Coll. Antropol. **47** (2023) 4: 259–269
Original scientific paper
doi:10.5671/ca.47.4.2

Types of Language Tools in German Television Commercials with Experiencing Certain Emotions by Gender

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ABSTRACT

The purpose of the paper is to explore the influence of verbal impulses of selected German television commercials on triggering emotions. The research aimed at finding out the interconnection of verbal and psychological dimension of television commercials and the comparison and analysis of the data, obtained with the help of test subjects, including the dimension of the gender of test subjects. In addition, the standard techniques and instruments of collecting quantity data were applied – a questionnaire and a grading scale. The data, obtained with the help of the questionnaires, completed by the test subjects, were statistically analysed. The results of statistical tests show that the language tools, applied in the German commercials concerned, do influence triggering of certain emotions. The analysis also showed that the influence of verbal impulses of television commercials on triggering emotions depends on the gender of participating test subjects, taking into account the exceptions.

Key words: *verbal impulses, television commercials, emotional response, gender, linguistic anthropology*

Introduction

Up-to-date advertising is a complex phenomenon, dependent not only on the type and nature of the product or service offered. The target group and their knowledge about the world, the cultural and social background are also important factors in designing advertising strategies. Furthermore, the gender of recipients is an element which can affect the designing of the commercial and selection of the advertising media as well as the progress of advertising communication process itself. Due to its technical characteristics, television advertising as a form of mass communication allows for "visual and audible transmission of advertising message to a wide range of heterogeneous recipients"[1].

The language, used for advertising purposes is recognisable, significant, expressive and 'purposive'[2,3]. This research aims at highlighting the role of the language tools, applied in television commercials, which acted as stimulus in the process of triggering emotions. The attention is drawn to the gender of the recipients of the television commercial. Ten television commercials in German language and 36 German test subjects of both genders were used for that purpose.

Research on the Advertising Language and Gender of the Recipients

Advertising and advertising language are the subject of research in numerous scientific fields and disciplines. There has been wider interest in advertising and advertising language since the 1950s. The advertisement and advertising language are defined in numerous research of this topic in various ways and from different points of view and aspects. Research of the connection of advertising language and gender of the recipients are not as numerous as the linguistic, economic, psychological, communicological, politological and sociological approaches and aspects of analysing advertising language. Nevertheless, there are some significant researchers who have focused on this issue or included it into their research.

Motschenbacher[4] researched linguistic characteristics of English and American advertising texts from the aspect of gender. His linguistic research is based on empiric analysis of the research corpus, consisting of 2000 advertisements in magazines Cosmopolitan and Men's Health.

Received for publication November 2, 2023

Motschenbacher[5] found language tools of advertising language and their influence. He analysed the verbal tools, applied in the advertisements, from the aspect of Doing Gender, defined by West and Zimmermann[6] as creating differences between girls and boys and women and men, differences that are not natural, essential, or biological. Once the differences have been constructed, they are used to reinforce the "essentia1ness"of gender."[6] 'Doing gender involves a complex of socially guided perceptual, interactional, and micropolitical activities that cast particular pursuits as expressions of masculine and feminine "natures."'[6]

Motschenbacher[5] focused on the research of verbal and non-verbal tools of the advertisement, serving to show the masculinity and femininity. It was found out by the author that the application of linguistic elements for describing parts of the body and colours depends on the gender of the target group. According to Motschenbacher[5] 'gendered advertising language renders a brilliant example of the linguistic performativity of identities. It illustrates how identities can be strategically constructed even by purely verbal means and independently of the biological characteristics of a speaker/writer'.

While Motaschenbacher's analysis is of descriptive and linguistic nature, Spörri's work is based on the presumption that »language and discourse are culturally and historically caused systems« of symbols[7]. In his semiotic analysis of advertising texts he pointed out that the selection and application of semantic expressions in an advertisement depends on the gender of the person they refer to. He found that characteristic not only in the verbal elements of the advertisement but also in picture coding of advertising. According to Spörri[7] the reason for this phenomenon is identification of the recipient with the advertising message or advertisement.

Dashyan[8] analysed linguistic phenomena at the phonetic, word formation and sentence level in German and Armenian television commercials. She pointed out the cultural factors and gender differences and the related differences in "cultural memory"[8], but she did not specify how to bridge this cultural gap, which partly results from different knowledge about the world.

Zetlin and Westwood[9] researched the variety of emotions, triggered by advertisements and the role of gender and cultural background of test subjects. They found out that the differences in triggering emotions depend on demographics and gender of test subjects[9]. Unlike this study, Zeitlin and Westwood[9] did not include any quantitative information or examples regarding the influence of gender or demographics of test subjects on triggering emotions. Moreover, the authors did not differentiate between the verbal and non-verbal impulses of television commercials, responsible for emotional processing.

Lexical categories applied in television commercials

The purpose of advertising is to attract the recipient's attention, awaken their needs and wishes, create the feeling of identification of the recipient with the sender of the advertising message or the offered product. In order to achieve this aim, the sender of the advertising message uses verbal tools or certain lexical categories. According to various research of German advertising language[10-12,2,3] nouns are the most common part of speech, used in German advertising texts[1]. Janich[13] claims that the reason for the noun to be prevailing is the ability of 'autosemantic reporting about objects and actual conditions.' Römer[11] and Baumgart[12] believe that the reason for the dominance of nouns in comparison with other parts of speech is the nominal style, characteristic of advertising language. The nominal style does not represent only simple dominance of nouns but also nominalisation of verbs by which the meaning of the verb is transferred to a noun (for example: syntagma, consisting of a noun and verb 'sich entscheiden – eine Entscheidung treffen' [to decide]. The number of nouns varies according to the field and target group. Sowinski[2] finds out that the share of nouns in German advertising texts which contain demanding technical explanations, is rather high while it is lower in picture and narrative texts.

