

# Psycholinguistic and Cultural Implications of German Stimulus Words *Humor* and *Lachen* in Association Test

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**Abstract.** The article is focused on the psycholinguistic and cultural study of individual associative responses to German stimulus words 'Humor' and 'Lachen'. The goal is to determine individual cognitive activity features in the target 'culture of popular laughter' (Bakhtin, 1965). The research involved a free word association test aimed at examining the German learners' perception of the stimulus words. Sixty undergraduate students aged 20-22 of the educational programme "Language and Literature (German). Translation" at Lesya Ukrainka Volyn National University, Ukraine, participated in the word association test. Quantitative analysis of response words, typical and individual responses allowed building semantic gestalt and productive semantic zones that represent the linguistic culture identification features. Nouns, adjectives, and verbs represented productive associations. The analysis of associative fields allowed modelling the interaction of psycholinguistic and lingo-cultural factors for the emergence of responses to the stimulus words 'Lachen' and 'Humor'. The obtained response words determined communicative, pragmatic, and cognitive productive profiles. Nuclear zones in each associative field tended towards a unified expression of positive emotions. Respondents produced a wide range of semantic potential of stimulus words and frequency of reverse reactions. The expressive spectrum of productivity of individual associations by the respondents is interpretive and results from their cognition of the culture of popular laughter.

**Keywords:** *word association test, German language, Lachen, Humor, culture of popular laughter, semantic gestalt, psycholinguistics.*

**Зубач Оксана. Психолінгвістичні та лінгвокультурні аспекти асоціативних реакцій на німецькі слова-стимули *Humor* та *Lachen*.**

**Анотація.** Мета статті – виявлення специфіки німецьких слів-стимулів *Humor* та *Lachen* на засадах лінгвокультурологічного та психолінгвістичного аналізу з метою визначення особливостей когнітивної діяльності особистості у сміховому просторі цільової лінгвокультури. У дослідженні застосовано метод вільного асоціативного експерименту, в якому досліджено особливості сприйняття слів-стимулів *Humor* та *Lachen* у сучасному соціумі, з'ясовано типові та індивідуальні реакції. В експерименті взяло участь 60 студентів бакалаврату віком 20-22 років освітньо-професійної програми «Мова та література (німецька). Переклад» Волинського національного університету імені Лесі Українки (Україна). На основі кількісного аналізу слів-асоціацій та методу семантичного гештальта виокремлено продуктивні семантичні зони та реакції щодо кожного зі слів-стимулів, які представляють специфіку ідентифікації лінгвокультури. Продуктивними реакціями

виокремлено іменникові, прикметникові та дієслівні. Аналіз асоціативних полів дав змогу змодельовати взаємодію психолінгвістичних та лінгвокультурологічних засад для виникнення реакцій на слова-стимули *Lachen* та *Humor*. До продуктивних профілів реакцій належать комунікативний, прагматичний та когнітивний. Ядерні зони в кожному асоціативному полі виявили тенденцію до однотипності вираження позитивних емоцій. Респонденти репрезентували широкий обсяг семантичного потенціалу слів-стимулів та частотності обернених реакцій. Виразний спектр продуктивності індивідуальних асоціатів запропонований респондентами має інтерпретаційний характер та є результатом ментальної та вербальної когніції сміхової культури.

**Ключові слова:** слова-стимули, асоціативний експеримент, семантичний гештальт, німецька мова, лінгвокультурологічний аналіз, психолінгвістика.

As a part of cognitive science (Stillings et al., 1995, p. 3), psycholinguistics focuses on the mental and cognitive mechanisms that make it possible for people to use language (Garnham, 1985, p. 1). The cognitive approach considers a wide range of issues related to the interaction of mental/cognitive processes of individual speech activity. It promotes access to information about the structures (mechanisms) of human perception and understanding of the world in general (Edgar & Sedgwick, 2007). A psycholinguistic analysis aims to reveal the essence of the semantic organization of mental vocabulary and its connection with the mental aspects of language and speech.

