey, woman and man are not represented equally generally in professional business life and management positions, distinctively in technology companies and IT departments of other companies, will ads for technological products in Turkish magazines reflect this inequality, or will the representations of genders change in parallel with the developments happening around the world? Based on the argument stated above, four research questions are analyzed in this study. The results of this research will reveal the differences of the portrayal of women and men in ads of technological products in Turkey, and they will serve as a model for studies conducted at other product categories.

Literature Review

Goffman's (1976) pioneering studies on magazine advertising and roles of gender show that magazine advertisements carry notable messages about the relations between genders and cultural values. Magazine advertising and its visual effects turn advertisement into a part of the culture's social art (Fowles, 1996). Analysis of magazine advertising has a distinct social value because advertisement is one of the major components of capitalism's materialistic culture (Schudson, 1984). According to the theory of symbolic interactionism, as a part of materialistic culture, magazine advertising can effect, even impose the relations between genders. "The positioning of mass media at the center of daily life enables the distribution of symbols within society by means of mass media, in parallel making it an interaction point "(Milkie, 1994, p.355) . Advertisement moves in parallel with other media in

the socialization process of consumers. Advertisements, as themselves, are the manifestos of cultural values (Belk, Bahn and Meyer, 1982). The messages of advertisement including product type, service life and the relationship between the consumer and the product also affect the cultural values obtained from the message (Wells, 1988). Advertisers who recognize their potential effects on consumers create signs, languages and symbols oriented towards the target (Baran et. Al, 1989). Marketing theories indicate that this intentional orientation is for creating idealized and desirable roles (Rook, 1985; Solomon 1983; Hirshman and Holbrook, 1982).

Most of the people say that they do not believe the stereotype that girls and women are not as good as boys and men in math and science, however research of Nozak, Banaji and Greenwald (2002) shows that individuals who consciously refute gender and science stereotypes can still hold that belief at an unconscious level. Those implicit biases can be more powerful than explicit beliefs. Many researchers indicate that the main reason for women being excluded from science and technology education is the scientific method of masculine aspect (androcentrism) (Harding 1987a, 1987b, 1991; Hirschman 1993; Keller 1985; Keller and Longino 1996). It is certain that women can compete and specialize in computer sciences in case educational reforms are carried out in order to fight against such incorrect prejudices (Margolis and Fisher 2003).

According to the liberal feminist conception, the inequality between women and men depends on the fact that different activity fields are predefined for each gender (Freeman 1989). Such predefined different fields make women feel that they have limited access for certain activity fields (Grundy 1996; Hirschmann 1993; Siann 1977; Wright 1997). Pantelli, Stack and Ramsay (2001) also support this case by ascertaining that women in workplaces are assumed to be incapable of technology both by others and themselves. Spender (1995) claims that as long as the presence of women in internet-content creating groups advances, feminine values will diffuse in cyberspace and a new virtual world excluded from the masculine hegemony will possibly be created. In a recent research in parallel with this aspect, it has been introduced that women have been recovered from previous negative classifications concerning self-evaluation, but men still have negative conceptions with regards to the relationship between women and Internet technologies (Granitz and Koernig 2002).

The studies concerning domestic Internet use also supports the theorem of social structure. The main fields of domestic Internet use are e-mail, game and hobbies, news and information, traveling and holiday planning, online shopping and health information (Hoffman, Novak and Venkatesh 2004). However, women using Internet at home are being

subject to intolerance, guilt and competition in access by other family members (Burke 2001). Such competition in use of computer sources especially decreases the intensive and special-purpose related use of technology (Shih and Venkatesh 2004).

Notwithstanding such findings, domestic computer use of female children, teenagers and adults have been increasing (Venkatesh 1996). Shih and Verkatesh (2004) have ascertained that family members with expert-level information on computers encourage the family members and experienced parents also support their daughters within this field. This is very important because if there is an increase in individual technology access, the usage of Internet also increases in parallel (Hoffman, Novak and Venkatesh 2004).

The major subject for discussion and research is that women play a limited role in advertisements in comparison with other people and products. The question is whether advertisements reflect the contemporary woman accordingly or impose a negative classification by portraying them in certain roles (Kerin, Lundstorm and Sciglimpaglia, 1979, p38).