Second most common and significant part of speech in German advertising texts are adjectives. Due to their descriptive function, adjectives are ideal for recommending goods and emphasising the characteristic of goods. Römer[11] and Baumgart[12] substantiate the frequency of adjectives by their ability to describe the offered products and services. In addition, adjectives characterise 'Actions, states and processes, which more frequently refer to the recipient than to the product'[134]. The results of an analysis, conducted by Römer[11] in the 1960s, showed a high frequency of adjectives used attributively in German advertising texts (for example: 'schneller Transport' [fast transport], 'natürliche Veredlung' [natural enrichment]) in comparison with predicative use of adjectives which is rarer (for example: 'Kaffee Haag. Er ist doppelt bekömmlich.' [Coffee Haag. Tastes twice better.]). Janich[13] points out that in statistical definitions of the occurrence of parts of speech it is necessary to define which criterion will be taken into account, the morphological or the syntactic.

Römer[11] included verbs in her research, but she did not explain rather rare occurrence in German advertising texts although their calling function is undoubtedly important. Baumgart[12] found a similar phenomenon for verbs as for adjectives. According to her analysis, verbs are not used only in connection with nouns but also independently or together with another verb. Sowinski[14] is of the opinion that the reason for somewhat lower occurrence of verbs (ranked third) is 'static and elliptic nature of numerous advertising texts and the related prevalence of the nominal style'. According to Schuncke[15] 'verbs give the noun certain "mobility" and liven up the style of German advertising texts.'

It follows from the results of those numerous analysis of the parts of speech in German advertising texts, published in various media:

(1) Various research of German advertising texts conclude that the nouns prevail. There are several reasons for this phenomenon: nominal style, autosemantic reporting, transfer of meaning from the verb to the noun. It can be assumed that the reason for the dominance of nouns in German advertising texts lies in the combination of all the factors mentioned. Nouns have the highest narrativeness and they are cognitively the easiest and that is also the reason they are used so frequently.

(2) Adjectives describe not only the offered products and services and their characteristics, but also their advantages and usefulness. In this way, the recipient of the advertising message gets a clear picture of the product or service. Adjectives come second as far as the occurrence in German advertising texts is concerned.

(3) Adjectives are followed by the verbs, particularly those describing the function of the product.

Emotions

According to Schwarz-Friesl[16] emotions are expressed in different ways, namely as "bodily condition (blood pressure, sweating, shaking), non-verbal expression (facial expression, body language, gestures), paraverbal aspects (prosody), and verbal forms of texts at the word, sentence and text level". LeDoux[17] defines emotions as "biological function of the nervous system" but adds that 'despite millennia of preoccupation with every facet of human emotion, we are still far from explaining in a rigorous physiological sense this part of our mental experience'[17]. According to Deak[18] 'Emotions are complex phenomena. They modulate and guide behaviour as a collection of biological, social, and cognitive components.' Damasio[19] understands 'emotion and the experience of emotion', as 'the highest-order direct expressions of bioregulation in complex organisms." He points out that emotion is 'critical for survival in the complex organisms equipped to process it' and that it 'plays a role in memory'[19]. According to Schwarz-Friesel[16] emotions are »multidimensional syndromes of human organism which cannot be triggered at will".

Schützeichl[20,21] deals with the issue of the extent of theatrical and planned action of emotions due to mass and media communication. The focus of his lecture "Emotions between amygdala and social semantics"[20] is the issue of the relation between our free decision-making and sentimentality of our thinking and actions. Schützeichel[20] relies on the results of neurobiological research and transfers them to the field of sociology. His conclusions are based on the theory that emotions, which are a combination of neuronal, psychic and social dimensions, are not on the border of sensible and insensible acts, but they are either the condition or a component of sensible actions.

Neurophysiology of emotions

The first neurofunctional theory and explanation of the emergence of emotions were developed in 1937 by James W Papez. He tried to describe a neuroanatomic substrate of behaviour and emotions, placing the central role on corpus mamillare. His hypothetical connection of the limbic system with emotions was the basis of numerous researches, which obtained results with the help of electrical stimulation of individual limbic and hypothalamus structures, pharmacologic effects and psychological changes after surgeries done on the nervous system[22]. In 1949 Mac Lean[23] corrected Papez's theory and introduced the concept of limbic system.

From the neurophysiological point of view, certain parts of limbic system and hypothalamus play a key role in emotions[24]. LeDoux[17] assumes that the limbic system is the seat of emotions, where amygdala has a more substantial effect on cortex than vice versa.

Amygdala is a 'region of the brain primarily associated with emotional processes', which 'is located in the medial temporal lobe, just anterior to (in front of) the hippocampus'. 'The amygdala is part of the limbic system, a neural network that mediates many aspects of emotion and memory'[25]. Adolphs, Russell and Tranel[26] argue that amygdala is responsible for negative emotions, which explains the inability of patients with bilateral damage of amygdala to recognise danger and threat. Kandel[27] agrees that amygdala is not responsible for all emotions, as it is often incorrectly assumed, but only for the negative ones. This was contradicted by Häusel[28] who claims that amygdala is active in triggering all emotions, not only the negative ones, and therefore it is the brain centre for emotional valuation. Numerous neurobiological studies of emotional processes imply that amygdala plays a central role in processing emotionally important sensoric impulses. In addition to emotional functions, amygdala is likely to have other functions as well, and it is not the only neural structure, responsible for emotional processing. Research, conducted with the help of computer tomography (CT) and imaging with magnetic resonance (MRT)[29], have shown the activation of paralimbic and medial prefrontal cortex (hereinafter referred to as: PMPC). In nearly 50%, PMPC is connected with amygdala, thalamus and other subcortical structures, and involved in emotional and cognitive acts. The activation of PMPC is not characteristic of certain emotions only as its role in emotional process is more general[30].