Laughter as a combination of mental and cognitive mechanisms of individual emotional state identification may be accompanied by typical (expressions of joy, social satisfaction or well-being) and conflicting emotions (emotions of sadness, dissatisfaction, hysteria, depression, and the like). On the other hand, laughter is a "part of normal human behaviour" (Savage et al. 2017), evidence of a loss of sense of reality or kinship with the situation (culturally conditioned) that caused it. According to Ginzburg et al. (2020, p. 29), laughter is associated with the pleasure experienced by the laugher and, potentially, by other interlocutors. The interdependence of acts of social and interpersonal communication is simultaneously declared by the mental signs of laughter and humour, as "laughter and humour often go together, although humour does not necessarily entail laughter (Charaudeau, 2006, p. 20) and "both what seems wrong and what seems OK depend on people's physiological vulnerabilities, desired identity traits, values, cultural background, language, and understanding of logic" (McGraw, 2014, p. 76). Humour is a functionally systemic sign engraved not only positive or fun but also a carnival and absurd. The pragmatic specificity of humour (Attardo, 2003; Takovski, 2021) contributes to categorizing the principles of mental and cognitive processes to identify individual, ethnospecific features of the speech activity of the individual in a particular linguistic and cultural space.

In psycholinguistics, *humour* is defined as an indicator or point of reference for the manifestation of emotional state recognition point (O'Donnel-Trujillo & Adams, 1983; Podilchak, 1992) and a socially desirable phenomenon facilitating the establishment of contact between communicants (Cann & Matson, 2014), which

influences many aspects of human well-being due to its positive effects on body physiology, immunity status, and psychological behaviour (Piemonte, 2015; Riesch, 2015). Humour both exposes and disrupts the usual ways of using language. It also disrupts the rigidity of conventional ways of thinking, for it plays only with the rules of language but also with the rules of logic. However, humour clearly has a logic of its own (Lopez & Vaid, 2017).

The association test, or word association test (Terekhova, 2014; Shono et al., 2016), is popular among psycholinguists due to the possibility of studying the semantic organization of individual mental lexicon. The free association test is considered a tool for finding differential mental characteristics of the individual and a means of identifying productive linguistic and cultural stereotypical / clichéd traits for modelling typological images of representatives of certain linguistic cultures. The application of the method focuses on identifying the linguistic and cultural specifics of language consciousness, conceptual semantic fields, and various elements of the linguistic world-image (Hui, 2011; Namei, 2004; Seguin, 2015). Recently, special attention has been paid to the study of linguistically marked stimulus words, as such words reveal the specifics of both cognitive and linguistic and cultural categorization of linguistic and cultural world images. Moreover, the analysis of linguistically marked words makes it possible to identify typical and specific meanings that demonstrate the peculiarities of the speakers' mentality of a certain linguistic culture.

## Methods

Associative thinking differs at the interpersonal level due to social, cultural, age, gender and other factors. This is a basis for studying the typicality and specificity of linguistic and cultural features of verbalisation and the uniqueness of their perception at the intercultural level.

The study uses the free association test method to search for typical and individual features in the formation of words-stimuli by individuals. In addition, the statistical data analysis method helped determine the nuclear and peripheral zones in each field in particular and all associative fields. The comparative analysis revealed typical and individual reactions. Semantic gestalt construction simulated the reference model typical for a certain national culture and proved to be vital for the selection of dominant semantic zones in the modelling of differential features of stimulus words. This model corresponds to the actual stimulus to a native speaker of a particular language (Novikova, 1988, p. 22–23), reveals both national and universal features and may vary depending on the time parameters and characteristics of groups of experimental participants (Novikova, 1988, p. 27). It is "built on the involvement of each reaction to a certain stereotypical quality of the referent in this language" (Goroshko, 2001). The semantic gestalt creates the preconditions for access to the associative-verbal network of the stimulus word, determining the productivity of reactions to it and the formation of profiles for reactions. The

semantic gestalt method was used in the study to determine typical and semantically similar responses for modelling the specifics of the perception of stimuli by the speakers. Stimulus words, on the one hand, are universal and social; on the other, they are unique at the intercultural level. The formation of a list of semantic gestalts for each stimulus word involved the procedure of seeking stereotypical properties of a specific referent based on the semantic similarity of elements.

The word association test (WAT) had the German words *Lachen* and *Humor* as stimuli. Sixty undergraduate students aged 20-22 of the educational programme "Language and Literature (German). Translation" at Lesya Ukrainka Volyn National University, Ukraine, participated in the word association test. Their level of proficiency in German as a foreign language corresponded to B2. The study included the following procedures:

1. Establishing an associative field at different levels of language
2. The formation of the semantic content of the stimulus words
3. Identification of typical, individual and productive reactions

It is important that the definition of *associative zones* is a necessary step for conducting constructive linguistic, cultural, and psycholinguistic analyses of the words.