Within the history of all content analysis concerning the printed advertisements on gender-based negative classifications:

Whissell and McCall (1997) have carried out the content analysis of words included in 16 magazine advertisements, and according to the research result it has been explained that men-appealing advertisements are more active and less satisfactory than women-appealing ones.

Dilevko and Harris (1997) have analyzed nine professional periodical within 1990-94. They have concluded that women's activity is more limited than men; men gain a recognizable reputation and have a more distinct connection with future compared to women.

Plous and Neptune (1997) have carried out the content analysis of fashion magazine advertisements for 10 years and have explained that gender-based prejudice has increased.

Stephenson, Stover and Villamor (1997) have analyzed the advertisements published in 144 magazines in 1962-1992 and have concluded that the inequality between women and men still continues.

Ford, Kramer, Honeycutt and Casey (1998) have analyzed advertisements published in 13 Japanese magazines and have found out that the Japanese magazine advertisements include both western and eastern values.

Al-Olayan and Karande (2000) have analyzed 1064 magazine advertisements from American and Arabic countries and have explained that there is no significant difference between portraits of women and men in both countries.

Strieter and Weaver (2005) have randomly chosen and analyzed three issues of Fortune magazine published in 1990, 1992,1994,1996,1998 and 2000 for each year.

The result of this research is important in the sense that it is published in 2005 and all of the advertisements in any product categories included in Fortune magazine have been analyzed. The content analysis applied on advertisements included within Fortune magazine, serving as the result of research, shows whether marketers sufficiently focus on the fact of targeting professional businesswomen among women and men portrayals in advertisements published in USA. According to the research results of Strieter and Weaver the use of women in advertisements increased dramatically, women were portrayed in figure roles were featured more in industrial organizational advertisements.

Research Model

While so many similar researches have been conducted on gender-based classification (Artz and Venkatesh 1991), Koernig and Granitz (2006) have analyzed whether e-commerce advertisements continue reflecting inequity resulting from classification by using the method content analysis. Within the scope of research, a total number of 24 issues from 15 magazines published in America between January 2000 and January 2002 have been analyzed and as a result of this research hereby it has been announced that e-commerce advertisements reflect women and men equally.

In view of the prior research and given the inequality of women and men in managerial and professional occupations in Turkey and particularly in technology firms, will the technological product advertisements reflect those inequality or will it offer more progressive representations. Based on the discussion above, the following research questions are examined.

RQ1: In technological product advertisements, are there equal representations of males and females?

RQ2: In technological product advertisements, are males and females depicted with equal power and authority in using technological products?

RQ3: In technological product advertisements, are males and females depicted with equal expertise in using technological products?

Drawing from the work of Fowles (1976), Rokeach (1973), and Starch (1923), Pollay (1983) developed and tested a comprehensive set of values manifested in advertising. These cultural values (or themes) that appear in advertisements also tend to perpetuate stereotypical images associated with men and women. Values included in ads with men have focused on men as strong, capable, free, and in control (Bretl and Cantor 1988; Courtney and Whipple

1983; Kolbe and Albanese 1996; Stern 1993) and independent (Dilevko and Harris 1997; Kolbe and Albanese 1996). Women have been shown as passive and helpless, powerless in affecting their destiny, and with no connection to the future (Bretl and Cantor 1988; Courtney and Whipple 1983; Dilevko and Harris 1997; Ruggiero and Weston 1985). In addition, ads targeting women displayed the themes of self-help, getting and keeping your man, achieving perfection, family (Ferguson 1983), and sexuality (Ferguson, Kreshel, and Tinkham 1990). Given the strong representation of women in e-commerce, the following research question will also be examined:

RQ4: In technological product advertisements, are similar value themes presented with males and females?

Methodology

To determine whether there are any differences in how women and men are portrayed in magazine ads, and whether the ad values portrayed might differ across these ads, a content analysis was conducted. Well-suited for this study, content analysis has been described as "an observational research method that is used to systematically evaluate the symbolic content of all forms of recorded communication. These communications can also be analyzed at many levels (image, word, roles, etc.), thereby creating a realm of research opportunities" (Kolbe and Burnett 1991, p. 243). In addition, content analysis has been used in a number of previous studies investigating sex roles in ads (Dilevko and Harris 1997; Maynard and Taylor 1999; Zhou and Chen 1997). Utilizing this methodology, a sample of magazines was selected.