Problem definition

The research aims at highlighting the influence of the parts of speech, used in the German commercials concerned[a] and emotional response in correlation with the gender of the test subjects. Therefore, the following research question is posed:

[a] Due to more economical expressing, term "German television commercial" is used rather than "German version of television commercials", which does not imply that the advertiser or the product are German.

- Which language tools, used in German television commercials, are linked with experiencing certain emotions by test subjects of different genders?

Research Methodology

The empirical research was conducted on samples from German population. A sample was selected as far as the number, place and gender of test subjects are concerned. 36 German speaking test subjects were involved in the research with the 50:50 ration of male and female test subjects. A corpus of 10 television commercials in German language, shown on German television channels[b] in 2011, was used for the empirical research: Listerine Coolmint, Wella Pro Series, Actimel Powerfruit, Vitalis Knusper Plus, Pattex, Voltaflex, SYOSS Men, Fa, Pampers Baby-Dry, and Palmolive.

The empirical research relies on research methodology, applied in psychological and economic-market research[31-37], but it has been adapted to a linguistic research. Standard techniques and instruments of collecting quantity data were applied:

- a questionnaire (closed questions),
- a grading scale.

This research focuses on establishing the influence of the selected parts of speech, used in television commercials, on emotional response by German test subjects in correlation with their gender. Therefore, the empirical research applies the method of verbal description of emotions, triggered by various linguistic tools, applied in the German television commercials concerned. Some emotional categories according to Plutchik[38] and Izard[39] (fear, joy, surprise) were taken into account. Emotional categories are divided in two groups, namely as calming/active emotions and positive/negative emotions with two dimensions according to Russell[40] being used as a guidance. Classification according to Dieckmann et al[41]. was applied partly for the selection of emotions. However, it has been changed a little and adapted for the needs of this study and, restoring to Ekman[42,43], supplemented by the emotions of satisfaction and annoyance. The range of emotions is a component part of the questionnaire[c], used in this research:

- calming positive emotions:

  satisfaction, carefreeness, easiness, liking, affection, comfort
- calming negative emotions:

  boredom, gloom, sadness, disappointment, rejection, dissatisfaction
- active positive emotions:

  joy, surprise, love, rapturousness, desire, enthusiasm
- active negative emotions:

  fear, anger, annoyance, pain, irritation, shock.

Limitations

The study aims at finding out the types of verbal impulses which trigger emotional processing. Phonetic, semantic, lexical or morphological characteristics of language elements, applied in television commercials, are not emphasised in the statistical sense. Emotions are feelings of an individual and therefore the answers by the test subjects are subjective. They cannot be verified and therefore we have to rely on the judgement by the test subjects.

Data collection

Each test subject views ten television commercials in a dedicated room. Then they fill in the questionnaire for each commercial, which includes open and close questions and a grading scale.

Statistical data processing

The data obtained was processed statistically in order to find out the influence of the parts of speech (nouns, verbs, adjectives, and other parts of speech) in German television commercials on emotional processing depending on the gender of test subjects. The data, obtained from the questionnaires, were processed with the help of Microsoft Excel 97-2003 and statistically analysed by R 2.11.1 and R 3.01[44,45].

Two statistical tests, namely Fisher test and hi-square ($\chi 2$) test were applied to analyse the types of verbal impulses, used in German television commercials, which acted as triggers of emotions. In this research Fisher detailed test was selected prior to hi-square test as it can be used also in case the sample or the quantity of data is not high[46,47] (McDonald, 2009; Simon, 2000), or if the expected frequencies (number of units in a certain category) are lower than five[48].

Numerical impulse analysis method

The same impulse or a word may trigger one or several emotions and that is why a new variable "Verbal impulse – multiple trigger has been introduced in this research and it represents the effect of that impulse (one-off or multiple). For example: the same verbal impulse "tasty" can trigger one emotion in test subject A (satisfaction), and several emotions in test subject B (satisfaction, joy, enthusiasm). Different effects of verbal impulse "tasty" with test subjects A and B will be evident from different number of verbal impulses or verbal impulses - multiple trigger (for example: the number of verbal impulses [test subject A]=1, the number of verbal impulses [test subject B]=3).

[b] ZDF, RTL, SAT1, VOX, kanal A, PINK SI, RTV SLO 1, RTV SLO 2, RTV SLO 3, Pop TV, Brio. Television commercials, used in the research, may have been shown also on other German channels and on the internet.

[c] The questionnaire includes section "additional emotions", where the test subjects can enter their individual emotions which were triggered but are not included in the list.

Results

Chi-Square Test ($\chi 2$) and Fisher's test (two-sided) were applied to check statistically significant connection of the types of emotions (calming and active emotions), triggered by various types of verbal impulses in German television commercials concerned with the gender of the tests subjects. The subject of statistical analysis were nouns, adjectives, verbs and other parts of speech that triggered all the calming/active and positive/negative emotions in the group of test subjects. Other parts of speech include all parts of speech save nouns, verbs and adjectives that played the role of triggers in the television commercials concerned. That group of words is considered as a whole, without dividing into individual parts of speech.

Verbal impulses – triggers of calming and active emotions in correlation with the gender of test subjects

(1) Verbal Impulses Class VImCl: Nouns, Adjectives, Verbs, Rest, which triggered calming emotions in the test subjects according to the gender

Fisher's test (two-sided) and Chi-Square Test ($\chi 2$): **$p<0.0001$**[d]

(2) types of verbal impulses: Nouns, Adjectives, Verbs, Rest, which triggered active emotions in the test subjects according to the gender

Fisher's test (two-sided) and Chi-Square Test ($\chi 2$): **$p<0.05$**[e]

Statistical tests provided the following results:

- type of verbal impulses, which triggered calming emotions, is statistically significantly linked with the gender of test subjects; Chi-Square Test ($\chi 2$) and Fisher's test (two-sided) $p<0.0001$;
- type of verbal impulses, which triggered active emotions, is not statistically significantly linked with the gender of test subjects; Chi-Square Test ($\chi 2$) and Fisher's test (two-sided) $p<0.05$.