## Results and Discussion

The WAT results showed that associative fields were created based on each stimulus word, which materialises at different levels of language. The analysis of stimulus words revealed traces of repetitive and individual reactions. For example, seven repetitive reactions were received to the *Lachen* stimulus word, where the stimulus word is categorised as a way of expressing positive emotions, emotional state or human reaction to something funny/humorous. The responses included nonverbal means of expressing mental state, e.g.: *eine ausdrückende Mimik, bei der der Mund in die Breite gezogen wird und die Zähne sichtbar werden*. 53 individual responses to the word-stimulus *Lachen* outlined its understanding as a manifestation of various human reactions to a comic / funny situation: *eine Reaktion eines Menschen auf Komische oder erheiternde Situationen*; preference / capture: *auf etwas, das sie mag oder genießt*; postreaction to the experienced danger: *eine Entlastungsreaktion nach überwundenen Gefahren*); echo of sounds or noises in the expression of joy: *Geräusche, wenn man Freude ausdrü*; an innate means of expressing a person's emotional state: *eines der wichtigsten angeborenen emotionalen Ausdrucksverhalten des Menschen*; method of confrontation with conflict situations and means of socialization: *a method for advocating for conflicts and for social assistance*; a protective mechanism against unexpected danger or fear: *ein Abwehrmechanismus gegen spontane Angstzustände*.

Repetitive reactions to the word-stimulus *Humor* were recorded in 22 cases. This stimulus word was defined as a positive reaction to certain things (*auf bestimmte*

Dinge heiter und gelassen zu reagieren). Thirty-seven individual reactions to the word-stimulus Humor indicated the (intellectual) ability to joke (*die Fähigkeit einer Person, Witze zu machen*); ability to resist everyday difficulties, failures (*the movement of a man, the indifference of the world and the people, the all-encompassing triumphs and misfortunes with the help of the voice to escape*); talent to make someone laugh (*ein Talent, andere zum Lachen zu bringen*); the ability to see something fun in objects and objects (*in Objekten das Lächerliche zu sehen / in Gegenständen lustig zu sehen*); a therapeutic/curative or therapeutic agent against sadness, depression, etc. Noteworthy is the individual reaction to the word-stimulus Humor, which records the specifics of perception of the individual in the particular language culture and mastery of verbal/nonverbal mechanisms of modelling or provoking laughter (*eine körperliche oder verbale Handlung, die Sie zum Lachen bringen soll, die Kunst sich selbst und die Umstände nicht so ernst nehmen*). Associative deviations include zero reaction (1) represented by verbal and nonverbal cues: no interest, no associations (*nicht mein Ding, weil ich es nicht verstehe*).

The nominative field of the stimulus words Lachen and Humor is mainly formed at the lexical level and consists of a set of one-word associations (noun, adjective and verb). Nounal reactions (137) outline constants, elements or product of laughter culture: *der Witz* (11), *die Anekdote* (10), *der Komiker* (10), *die Satire* (8), *der Scherz* (8), *der Humor* (7), *the comedy* (6), *the laughter* (6), *the love* (6), *the parody* (6), *the spaghetti* (6), *the joke* (5), *the frivolity* (4), *the irony* (4), *the creativity* (3), *the optimism* (3), *the streak* (3), *the poetry* (3), *the text* (3), *the lightness* (3), *the comics* (2), *the clown* (2), *the words* (2), *der Lachenfall* (2), *die Übertreibung* (2), *die Offenheit* (2), *der Krimi* (2), *das Genre* (2), *der Funke* (2), *die Intelligenz* (2), *das Temperament* (2).

Adjectival reactions (118) are most clearly reflected at the pragmatic level of language, where they mark the interaction of individual mental, cognitive, and linguistic-cultural modes of perceiving the stimuli. This interaction enriches the associative row by indicating the originality of thinking.

Connotative meaning – *lustig* (13), *komisch* (7), *witzig* (6), *fröhlich* (4), *zynisch* (4), *sarkastisch* (4), *lächerlich* (2), *subtil* (3), *unterhaltsam* (3), *ironisch* (3), *satirisch* (3), *gelaunt* (3), *geistreich* (3), *bizarrr* (3), *amüsant* (2), *geistreich* (2), *spielerisch* (2), *liebenswert* (2), *eigentümlich* (2), *liebenswürdig* (2), *poetisch* (2), *spotty* (2), *original* (2), *good* (2).

Significative meaning – *bissig* (4), *derb* (2), *humorlos* (2), *hysterisch* (2), *albern* (2), *boshaft* (2), *irrsinnig* (2), *absurd* (2), *verächtlich* (2).

Contextual meaning – *laconic* (1), *black* (1).

Lingo-cultural meaning – *volkstümlich* (1), *urkomisch* (1).