Magazine ads were chosen for several reasons. First, over the past few years, print advertising in general, and magazine advertising in particular, have continued to be the leading spending category for technology firms such as Microsoft, IBM, HP, Xerox, and AT&T (Bulik 2004; Technology Advertising and Branding Report 2001, 2003a, 2003b). Second, technology executives are maintaining their business readings with established magazine brands like Fortune and Forbes (Callahan 2003). Third, given the focus of this study on portrayed imagery and information, magazine ads are more appropriate, as they are stronger image conveyers (through good reproduction) than Internet ads, which are not as image-intensive due to slow loading capabilities (Gordon 2002).

Population and Sample

The population of this study is all the magazines published in Turkey. With purposive sampling ten magazines that have more technological product advertisements and that have wider audiences were selected. In this research the products that are classified as technological are;

Laptop, desktop, monitor, projector, network devices, RAM products, mouse, keyboards, printer, scanner, speaker, copy machines, software, computer games, graphic card, PDA, television, DVD player/recorder, home theater system, video recorder, home music system, iPod and mp3, headset, digital camera, flash memory, video games system, virus protection software, technological education.

Computer Magazines: Byte, Chip, PC Magazine, PC Net, and PC World.

Technology Magazines: Home&Technology, Mobimag, Newtech, Stuff

Game Magazine: Level

September, October, November, December 2006 and January 2007 issues of these periodicals were included in the study. As the purpose of this research was to explore the content of ads and not the frequency, duplicate ads for the same product were not included in the study (e.g., Roth 1996). The advertisements that do not have a person were excluded. Units of analysis are the technological product advertisements that appear in the selected issues of selected magazines. Using this method to select magazines and ads, 202 technological product advertisements were found. A breakdown of the number of ads analyzed from each magazine can be found in Table 4.

Procedure

As the research questions focus on comparing the depiction of females with the depiction of males, ads were classified as only male, only female, or both male and female (Dilevko and Harris 1997). While the only male and only female ads allow for indirect comparisons across the ads, the both male and female ads allow for more direct comparisons of the sexes. To avoid researcher bias, two judges were recruited to independently evaluate each of the ads (e.g., Kolbe and Burnett 1991). Coders were trained on how to grade each of the criteria under study.

Coding

The coding is adopted from Koernig and Granitz (2006). The number of females and males in each ad was recorded. The predominant (and often only) person in the ad was termed "primary" to describe this person. The associated variables for this person (size, depth, position, and expertise) are reflected in the tables in the results section with a "1" after the

variable name (e.g., size1, depth1, etc.). The variables associated with next most prevalent person are denoted with a "2" after the variable name.

Due to the small number of ads that contained three or more males or females, these people in the ads were excluded from the analyses.

To test RQ1 (equal representation in technological product ads) the total number of only male ads was compared with the total number of only female ads. For the both male and female ads, the average number of males in the ad was compared with the average number of females (e.g., Dilevko and Harris 1997). T tests were conducted to compare the number of females with the number of males in the ads.

To test RQ2 (power and authority), the strategic position criteria developed by Goffman (1979), Masse and Rosenblum (1988), and Zhou and Chen (1997) is adopted. All these authors established size as a representation of hierarchical ranking. To classify power and authority, the relative size (using average American heights to adjust for sex differences in height across men and women) of each person in the ad (small compared to others versus large compared to others), their depth (toward the back of the ad versus toward the front of the ad), and their positioning (off to the side versus in the center of the ad) was recorded by the judges on seven-point semantic differential scales. For example, for depth, a "7" meant that the person was at the absolute forefront of the ad. A "4" meant that the participant was situated exactly between the front and the back of the ad. A "1" meant that the participant was pictured at the absolute back of the ad. T-tests were used to compare the size, depth, and position of males compared to females in same-sex and mixed-sex ads.

To test RQ3 (expertise), we used Kuusela, Spence, and Kanto's (1998) definition of expertise as the ability to perform tasks successfully. To classify the expertise of the people present in the ads, several criteria were studied. First, the text was studied. Did the text imply that the person mastered the technology or not? For example, were they giving advice or receiving help (Zhou and Chen 1997)? Second, was the physical stance such that the person conveyed mastery of the technology or not? Was the stance one that displayed ability or inability to move or unable to act? For example, was the person using the product or not? (Dilevko and Harris 1997; Goffman 1979; Masse and Rosenblum 1988) Third, did the facial expression convey mastery (smile) of the technology or not (worry, confusion, looking away) (Goffman 1979; Masse and Rosenblum 1988)? Using these criteria, the judges evaluated the expertise of each person in the ad on a seven-point semantic differential scale. T-tests were used to compare the expertise of males with females in same-sex and mixed-sex ads.