The percentage data analysis (graphs 1a, 1b, 2a in 2b[f]) was conducted in order to show the differences among the types of verbal impulses which triggered calming and active emotions in test subjects according to their gender in more detail and the following has been found out [g]:

- the percentage of nouns which triggered calming emotions in female test subjects is higher than the percentage of nouns which triggered the same type of emotions in male test subjects. A similar phenomenon can be observed in triggering active emotions (Figures 1a-2b);
- the percentage of adjectives which triggered calming emotions in female test subjects is higher than the percentage with male test subjects. Similar results are shown in triggering active emotions (Figures 1a-2b);
- in triggering calming and active emotions verbs reached higher percentages with female test subject than with male test subjects (Figures 1a-2b);
- in triggering calming and active emotions, there is a slight difference between the percentage values of other parts of speech with male and female groups of test subject in favour of the females (Figures 1a-2b).

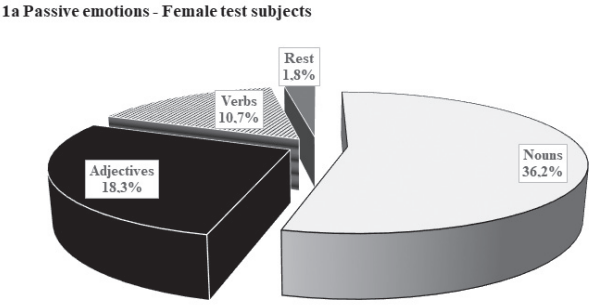

Fig. 1a. Percentage of verbal impulses of calming emotions in female test subjects.

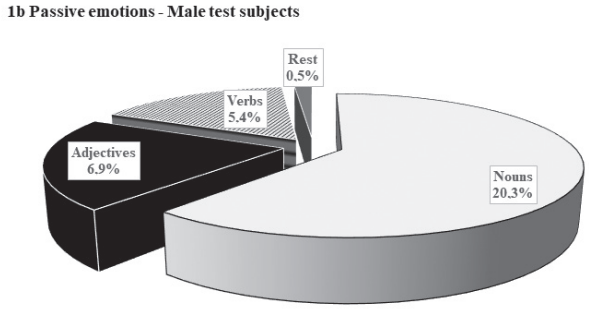

Fig. 1b. Percentage of verbal impulses of calming emotions in male test subjects.

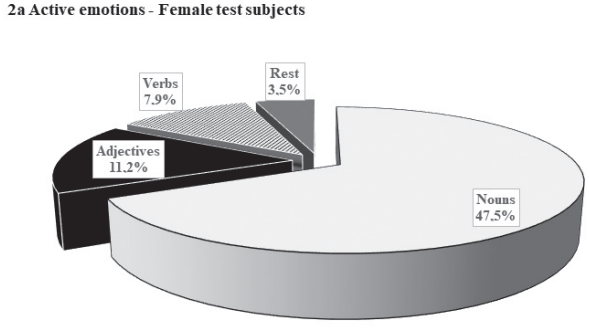

Fig. 2a. Percentage of verbal impulses of active emotions in female test subjects.

[d] Statistical significance level is 5% ($p<0.05$).
[e] Statistical significance level is 5% ($p<0.05$).
[f] The group includes other parts of speech.
[g] Due to rounding the results to one decimal, the total may vary + / – 0,5.

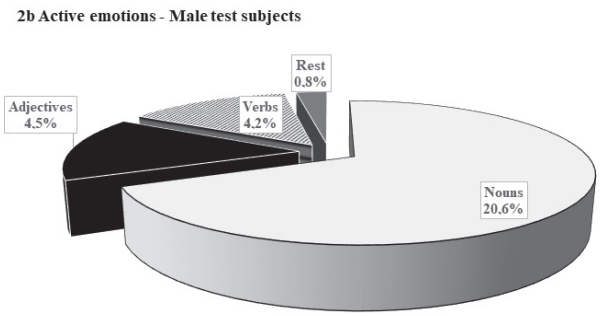

Fig. 2b. Percentage of verbal impulses of active emotions in male test subjects.

In spite of the fact that the application of non-parametric statistical tests (hi-square test, Fisher test) did not result in statistically significant connection between the types of verbal impulses which triggered active emotions and the gender of test subjects, it follows from the percentage analysis that in comparison with other verbal impulses which played the role of emotional triggers, nouns were the most common triggers of calming and active emotions irrespective of the gender of test subjects. The reason for the predominance of nouns as emotional triggers is the fact that nouns are the most powerful in transferring the meaning of a sentence or the point of an advertising text.

It should be mentioned that the higher percentage of language tools was triggering calming emotions than active emotions, which is true for test subjects of both genders. In addition, it is evident that all the parts of speech concerned triggered calming and active emotions more often in female test subjects than in male test subjects.

The percentage analysis resulted in numeric data on the effect of individual language elements of television commercials as emotional triggers depending on the gender of test subjects. In order to explain the numerically expressed occurrence of those language tools, examples of parts of speech that were the most common or the rarest triggers of calming or active emotions are shown below[h].

Examples of verbal impulses which occurred as triggers of calming emotions in male and female test subjects

In comparison with nouns[i], which acted as triggers of calming emotions in the test subjects concerned, noun *Haar* (hair) (21.7%) had the highest share in triggering calming emotions in male test subjects while *Power* (6%) was the highest with female test subjects. Nouns *Oma* (grandma), *Entspannung* (relaxation), *Ylang Ylang* (ylang ylang), *Kraft* (power), *Öle* (oils), *Kniegelenke* (knee joints), *Temperatur* (temperature), *Palmolive, Wella, Baby-dry, Duschgel* (shower gel), *Einzelhandel* (retail), *Multifrucht* and *Powerhalt* (0.5%) were the rarest triggers of calming emotions in male test subjects while *Gelenke* (joints), *Vitalis, Belag* (plaque), *Fülle,* (abundance) ,*Knieschmerzen* (knee pain)*, Temperatur* (temperature), *Arthrose* (arthrosis), *Moment* (moment), *Dreck* and *Haut* (skin) (0.3%) were the least common in triggering such emotions in female test subjects.