Verb reactions (67) are associated with nominative fields that reveal the activity code of a person in the laughter space of a certain linguistic culture and categorize its activity: joke (*scherzen* (8), *erheitern* (5), *schwätzen* (1), *plänkeln* (1), *erzählen* (1)), to laugh (*lachen* (6), *belächeln* (1), *gluksen* (1), *gackern* (1)); to have fun (*süsmüren* (5), *überspielen* (2), *sich unterhalten* (2), *sich erlustigen* (1), *aufmuntern* (1), *sich*

entspannen (1), sich ablenken (1), erfrischen (1), sich freuen (1)). The stimulus words *Lachen* and *Humor* in the associative series of the nominative group of verb reactions determine the level of laughter gradation at the communicative level of language – lächeln (9), kichern (4), auslachen (4), grinsen (2), schmunzeln (2), glimmlachen (2), totlachen (2), feixen (1), meckern (1).

The associative row at the syntactic level takes into account the syntactic categorical relations of creating predicative constructions at the levels of phrases and sentences. The peculiarity of the associative production of reactions to stimulus words outlines only the prerequisites for modeling the projection of the laughter culture specifics: purpose (*Fre man Freude äußert und seine Zähne dann sichtbar sind / die Atmosphäre verwässern muss / die Leute aufmuntern will*); condition (*... man anekode gehört oder erzählt hat / etwas Lustiges gesehen, gehört, gedacht oder gefühlt wird / einen guten Witz oder eine witzige Situation sieht oder hört*); receptions (*... man lustig scherzt / etwas lustig findet oder nervös ist / einen lustigen Witz erzählt / lächerlich ist*).

It should be noted that the detection of reactions at the phrase level was not due to the experiment. Representation by 4 respondents of associative adjectives (2 respondents) (*... kindlichen / herzlichen / lauten / lustigen / bitteren Lachens*) and verbs (2 respondents) (*Spaß machen, Witze machen, einen Lachanfall / Lachkrampf bekommen, ein Gelchenmen about jmd. or etw. Witze machen / erzählen, sich über etwas lustig machen, vor Lachen weinen*) reactions-phrases are evidence of a deeper awareness of the semantic volume of words-stimuli at the intercultural level.

The linguistic and cultural specifics of creating an associative series are categorised through national and cultural values of perception of the world of language and the world of culture, which are engraved in a certain linguistic and intercultural space. The specificity of the associative field in 99 proverbs is actualised at the morphological level of language. It is realised in word-forming categorical relations between reactions and stimulus words (*das Lachen, das Lächeln, Gelächter, lächelnd, lustig, lachen*), humor (*der Humor*). The spectrum of the associative field of the stimulus word *Lachen* (78) is higher than that of the stimulus word *Humor* (21). The intercultural level of the associative field is reflected in the responses of two participants:

Humor ist eines der besten Kleidungsstücke, die man in Gesellschaft tragen kann. William Shakespeare.

Lachen ist eine körperliche Übung, von größtem Wert für die Gesundheit. Aristoteles.

Here the stimulus words are part of idioms.

Semantically opaque reactions to these stimulus words are few and their motivation is not always clear, probably due to a clear individualisation similarity or similarity association.

The analysis of associative fields allowed us to identify productive responses to the stimulus words *Lachen* and *Humor* (see Table 1).

Table 1  
*Productive responses to the stimulus words Lachen and Humor*

Stimulus words	Productive responses						
	typical	individual	Nouns	Adjectives	Verbs	Zero	
Lachen	Mimik	Reaktion	Witz	lustig	scherzen	-	
	MundZähne	Entlassungs-	e-aktion	Anekdote	komisch	erheitern	
		Geräusche	Satire	Komiker	humorvoll	lachen	
		Ausdrucksve-	r-halten	Scherz	witzig	lächeln	
		r-halten	Humor	Satire	fröhlich	kichern	
		Methoden-	Abwehrme-	Humor	zynisch	auslachen	
		ha-	nismus	Komödie	sarkastisch		
				Lachen	bissig		
				Heiterkeit			
		Humor	Heiterkeit Reaktion	Fähigkeit	Parodie		
Begabung				Spaß			mein
Talent						Ding	
Heilmittel							
Handlung							

The analysis of associative fields allowed us to identify productive response profiles to the stimulus words Lachen and Humor (see Table 2).

