



DOI: <https://doi.org/10.15688/jvolsu2.2024.5.15>

UDC 811.111'42  
LBC 81.432.1-51

Submitted: 28.03.2024  
Accepted: 24.06.2024

## THE MATRIX OF COGNITIVE FILTERS AS A TOOL FOR THE ANALYSIS OF LINGUOCREATEMES IN MODERN ENGLISH DISCOURSE <sup>1</sup>

**Maria P. Taymour**

Plekhanov Russian University of Economics, Moscow, Russia

**Abstract.** This study is devoted to the development of the author's method "The Matrix of Cognitive Filters" (MCF). It is used to model the process of inferring the meaning of creative elements (linguocreatemes) in multimodal online discourse. To accomplish this task, key cognitive mechanisms for generating the meaning of linguocreatemes were identified and researched. These are banner blindness, evaluative categorization and conceptualization, (de)compression of information and profiling, conceptual metaphor, conceptual metaphonymy, and conceptual integration. Monomodal verbal and multimodal linguocreatemes (more than 18,000 units) were selected with a continuous sampling method from English-language Internet resources, visual and verbal corpora. Theoretical analysis showed that the MCF can be used to model the overall ability of a linguocreateme to initiate cognitive resonance in a recipient. This method also allows for the collection of data on the probabilistic prediction of the level of cognitive resonance and positive or negative dissonance in an addressee. The empirical data obtained during a practical linguistic-cognitive experiment among English-speaking respondents from across countries confirmed the theoretical results of the study. The participants had to infer the general meanings of several multimodal linguocreatemes in accordance with the MCF. The experiment confirmed the feasibility of using this method to assess the occurrence of cognitive resonance, positive or negative dissonance, as well as obtaining additional data on the recipient's reactions to different linguocreatemes in English online discourse.

**Key words:** matrix of cognitive filters, linguocreateme, cognitive mechanism, categorization, metaphor, metaphonymy, integration.

**Citation.** Taymour M.P. The Matrix of Cognitive Filters as a Tool for the Analysis of Linguocreatemes in Modern English Discourse. *Vestnik Volgogradskogo gosudarstvennogo universiteta. Seriya 2. Yazykoznanie* [Science Journal of Volgograd State University. Linguistics], 2024, vol. 23, no. 5, pp. 186-196. DOI: <https://doi.org/10.15688/jvolsu2.2024.5.15>

УДК 811.111'42  
ББК 81.432.1-51

Дата поступления статьи: 28.03.2024  
Дата принятия статьи: 24.06.2024

## МАТРИЦА КОГНИТИВНЫХ ФИЛЬТРОВ КАК ИНСТРУМЕНТ ДЛЯ АНАЛИЗА АНГЛОЯЗЫЧНЫХ ЛИНГВОКРЕАТЕМ В СОВРЕМЕННОМ ДИСКУРСЕ <sup>1</sup>

**Мария Павловна Таймур**

Российский экономический университет им. Г.В. Плеханова, г. Москва, Россия

**Аннотация.** Исследование посвящено разработке авторского метода «матрица когнитивных фильтров» (МКФ), который может быть использован для моделирования процесса инферирования смысла лингвокреатем в мультимодальном онлайн-дискурсе. Для решения данной задачи выявлены и изучены такие ключевые когнитивные механизмы генерации значения лингвокреатем, как баннерная слепота, оценочная категоризация и концептуализация, компрессия и декомпрессия информации, профилирование, концептуальная метафора, концептуальная метафтонимия и концептуальная интеграция. Материалом для анализа послужили мономодальные вербальные и мультимодальные лингвокреатемы, отобранные из англоязычных интернет-ресурсов, визуальных и вербальных корпусов. Сформулировано положение о том, что МКФ можно использовать для моделирования общей способности лингвокреатемы инициировать у реципиента когнитивный резонанс, а также получения данных о вероятностном прогнозировании уровня когнитивного резонанса и положительного или отрицательного диссонанса у адресата. Эмпирические данные, собранные

в ходе практического лингвокогнитивного эксперимента среди англоговорящих респондентов из разных стран, подтвердили теоретические результаты исследования. Участникам предлагалось сделать выводы об общих смыслах нескольких мультимодальных лингвокреативов в соответствии с МКФ. Эксперимент подтвердил целесообразность использования данного метода для оценки возникновения когнитивного резонанса, положительного или отрицательного диссонанса, а также получения дополнительных данных о реакциях реципиента на различные лингвокреативы в англоязычном онлайн-дискурсе.