Adjective *stark* (strong) (28.2%) was the most common adjective[j] to trigger calming emotions in the male test subjects concerned, and for females the most common adjective was *ruhig* (calm) (21,7. The rarest (2.6%) adjective to trigger calming emotions in male test subjects were *sicher* (reliable), *günstig* (keen) and *heiß* (hot). In the case of female test subjects that was adjective *groß* (big) (0.8%).

Of all the verbs[k], which were triggers of calming emotions in the test subjects concerned, the most common with males were verbs *putzen* (to clean) (30%) and *relax* (to relax) (30%), and *eintauchen* (to plunge) (22.2%) and *relax* (22.2%)[l] with female test subjects. The least common trigger of calming emotions in female test subjects was verb *lindern* (to relieve) (3.7%). With male test subjects those were verbs *eintauchen* (to plunge) and *entdecken* (to discover) (5%).

In comparison with other parts of speech [m], the most common trigger of calming emotions was numeral *achtundvierzig* (40% with males and 31.6% with females), and adverb *sauber* (40% with male test subjects). In the case of male test subject the least common trigger of calming emotions was numeral *sechsundfünfzig* (20%). The same applies to adverbs *gut* and *wirklich* with female test subjects (5.3%).

It follows from the above that calming emotions were triggered in male and female test subject by various nouns, adjectives, verbs and other parts of speech in different percentages. In addition, it has been found out that the same word, but in different percentage values, can trigger calming emotions in the test subjects concerned, irrespective of their gender. For example: verb *relax* (to relax) triggered calming effects with test subjects of both genders but in different percentage - 30% in males and 22.2% in females.

Examples of verbal impulses which occurred as triggers of active emotions in male and female test subjects

In comparison with other nouns[n], which triggered active emotions in the test subjects concerned, noun *Schmerzen* (pains) (24.5%) was the most common trigger of such emotions in male test subjects. One of the three nouns

[h] The total for the calculation of percentage are groups of nouns, adjectives, verbs and other parts of speech which triggered calming and exciting emotions. In order to facilitate percentages and illustration, in the examples the nouns are in the nominative case, verbs in the infinitive, adjectives in masculine singular, in spite of the fact that test subjects used the words in various cases and persons.

[i] % of all the nouns which triggered calming emotions in males or females.

[j] % of all the adjectives which triggered calming emotions in males or females

[k] % of all the verbs which triggered calming emotions in males or females.

[l] In the television commercial word *relax* is a noun but the test subjects wrote it in lower case. Therefore it was considered as a verb in the analysis.

[m] % of other parts of speech which triggered calming emotions in males or females.

[n] % of all the nouns which triggered exciting emotions in males or females.

which triggered active emotions in female test subjects was *Schmerzen* (pains) (7%). The lowest percentage (2%) of triggering active emotions in male test subject is characteristic of nouns *Knusper-Crunchies* (crispy crunchies), *Acerola* (acerola), *Powerhalt*, *Oma* (grandma), *Stunden* (hours), *Nächte* (nights), *Bewegung* (motion), *Crunchies* (crunchies), *Duschgel* (shower gel), *Gelenke* (joints), and *Palmolive*. In females those were nouns *Pampers*, *Vitalität* (vitality), *Vitamin C* (vitamin C), *Welt* (world), *Immunsystem* (immune system), *Styling*, and *Tage* (days) (0.9%).

Of all the adjectives[o], which triggered active emotions in the test subjects concerned, the most common trigger with male test subjects was adjective *heiß* (hot) (50%). In the case of females those were adjectives *ruhig*, *frisch* (fresh), and *magisch* (magic) (21.4%). The least common trigger of active emotions in male test subjects was adjective *groß* (big) (16.7%). For females, those were adjectives *stark* (strong), *golden* (golden), *knackig* (crisp), and *spannend* (active) (7.1%).

In comparison with other verbs[p], the most common verbs to trigger active emotions were *stören* (to disturb) (75% in the case of males), and *eintauchen* (to plunge) (50% for females. The lowest percentage of triggering active emotions in males was verb *relax*[q] (to relax) (25%). In the case of females those were verbs *relax* (to relax), *verwöhnen* (to spoil) and *tun* (to do) (16.7%).

In comparison with other parts of speech[r], which triggered active emotions, in females such emotions were most commonly triggered by numeral *achtundvierzig* (forty-eight) (57.1%). In the case of males only possessive pronoun *dein* (your) (50%) and numeral *achtundvierzig* (forty-eight) (50%) occurred as triggers of active emotions. In the case of female test subjects personal pronoun in the accusative *dich* (you) (14.3%) and numeral *sechsundfünfzig* (fifty-six) (28.6%) were of the lowest occurrence in triggering active emotions.

It follows from the percentage analysis conducted and the examples mentioned that nouns, adjectives, verbs and other parts of speech achieved different percentages as triggers of emotions and they differ according to the gender of test subjects. For example: of all the verbs that acted as triggers of active emotions in the test subjects concerned, the most common trigger of emotions in males was *stören* (to disturb) while with females it was not a trigger of active emotions at all. In comparison with other nouns, *Schmerzen* (pains) was the most common trigger of active emotions in both genders (24.5 % and 7 %). Like in triggering calming emotions, it was found out that triggers of active emotions are not only various parts of speech but also different meanings of words affect triggering.