To test RQ4, the judges were provided with a written description of Pollay's (1983) 42

values (listed in Table 8) and could refer to the descriptions during the coding process.

The only value description that was modified was "technology." As all of the advertisements are related to technology, technology here refers only to ads that contained technical-language text (hardware, software, system, or networking terms). For each advertisement, the coders determined what values were present in the ad. If the value was present, the ad was coded "1," and if it was not present, the ad was coded "0." For each ad, this procedure was done for all of the 42 values. The coders were advised that there was no lower or upper limit to the quantity of values an ad could possess. Any difference between the coders was resolved by discussion until a consensus was reached. A $\chi 2$ analysis was then conducted to examine differences in the type of ad values across the only male and only female ads.

After the data collection was complete, Cohen's κ was calculated for each of the dependent variables to measure agreement between the two coders. Cohen's κ is a conservative method for calculating inter coder reliability that corrects the coefficient of reliability for agreement due to chance (Milne and Adler 1998).

Using this method, for the predominant person the inter coder agreement was 85.9% for size1, 85.3% for depth1, 86.6% for position1, 85.3% for size2, 85.2% for depth2, 84.1% for position2. As for the expertise of the predominant person the variables for knowledge 86.7% , usage 88.6%, 86.3 % ease of use.

Results

Research Question 1 asks if there will be equal representation of males and females present in technological product ads.

In the total sample of 202 ads, the predominant person in 40% of the ads was male and 60 % was female. (Table 4)

In the 168 only male or only female ads (but not both male and female) in the entire sample, 43% were only male and 57 % were only female ads.

In the 34 both male and female ads the predominant person in 24% of the ads was male and 76 % were female.

Table 4. Classification of Ads

Type of classsification	Only Male	Only Female	Both Male and Female	Total
Number of ads	73	95	34	202
Predominant person Male	73	0	8	81
Predominant person Female	0	95	26	121
Secondary person Male	8		25	33
Secondary person Female		8	9	17
Expertise value calculated	33	48	23	104

Research Question 2 asks if males and females will be depicted as equal in power and authority in using technological product ads, as measured by their size, depth, and position.

For the entire sample, in the only male and only female ads, t-tests revealed significant differences in size ($p = .0006$) but not in depth ($p = .011$) and position ($p = .955$) of the primary female compared to the primary male (see Table 5). The primary female in the ad was larger than the primary male (3.51 versus 2.85)

There were no significant differences across the secondary male or female in the ads for either magazine sample.

In the both male and female ads, across all magazines there is a significant difference in depth ($p = .034$), females are placed more forward in the ad (2.41 versus 2.06) whereas there is not a significant difference in size ($p = .492$) and position ($p = .198$) of the primary male compared to the primary female. Across both magazine samples, there were also no significant differences in the portrayal of the secondary males and the secondary females. Thus, based on these findings, there are mixed results. In the both male and female ads, primary woman is placed more forward than the male.

Ads of the same-sex indicates that advertisers are using primary females larger then males.

Table 5. Strategic Position of Males Compared to Females

	Only Male and Only Female Ads				*Both Male and Female Ads*			
	Male	**Female**	**Significance**		**Male**	**Female**	**Significance**	
Size1	2,85	3,51	0,006	*	2,06	2,41	0,492	
Depth1	3,84	4,27	0,110		2,19	3,56	0,034	*
Position1	4,03	4,01	0,955		2,81	3,87	0,198	
Size2	2,62	2,25	0,486		2,40	2,17	0,641	
Depth2	3,19	3,19	1,000		3,20	2,33	0,125	
Position2	4,50	2,94	0,069		2,62	2,77	0,793	

**Significant at p<0.05.*

Since the only male and female ads and both male and female ads revealed different results, all the ads (202 in total) have been analyzed the ads are labeled according to the primary and secondary person the results are in Table 6.

The size of the primary female is larger than the primary male. (p=.021) Differences between male and female primary persons depth and position is insignificant.