**Ключевые слова:** матрица когнитивных фильтров, лингвокреатива, когнитивный механизм, категоризация, метафора, метафониция, интеграция.

**Цитирование.** Таймур М. П. Матрица когнитивных фильтров как инструмент для анализа англоязычных лингвокреативов в современном дискурсе // Вестник Волгоградского государственного университета. Серия 2, Языкознание. – 2024. – Т. 23, № 5. – С. 186–196. – (На англ. яз.). – DOI: <https://doi.org/10.15688/jvolsu2.2024.5.15>

## Introduction

In early studies, linguistic creativity as a speech communication strategy was traditionally considered a characteristic poetry feature. However, the area of human speech, oriented towards the creative implementation of the language potential resources as the focus of modern research, is much broader and includes various text types (e.g., artistic, conversational, advertising, journalistic, epistolary, etc.).

In recent years, cognitive linguistics has sparked interest in the study of linguistic creativity that through various cognitive tools realizes both the potential of language systems and the creative abilities (often intuitive) of the linguistic personality. One of the central provisions of cognitive linguistics, influencing the correct interpretation of the essence of the linguistic creativity phenomenon, is the idea of the language direct involvement in the process of cognition, the interpretation of information about the world, and the formation of previously non-existent knowledge structures. In this case, language fulfills the cognitive and communicative intentions of the linguistic personality [Boldyrev, 2020], and linguistic creativity expresses its interpretive function. The phenomenon of linguistic creativity as an integral component of verbal thinking is also based on the deformation and switching of stereotypes and relations existing in the individual's consciousness.

In the last few decades, the study of linguistic creativity has employed the postulate that in discourse, the linguistic sign realizes its associative potential as the interrelation between form and content [Gridina, 1996]. As a means of cognition, inference and interpretation, and the creation of new concepts, language contributes

to the fulfilment of the communicative and cognitive intentions of interlocutors [Boldyrev, 2020; Gurevich, 2022; Lakoff, Johnson, 1980]. A typical communicant, being able to think creatively, can use the potential inherent in linguistic units and model innovative elements of discourse based on associative rapprochements, which is especially relevant in the era of verbal emancipation of the 21<sup>st</sup> century. What is more, modern discourse studies view it as the area of realization of the creative potential of both the language system and the linguistic personality [Fauconnier, 1985; Forceville, 2009; Golubkova, Taymour, 2021; Karabulatova et al., 2021; Zhang et al., 2023]. We also consider it crucial that linguistic creativity as a violation of habitual linguistic behavior is typical for communicants with flexible intelligence, distinguished by originality, spontaneous flexibility, efficiency, divergence and associative thinking, the ability to rethink, and a developed sense of humor.

Virtual communication in online mode activates the process of generating an increasing number of complex (or multimodal) texts, which are a collection of culturally established, socially formed semiotic resources that produce meaning from a variety of modalities. The texts that combine semiotically heterogeneous sign systems represent an inherent part of the culture of the 21<sup>st</sup> century society.

These semiotically heterogeneous texts continue to evolve, providing previously unknown opportunities for global communication. Over the past few decades, they have been the focus of scientific interdisciplinary research. Hence, it seems vital to analyze the pragmatic properties of various multimodal creative texts of modern English-language discourse. In addition, it is crucial to determine the relationship between generating

and deciphering creativity and the author's internal cognitive processes.

### **Materials and methods**

The research material included more than 18,450 samples of monomodal verbal and multimodal linguocreatemes, selected by a continuous sampling method from English-language Internet resources (periodicals, advertising agency websites, TV shows, podcasts, websites of commercial and non-profit organizations, foreign social networks, comics for teenagers and adults, fiction works, collections of road signs); visual corpora Google Images, Pinterest Creative Ads, VisMet, VisMet Baby, Ads of the World, Adevee и Best of Behance; verbal corpora British National Corpus, The Corpus of Contemporary American English, Natsionalny Korpus Russkogo Yazyka (The Russian National Corpus). The collection comprises multimodal linguocreateme of commercial advertising (more than 15,000 units) and social advertising, including Internet demotivators. The work uses materials from explanatory and specialized dictionaries and lexicographic and specialized online sources.

The study aims to develop a concept of cognitive mechanisms interaction used to infer meanings of multimodal linguocreatemes resulting from the interplay of their constituent multi-code elements. It also seeks to identify a degree of influence of various modalities and basic cognitive mechanisms on successful meaning inference of linguocreateme in virtual communication in modern English-language digital Internet discourse.