It may be concluded from the analysis that the occurrence of verbal impulses[s], which were the most common or the rarest triggers of active emotions in the test subjects concerned, taking into account the exceptions (for example noun *Schmerzen* [pains], verb *relax* [to relax], and numeral *achtundvierzig* [forty-eight]), differ according to the gender of test subjects. For example: the highest percentage of triggering active emotions in males was achieved by verb *stören* (to disturb) (75 %) while verb *eintauchen* (to plunge) played that role with female test subjects (50%).

Verbal impulses – triggers of positive and negative emotions in correlation with the gender of test subjects

(1) Verbal Impulses Class VImCl: Nouns, Adjectives, Verbs, Rest, which triggered positive emotions in the test subjects according to the gender

Fisher's test (two-sided) and Chi-Square Test ($\chi 2$): $p<0.01$[t]

(2) Verbal Impulses Class VImCl: Nouns, Adjectives, Verbs, Rest, which triggered negative emotions in the test subjects according to the gender

Fisher's test (two-sided) and Chi-Square Test ($\chi 2$): $p<0.0001$[u]

Statistical tests provided the following results:

- type of verbal impulses, which triggered positive emotions, is statistically significantly linked with the gender of test subjects; Chi-Square Test ($\chi 2$) and Fisher's test (two-sided) $p<0.01$;
- type of verbal impulses, which triggered negative emotions, is statistically significantly linked with the gender of test subjects; Chi-Square Test ($\chi 2$) and Fisher's test (two-sided) $p<0.0001$.

In order to better highlight the effects of linguistic elements of the television commercials concerned in triggering positive and negative emotions and their correlation with the gender of test subjects, the verbal impulses concerned were analysed also for percentage (Figures 3a - 4b)[vw].

It follows from the percentage analysis of verbal impulses that triggered emotions in test subjects of different genders that:

- with female test subjects the percentage of nouns which triggered positive emotions is substantially higher than the percentage of nouns for male test subjects (Figures 3a and 3b). in the case of negative emotions the difference between the percentage values of nouns as triggers between males and females is not so evident (Figures 4a and 4b);

[o] % of all the adjectives which triggered exciting emotions in males or females.

[p] % of all the verbs which triggered exciting emotions in males or females.

[q] In the television commercial word relax is a noun but the test subjects wrote it in lower case. Therefore it was considered as a verb in the analysis.

[r] % of other parts of speech which triggered calming emotions in males or females.

[s] nouns, adjectives, partly verbs and other parts of speech

[t] Statistical significance level is 5% ($p<0.05$).

[u] Statistical significance level is 5% ($p<0.05$).

[v] Due to rounding the results to one decimal, the total may vary + / - 0.5. The results of verbal impulses which were multiple triggers were applied.

[w] The group includes other parts of speech.

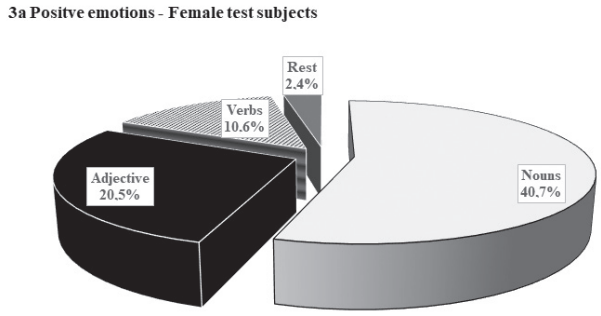

Fig. 3a. Percentage of verbal impulses of positive emotions in female test subjects.

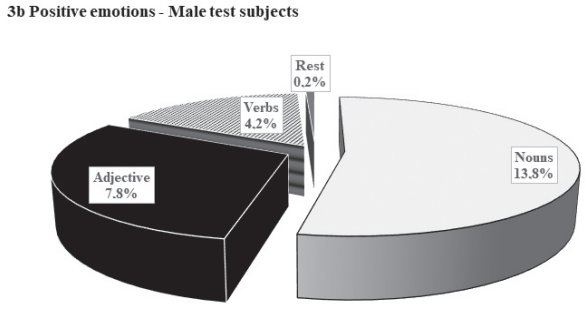

Fig. 3b. Percentage of verbal impulses of positive emotions in male test subjects.

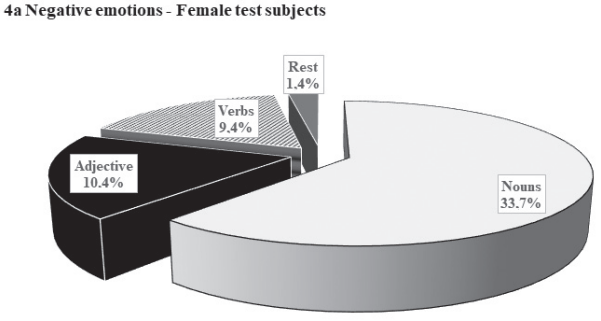

Fig. 4a. Percentage of verbal impulses of negative emotions in female test subjects.

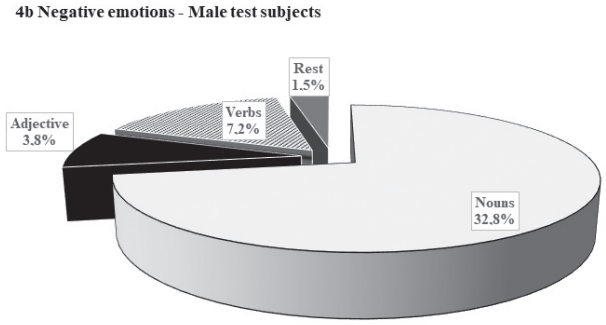

Fig. 4b. Percentage of verbal impulses of negative emotions in male test subjects.