Table 2  
*Productive response profiles to the stimulus words Lachen and Humor*

Stimulus words	Productive response profiles		
	communicative	cognitive	pragmatic
Lachen/Humor	kichern	wenn man Freude äußert	Ironisch
	auslachen	und seine Zähne dann	satirisch
	grinsen	sichtbar sind/ die	derb
	schmunzeln	Atmosphäre verwässern	poetisch
	glimmlachen	muss / die Leute	aburd
	totlachen	aufmuntern will / eine	volkstümlich
	feixen	Anekdote gehört oder	urkomisch
	meckern	erzählt hat / etwas	hysterisch
	gackern	Lustiges gesehen, gehört,	humoristisch
	aufmuntern	gedacht oder gefühlt wird	scharfsinnig
	ablenken	/ einen guten Witz oder	schwarz
	erfrischen	eine witzige Situation	lakonisch
	loben	sieht oder hört) / lustig	optimistisch
	gluksen	scherzt / etwas lustig	frech
	plänkeln	findet oder nervös ist /	albern
	erzählen	einen lustigen Witz	eigenartig
	schwätzen	erzählt	irrsinnig
	belächeln		spielerisch
	überspielen		gutmütig

The analysis of associative fields enabled the model of the interaction of psycholinguistic and lingo-cultural aspects for emerging reactions to the stimulus words *Lachen* and *Humor* (see Fig. 1).

Figure 1

*A model of the interaction of psycholinguistic and lingo-cultural aspects for emerging reactions to the stimulus words Lachen and Humor*



The WAT results indicate a greater amount of semantic potential of the stimulus words than recorded in the German lexicographic edition, where the stimulus word *Lachen* is defined as "durch eine Mimik, bei der der Mund in die Breite gezogen wird, die Zähne sichtbar werden und um die Augen Fältchen entstehen, [zugleich durch eine Abfolge stoßweise hervorgebrachter, unartikulierter Laute] Freude, Erheiterung, Belustigung o. a. erkennen lassen" (Duden, p. 918). The stimulus word *Humor* is defined as follows: "Gabe eines Menschen, der Unzulänglichkeit der Welt und der Menschen, den Schwierigen und Mißgeschicken des Alltags mit heiterer Gelassenheit zu begegnen" (Duden, p. 741).

Semantically opaque reactions to stimulus words are few, and their motivation is not always clear, probably due to certain individualized features or associations based on similarity or contiguity.

## Conclusions

The article attempted to conduct a psycholinguistic and cultural analysis of perceiving the stimulus words *Lachen* and *Humor* by the selected group of German learners at different language levels. The results of the psycholinguistic association test indicate that the perception of the stimulus words *Lachen* and *Humor* represents a vital linguistic and cultural fragment of the German culture of popular laughter. The responses contribute to the formation of stereotypes and cultural values, being a stimulus to analytical and critical thinking with expected constructive feedback. Among typical reactions to the stimulus word *Lachen* were *Mimik*, *Mund*, *Zähne*,



*individual: Reaktion, Entlassungsreaktion, Geräusche, Ausdrucksverhalten, Methode, Abwehrmechanismus.* The stimulus word *Humor* had the following typical responses: *Heiterkeit, Reaktion, individual: Fähigkeit, Begabung, Talent, Heilmittel, Handlung.* Associative fields with the proposed stimulus words consist of structurally and semantically heterogeneous units and are formed at different language levels. The reactions formed by paradigmatic and syntagmatic connections with stimulus words are considered productive, and phrasal expressions unproductive. The productive reactions include nouns *Witz, Anekdote, Komiker, Satire, Scherz, Humor, Komödie, Lachen, Heiterkeit, Parodie, Spaß,* adjectives *lustig, komisch, humorvoll, witzig, fröhlich, zynisch, sarkastisch, bissig,* verbs *scherzen, erheitern, lachen, sich amüsieren, lächeln, kichern, auslachen.* Few sentence-long responses posed the most significant cognitive difficulties. The productive response profiles include communicative, e.g. *schmunzeln, grinsen, auslachen, lächeln, kichern,* pragmatic, e.g. *ironisch, satirisch, derb, poetisch, humorlos, absurd, Volksmilch, urkomisch,* and cognitive, e.g. *wenn man Freude äußert und seine Zähne dann sichtbar sind; die Atmosphäre verwässern muss; die Leute aufmuntern will / eine Anekdote gehört oder erzählt hat; etwas Lustiges gesehen, gehört, gedacht oder gefühlt wird; etwas lustig findet oder nervös ist.* Nuclear zones in each associative field tended towards a unified expression of positive emotions. The expressive range of productivity of individual associations by the respondents is interpretive and results from their cognition of the culture of popular laughter.

Since the study was limited to a small number of participants, it was not possible to reveal other potentially interesting for psycholinguists responses. What is now needed is a cross-national comparative psycholinguistic study involving both German native speakers and German learners.

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