It is possible to achieve the study's goal if the following is done:

- 1) analyzing the features of the main cognitive mechanisms activated in the recipient when inferring the meanings of multimodal linguocreatemes;

- 2) developing an original method for multi-level analysis of multimodal linguocreatemes "the matrix of cognitive filters" (the MCF), taking into account the specifics of the simultaneous functioning of the main cognitive mechanisms;

- 3) analyzing the principles of the emergence of cognitive resonance (or dissonance) in multimodal linguocreatemes;

- 4) designing and conducting a linguocognitive experiment using the MCF to empirically

determine the factors influencing the occurrence of cognitive resonance, positive and negative dissonance.

The following methods are used to accomplish the study: a continuous sampling method for selecting multimodal material from online sources in English; general scientific methods of cognition such as analysis, synthesis, comparison, and generalization; methods of cognitive and discourse analysis; the author's method of analyzing multimodal metaphorical linguocreatemes "the matrix of cognitive filters" (the MCF).

### **Results and discussion**

Technologization of the language of communication is a peculiar feature of the linguistic situation in the modern world. The term 'technologization' refers to the infiltration of the Internet into areas previously exclusively occupied by offline communication. Technologization also promotes the use of specific vocabulary in virtual reality in online discourse [Gapanyuk et al, 2024]. This vocabulary has both socio-cultural characteristics and individual linguistic features due to the functional and socio-cultural specifics of its appearance, use and distribution. It is highly metaphoric and descriptive as it combines the elements of different styles and retains some features of professional and technical jargon, common lexis and informal gaming vocabulary. It also displays the features of oral and written speech and is governed by the inner laws of a particular language. We assume that the function of these lexical units is to increase the effectiveness of virtual communication in a digital society and a digital language [Taymour, 2022]. In addition, the nomination of realities that have arisen due to the emergence of the Internet is necessary to eliminate gaps in the standard vocabulary.

Quite often, such lexical units consist of verbal and non-verbal elements, and the term "linguocreateme" seems to be most suitable for describing the products of linguistic creativity in multimodal online discourse (cf. createme, expresseme). Of course, linguocreatemes may be found in offline discourse, too (e.g. street billboards), but, in this research, we explore only Internet communication. We understand a

linguocreateme as a small-format creolized Internet text, a unit of information and communication, which is a cognitively stimulating sign complex that arises as a result of creative personal rethinking and modification of existing linguistic and extralinguistic realities. A linguocreateme includes a set of ideas transmitted in the process of oral or written communication to the recipient to achieve a certain communicative effect, which often provokes the effect of defeated expectancy and cognitive dissonance [Taymour, 2023]. Undoubtedly, the intended pragmatic effect plays a vital role in this process. When achieved, we state the presence of cognitive resonance as the state of quality understanding [Festinger, 1957]. Otherwise, cognitive dissonance (or mental tension) occurs and causes malfunctioning or even failed communication.

The working hypothesis of this study is the following statement: deciphering the meaning of a linguocreateme occurs when some specific cognitive mechanisms that generate it are activated. Modeling this process, for obtaining theoretical and empirical data on the probabilistic prediction of cognitive resonance and dissonance, can be done by conducting a linguocognitive experiment among English-speaking respondents.

To prove or refute the proposed hypothesis, we studied the features of the functioning of the following cognitive mechanisms: the cognitive mechanism of conceptual metaphor; the cognitive mechanism of conceptual integration; the cognitive mechanisms of evaluative conceptualization and categorization; the cognitive mechanism of compression and decompression; the cognitive profiling mechanism (including banner blindness); the cognitive mechanism of conceptual metaphonymy.

Having studied the cognitive mechanism of conceptual metaphor, we proved that the internal structure of most linguocreatemes is determined by the primary metaphors in their composition, where a primary metaphor is a metaphor connecting basic physical and mental experiences (e.g. GOOD IS UP) [Grady, 1997]. Drawing on the selected empirical material (commercial and social advertising, comics, memes, demotivators, etc.), the following most frequent primary metaphors were extracted: GOOD IS BRIGHT, BAD IS DARK, IMPORTANCE IS SIZE, IMPORTANCE IS VOLUME, IMPORTANCE IS CENTRAL

POSITION, UNDERSTANDING IS SEEING, CONTROL IS BEING ABOVE, SIMILARITY IS PROXIMITY.

The cognitive mechanism of profiling is an individual mental ability to distinguish between the main and the secondary as a result of the process of “highlighting”, the imposition of the most relevant/main meaning within the boundaries of a certain conceptual area, existing on the basis of specific conceptual content. We consider the cognitive profiling mechanism as two parallel mechanisms of focusing and defocusing. As the study showed, the ultimate version of defocusing is the cognitive mechanism of banner blindness, defined as a protective mental mechanism activated when one directs their selective attention exclusively to those discursive elements that meet their current communicative needs and help achieve certain goals.