- the percentage of adjectives which triggered positive and negative emotions is twice as big in female test subjects (Figure 3a-4b);
- in triggering positive and negative emotions verbs reached higher percentages with female test subject than with male test subjects (Figures 3a-4b);
- the occurrence of other parts of speech which triggered positive emotions differs between males and females in favour of female test subjects (Figures 3a and 3b) The percentage of other parts of speech, triggers of emotions is nearly the same for both genders (Figures 4a and 4b)

It follows from the percentage analysis conducted that in comparison with other verbal impulses, which acted as triggers of emotions, the share of nouns occurring in triggering positive and negative emotions is the highest, irrespective of the gender. It should be pointed out that the language tools concerned triggered positive emotions in higher percentages than negative emotions in case of male and female test subjects, with the exception of nouns which triggered more negative than positive emotions in males (Figures 3a-4b). It has also been found out that all the parts of speech concerned were more common triggers of emotions in females than in males. In the case of female test subjects adjectives trigger positive or negative emotions in lower percentages than nouns, unlike in male test subjects where positive and negative emotions were more often triggered by verbs than by adjectives.

The percentage analysis resulted in data on the occurrence of individual language elements of television commercials as triggers of positive and negative emotions depending on the gender of test subjects. In order to explain the results better, below are examples of the parts of speech which affected emotional processing by the recipients with the highest and lowest percentage values[x].

Examples of verbal impulses which occurred as triggers of positive emotions in male and female test subjects

Of all the nouns[y], which triggered positive emotions in the test subjects concerned, noun *Haar* (hair) was the most common (14.4%) trigger of such emotions in male test subjects. In the case of females, that was noun *Power* (7.4%). Nouns which were the rarest triggers of positive emotions in males (0.9%) are *Stunden* (hours), *Zahnbelag* (dental plaque), *Bewegung,* (motion), *Vitalis, Schlaf* (sleep), *Kraft* (power), *Palmolive*, *Entspannung* (relaxation), *Deoschutz* (deodorant protection), and *Einzelhandel* (retail). Nouns *Palmolive* and *Einzelhandel* (retail) were the rarest to trigger positive emotions in females (0.2%).

[x] The total for the calculation of percentage are groups of nouns, adjectives, verbs and other parts of speech which triggered calming and exciting emotions. In order to facilitate percentages and illustration, in the examples the nouns are in the nominative case, verbs in the infinitive, adjectives in masculine singular, in spite of the fact that test subjects used the words in various cases and persons.

[y] % of all the nouns which triggered positive emotions in males or females.

The highest percentage of all the adjectives[z], which acted as triggers of positive emotions in the test subjects concerned, adjective *stark* (strong) was the most common to trigger such emotions in males (29.7%). In the case of females that was adjective *ruhig* (calm) (23.6%). The rarest (2.7%) adjectives to trigger positive emotions in males were *sicher* (reliable) and *unglaublich* (incredible). In the case of females those were adjectives *knackig* (crunchy), *heiß* (hot), and *groß* (big) (0.9%).

Of all the verbs[aa], which triggered positive emotions in the test subjects concerned, the most common verbs are *relax* (to relax) and *eintauchen* (to plunge) – verb *relax* (to relax) triggered positive emotions in males in 46.7%, and verb *eintauchen* (to plunge) in 31% of females. The latter recorded the lowest percentage in triggering positive emotions in male test subjects (6.7%). The least common trigger of emotions in female test subjects was verb *lindern* (to relieve) (3.4%).

In comparison with other parts of speech [ab] which triggered positive emotions in male test subjects, it was only numeral *achtundvierzig* (forty-eight) (100%) which occurred as a trigger of such emotions. In the case of female test subjects the highest percentage values were achieved by numeral *achtundvierzig* (forty-eight) (52.6%), while adjective *sauber* (clean) (10.5%) was the rarest to trigger calming emotions.

The examples of verbal impulses which functioned as triggers of positive emotions show that the nouns, adjectives, verbs and other parts of speech which reached the lowest or the highest percentage values as the triggers of emotions, differed according to the gender of test subjects. It has also been found out that the same verbal impulses trigger positive emotions in both, men and women, however, the percentages differ. For example: of all the verbs that acted as triggers of positive emotions, verb *eintauchen* (to plunge) was the most common one to trigger positive emotions in women while the percentages for men were the lowest. Like in triggering calming and active emotions, it has been found out again that various parts of speech and different meanings of words do influence triggering of positive emotions. For example: adjective *unglaublich* (incredible) triggered positive emotions in male test subjects while the same role was played by adjective *knackig* (crunchy) in the case of female test subjects. Below are examples of the parts of speech which were the most or the least common to trigger negative emotions in male and female test subjects[ac].

Examples of verbal impulses which occurred as triggers of negative emotions in male and female test subjects

The most common of all the nouns[ad] which triggered negative emotions was noun *Schmerzen* (pains) in the test subjects of both genders (19.9% in male test subjects and 16.2% in female test subjects). The least common nouns which triggered negative emotions in male test subjects (0.7%) were *Kniegelenke*, *Morgen* (morning), *Acerola* (acerola), *Temperatur* (temperature), *Öle* (oils), *Baby-dry*, *Knusper-Crunchies* (crispy crunchies), *Multifrucht*, *Palmolive*, *Vitamin* (vitamin), *Wella* and *Ylang Ylang* (ylang ylang), and *Aromatherapy* (aromatherapy), *Belag* (plaque), *Prozent* (percent), *Seele* (soul), *Temperatur* (temperature), *Arthrose* (arthrosis), *Immunsystem* (immune system), *Pflegestoffe*, *Vitalität* (vitality), and *Vogel* (bird) in female test subjects (0.7%).

Of all the adjectives[ae], which triggered negative emotions with the test subjects concerned, the most common trigger with male test subjects was adjective *ruhig* (calm) (62.5%). In the case of female test subject those were adjectives *spannend* (active), *unglaublich* (incredible) and *absolut* (absolute) (12.5%). In comparison with other adjectives which triggered negative emotions in females, adjectives *frisch* (fresh), *natürlich* (natural), *magisch* (magic), *professionell* (professional), *perfekt* (perfect), *echt* (genuine) and *heiß* (hot) appeared in lower percentages (4.2%). Adjectives *frisch* (fresh), *günstig* (favourable) and *natürlich* (natural) were the rarest to trigger negative emotions in males (12.5%).