Table 6. Strategic Position of Primary and Secondary Males Compared to Females

	Primary Person					*Secondary Person*		
	Male	**Female**	**Significance**			**Male**	**Female**	**Significance**
Size1	2,77	3,28	0,021	*	Size2	2,45	2,21	0,487
Depth1	3,68	4,12	0,078		Depth2	3,20	2,74	0,310
Position1	3,90	2,85	0,793		Position2	3,08	2,85	0,655

**Significant at p<0.05.*

Also the differences between male and female secondary persons size, depth and position is insignificant. Thus advertisers are using women larger than males, however in depth and position they are equally represented.

Research Question 3 asks if males and females will be portrayed as having equal expertise using technological products. There are three dependent variables associated with expertise.

Information: Is the primary person getting information or giving information? The level of information the primary person has. (1-low info 7-high info)

Usage: Is the primary person using the product to what extent? (1-low usage 7-high usage)

Ease of use: Is the facial expression of the primary person indicates the ease of use?(1-low ease 7-high ease) The expertise variables are calculated for 33 only male and 48 only female ads.

Expertise and product usage results are presented in Table 7. In only male and only female advertisements the level of information is significantly higher for males than females (4.02 versus 3.01, p=0.013).

Table 7. Expertise and Product Usage of Males Compared to That of Females

	Only Male and Only Female Ads				*Both Male and Female Ads*			
	Male	**Female**	**Significance**		**Male**	**Female**	**Significance**	
Information	4,02	3,01	0,013	*	5,33	3,2	0,012	*
Usage	4,71	4,39	0,570		5,91	5,82	0,900	
Ease	1,64	1,69	0,813		1,50	1,29	0,516	

**Significant at p<0.05.*

Also for mixed sex advertisements the level of information is significantly higher for males than females (5.33 versus 3.2, p=0.012) according to usage and ease variables females and males are depicted equally.

Research Question 4 asks if similar themes will be presented in ads with males and females. In the sample, $\chi 2$ analyses revealed significant differences in the presence of some of the values included in the only male ads compared with the only female ads (see Table 8). Specifically, "technological" was a theme that was present in 9.9% of the only male ads, but in only 5.8% of the only female ads.

Pollay's 5 values, durable, productivity, security, casual and dear have not been used equally in female and male ads. Chi-Square tests are significant.

Rational value "durable" is used in 3.7% of the primary male ads 0% in female ads. (p=0.033)

Rational value "productivity" is used in 28.4% of the primary male ads 12.4% in female ads. (p=0.004)

Table 8. Appearance of Values

Pollay values (rational)	Female	Male	Significance		Pollay values (emotional)	Female	Male	Significance	
Independence	1,7%	2,5%	0,683		Morality	0,0%	0,0%	na	
Wisdom	0,0%	0,0%	na		Family	5,0%	2,5%	0,374	
Durable	0,0%	3,7%	0,033	*	Humility	0,0%	0,0%	na	
Neat	4,1%	7,4%	0,315		Vain	0,0%	0,0%	na	
Natural	0,0%	0,0%	na		Distinctive	23,1%	17,3%	0,315	
Effective	24,0%	27,2%	0,609		Nurturance	0,0%	0,0%	na	
Safety	1,7%	3,7%	0,358		Ornamental	10,7%	8,6%	0,624	
Tamed	0,8%	0,0%	0,412		Plain	0,8%	0,0%	0,412	
Convenient	30,6%	27,2%	0,601		Enjoyment	13,2%	18,5%	0,306	
Modern	0,0%	2,5%	0,082		Traditional	0,0%	0,0%	na	
Healthy	0,0%	0,0%	na		Youth	5,8%	7,4%	0,645	
Technological	5,8%	9,9%	0,277		Modesty	0,0%	0,0%	na	
Cheap	13,2%	11,1%	0,655		Security	4,1%	4,9%	0,003	*
Productivity	12,4%	28,4%	0,004	*	Frail	0,0%	0,0%	na	
					Untamed	0,0%	1,2%	0,220	
					Adventure	5,0%	12,3%	0,057	
					Maturity	0,0%	0,0%	na	
					Freedom	2,5%	7,4%	0,096	
					Popular	0,8%	1,2%	0,774	
					Status	4,1%	4,9%	0,786	
					Casual	27,3%	13,6%	0,021	*
					Relaxation	2,5%	0,0%	0,153	
					Sexuality	13,2%	1,2%	0,786	
					Dear	5,0%	0,0%	0,042	*
					Magic	0,0%	1,2%	0,220	
					Community	4,1%	6,2%	0,512	
					Affiliation	2,5%	2,5%	0,996	
*Significant at p<0.05.					Succorance	0,8%	0,0%	0,412	

Rational value “security” is used in 4.9% of the primary male ads 4.1% in female ads. (p=0.003)

Emotional value “casual” is used in 13.6% of the primary male ads 27.3% in female ads. (p=0.021)

Emotional value “dear” is used in 0% of the primary male ads 5.0% in female ads. (p=0.042)

The other 26 values are equally used in female and male ads. Sexuality has been used in 17 ads, 16 of these ads have female primary person.