Verb *putzen* (to clean) was the most common of all the verbs[af] to trigger negative emotions in test subjects of both genders, 50% in males and 66.7% in females. The least common verb to trigger negative emotions were *relax*[ag] (to relax), *bohren*[ah] (to drill) and *fühlen* (to feel) in the case of male test subjects, and verb *fühlen* (to feel) in the case of female test subjects (33.3%).

In comparison with other parts of speech which triggered negative emotions, the highest percentage was recorded for adjective *sauber* (clean) (33.3% in males and 40% in females), irrespective of the gender of test subjects. In the case of female test subjects adverbs *gut* (well) and *wirklich* (really) triggered negative emotions and the percentage was the same (20%) as adverb *gut* (well) and personal pronoun in the accusative *dich* (you). In the case of male test subjects possessive pronoun *dein* (your) and numeral *sechsundfünfzig* (fifty-six) triggered those emotions (16.7%).

The results of the percentage analysis and the above examples of verbal impulses showed that nouns, adjectives,

[z] % of all the adjectives which triggered positive emotions in males or females.

[aa] % of all the verbs which triggered positive emotions in males or females.

[ab] % of other parts of speech which triggered positive emotions in males or females.

[ac] The total for the calculation of percentage are groups of nouns, adjectives, verbs and other parts of speech which triggered positive and negative emotions.

[ad] % of all the nouns which triggered negative emotions in males or females.

[ae] % of all the adjectives which triggered negative emotions in males or females.

[af] % of all the verbs which acted as verbal impulses in emotional processing or as triggers of emotions.

[ag] In the television commercial word *relax* is a noun but the test subjects wrote it in lower case. Therefore it was considered as a verb in the analysis.

[ah] Test subjects wrote noun *Bohren* in the upper and the lower case and in forms *bohren*, *bohre*. Therefore, the forms, used by the test subjects were taken into account.

verbs and other parts of speech which triggered negative emotions, differ according to the gender of the test subjects. Furthermore, it was found out that the same verbal impulses triggered negative emotions in both genders. For example: noun *Schmerzen* (pains) and verb *putzen* (to clean) occur as the most common triggers of negative emotions in males and females although the percentages differ. Like in triggering positive emotions, it has been found out also in the case of negative emotions that emotions are triggered not only by different parts of speech but also by the meaning of words. For example: noun *Öle* (oils) triggered negative emotions in male test subjects, and noun *Vogel* (bird) triggered such emotions in females.

It can be concluded that verbal impulses which were the most or the least common to trigger negative emotions in the test subjects concerned, differ according to the gender, with taking exceptions into account[ai].

Conclusion

The research tries to highlight the role of verbal impulses in German television commercials in emotional processing. The answer to the research question about the type of language tools, applied in German television commercials, connected with experiencing certain emotions in correlation with the gender of test subjects, is that different types of verbal impulses (nouns, verbs, adjectives and other parts of speech) in the television commercials did affect emotional processing. When attention is paid to the interconnectivity of the gender of test subjects and effects of different types of verbal impulses (nouns, adjectives, verbs and other parts of speech) in triggering emotions, it can be concluded on the basis of statistical tests that the type of verbal impulses of the shown television commercials which triggered calming emotions, is statistically significantly connected with the gender of test subjects. In the case of triggering active emotions, it was not possible to find statistically significant connection of the type of verbal impulses and the gender of test subjects. Different percentages were recorded in the occurrence of nouns, adjectives, verbs and other parts of speech in triggering emotions in males and females. Furthermore, it was found out that the type of verbal impulses which triggered positive and negative and calming emotions is statistically significantly connected with the gender of test subjects. It can be concluded that the language elements of television commercials which acted as verbal impulses in emotional processing, are statistically significantly connected with the gender of test subjects, with the exception of triggering active emotions.

In addition, a substantial number of various verbal impulses - triggers of emotions, recorded low percentages, which means that the verbal impulse acted as a trigger of emotions in a very low number of test subjects. Contrary, a low number of verbal impulses with high occurrence triggered emotions in numerous test subjects. There are also differences in the occurrence of nouns, verbs, adjectives and other parts of speech, which acted as triggers of emotions in the test subjects concerned according to the gender. It can be summarised from the comparison of verbal impulses which triggered emotions exclusively in males or females that the gender of the test subject and verbal impulse are interconnected in emotional processing.

However, the above finding cannot be generalised or claimed to be a universal phenomenon. In order to find out the role of various verbal impulses which affect emotional processing, the study would have to be extended to other groups or other language pairs and other television commercials, which could be the subject of new studies.

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[ai] noun Schmerzen, adverb sauber, verb putzen

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JEZIČNI ALATI U NJEMAČKIM TELEVIZIJSKIM REKLAMAMA I DOŽIVLJAVANJE ODREĐENIH EMOCIJA PREMA SPOLU

S A Ž E T A K

Svrha rada je istražiti utjecaj verbalnih impulsa odabranih njemačkih televizijskih reklama na poticanje emocija. Istraživanje je imalo za cilj utvrditi povezanost verbalne i psihološke dimenzije televizijskih reklama te usporedbu i analizu podataka dobivenih uz pomoć ispitanika, uključujući i dimenziju spola ispitanika. Primijenjene su standardne tehnike i instrumenti prikupljanja kvantitativnih podataka – upitnik i ljestvica ocjenjivanja. Rezultati statističkih testova pokazuju da jezični alati, primijenjeni u njemačkim reklamama, utječu na izazivanje određenih emocija. Analiza je također pokazala da utjecaj verbalnih impulsa televizijskih reklama na izazivanje emocija ovisi o spolu ispitanika koji su sudjelovali u testiranju.