Albert and Stafford (1983) has categorized Pollay’s values as rational and emotional. The data has also been analyzed using this method. Emotional appeals have been used more in female ads than male ads (1.34 versus 1.17, p=0.042) There is no significant difference between female and male ads according to rational appeals. (Table 9)

Table 9. Rational and Emotional Appeal for Primary Reason

	Primary Person			
	Male	**Female**	**Significance**	
Rational appeal	1,32	0,97	0,236	
Emotional appeal	1,17	1,34	0,042	*
*Significant at p<0.05.				

202 ads have been labeled as emotional and rational based on the number of appeal used in the ad. For example if an ad has 4 emotional and 6 rational values the ad is labeled as a rational one. Ads with equal rational and emotional values are not included. A total number of 165 ads have been found, 67 is rational 98 is emotional. Chi-square tests indicate that rational and emotional themes are significantly different for men and female ads as presented in Table 10. According to the results there are significant differences in rational and emotional themes that has been presented in ads with males and females.

Table 10. Rational and emotional appeals observed and expected for male and female ads.

Percentage	Male	Female	Total
Total Number of Rational+Emotional ads	62	103	165
Rational+Emotional theme (%)	38%	62%	100%
Rational theme (%)	48%	52%	100%
Emotional theme (%)	31%	69%	100%
Chi-square value= 0.026			

Conclusion

Women are used more than men in technological print advertisements, however the power authority and expertise research results suggested men and women are equally presented in terms position, depth, usage and ease. According to size and information men and women are not equally presented.

The power and authority is tested with three variables. According to size men and women are not represented equally, however according to position and depth males and females are equally presented.

The expertise is tested with three variables, information, usage and ease.

According to information variable females and males are not represented equally, however according to usage and ease variables males and females are equally presented.

As opposed to former research on technology and women, women have been presented more than men. (Dilevko, Harris 1997)

Men and female are equally presented as opposed to the former studies. (Barthel 1988; Belknap and Leonard 1991; Browne 1998; Chafetz, Lorence, and Larosa 1993; Courtney and Lockeretz 1971; Dilevko and Harris 1997; Ferguson 1983; Ferguson, Kreshel, and Tinkham 1990; Ford et al. 1998; Gilly 1988; Goffman 1979; Kuiper, Booth, and Bodkin 1998; Masse and Rosenblum 1988; Mayne 2000; Stern 1999, 1993; Whipple and Courtney 1985; Wiles, Wiles, and Tjernlund 1995; Zhou and Chen 1997).

Technological product and e-commerce products have similar target audiences. The study has similar results with Koernig and Granizt (2006). The results of this study indicated that in e-commerce advertisements males and females are represented equally.

Koernig and Granitz (2006) have analyzed Adweek, American Demographics, Atlantic Monthly, Esquire, Forbes, Fortune, Harvard Business Review, Macworld, Maximum PC,Money, Parents, PC Magazine, Sports Illustrated, Time, Yahoo Magazine between January 2000-January 2002. PC Magazine has been used in both researches.

Target audience of technological product advertisements in Turkey, consists of fewer women than men. Although females are used more than man in technological product advertisements, they are depicted with equal power and authority in using technological products.

In technological product advertisements men are depicted to have more information than women. The size of the primary women in the advertisements is significantly different then the primary men. In the both male and female ads, primary woman is placed more forward than the male. Ads of the same-sex indicates that advertisers are using primary females larger than males.

Pollay's 5 values, durable, productivity, security, casual and dear have not been used equally in female and male ads. Chi-Square tests are significant.

Albert and Stafford (1983) has categorized Pollay's values as rational and emotional. The results indicate that emotional appeals have been used more in female ads than male ads and there is no significant difference between female and male ads according to rational appeals.

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