The cognitive mechanism of information (de)compression is constantly activated when a recipient interacts with polycode linguocreatemes. Its analysis has shown that an individual constantly “archives” vast amounts of knowledge and then “unarchives” it at the required time. In the presence of verbal and non-verbal semiotic resources in a single element, (de)compression of information is more versatile, and the recipient faces an additional cognitive challenge when extracting the underlying meanings. In this study, we identified three main models according to which embedded meanings are archived and then, accordingly, unarchived when the information decompression mechanism is activated:

- 1) non-verbal dominant information compression;
- 2) verbal-dominant compression of information;
- 3) complementary information compression.

Having researched the features of the cognitive mechanism of conceptual integration, we determined that in multimodal discursive elements, in most cases, the availability of more than two input spaces is observed due to additional components from different semiotic systems.

The general metaphonymic model can be represented as  $Z = (X \text{ instead of } Y)$ , WHERE ( $Y \text{ is } W$ ), where  $Z$  is the final meaning of the new discursive conceptual unit, formed as a result of the functioning of the cognitive mechanism of metaphonymy, ( $X \text{ instead of } Y$ ) – metonymic

associative transfers; (*Y* is *W*) – metaphorical associative transfers. The analysis of the cognitive mechanism of metaphonymy for multimodal linguocreatemes made it possible to identify eight main cognitive metaphonymic models:

- 1) double metonymic expansion of one metaphorical source within one target domain;
- 2) double metonymic extension of one metaphorical source within two target domains;
- 3) double metonymic extension of two metaphorical sources within two target domains;
- 4) double metonymic extension of two metaphorical sources within three target domains;
- 5) triple metonymic extension of one metaphorical source within one target domain;
- 6) metonymic expansion of one metaphorical source within two target domains;
- 7) metonymic expansion of two metaphorical sources within one target domain;
- 8) metonymic extension of three metaphorical sources within one target domain.

We consider the effect of cognitive resonance as a successful result of the described above cognitive mechanisms functioning, which are involved in deciphering the meaning embedded in a discursive element. In case the cognitive programs of the communicants coincide, the cognitive synchronization allows the addressee to infer those inherent meanings intended by the author, form a general mental representation of the object of discourse, and, in some cases, generate new meanings.

In this research, cognitive dissonance is defined as an anti-concept of cognitive resonance. It is mental tension that can arise in the process of communication when a recipient misunderstands the meanings of certain linguocreatemes. As the results showed, dissonance can appear due to the following factors: the discrepancy between the meanings of verbal and nonverbal elements and the cognitive contexts behind them; too high level of information compression; lack of background knowledge on the part of the addressee; the failure of the cognitive mechanism of conceptual integration or metaphonymy, etc.

We have determined that the vast majority of linguocreatemes provoke defeated expectancy. A certain level of cognitive dissonance is necessary to attract the attention of the addressee and activate his or her mental and intellectual efforts to overcome the created tension.

A recipient can overcome the resulting cognitive discomfort by a sudden insight (“insight”) on an intuitive level. In this paper, we proposed to consider this type of cognitive dissonance as positive. However, if the intensity of tension exceeds a certain threshold of individual potential cognitive capabilities, the required communicative effect may not be achieved. This level of cognitive dissonance is proposed to be considered as negative. Thus, the difference between cognitive resonance and positive cognitive dissonance lies only in the amount of mental energy expended on the part of the addressee when inferring the meanings of a creative discourse element. Since the most important factor in the processes and mechanisms of linguocreateme meaning formation is the success or failure of explication of the meanings embedded in them, the study uses the terms “cognitive resonance” and “positive cognitive dissonance” interchangeably.

The research aims to develop a cognitive model of linguocreatemes in multimodal discourse to identify their strategic communicative potential and the level of achievement of the author’s set pragmatic goals. To accomplish that, we attempted to model the cognitive resonance of a linguocreateme. It includes a cumulative analysis of the cognitive mechanisms of meaning formation, ordering them and developing the matrix of cognitive filters. The term denotes a generalized cognitive model of a creative discursive element (mono- or multimodal creative theme) that allows one to determine the approximate level of its mental resonance. The model represents a six-level system of step-by-step analysis of the cognitive mechanisms functioning resulting in a linguocreateme meaning inference:

Filter 0 – Level of banner blindness.

Filter 1 – Level of evaluative categorization/ conceptualization.

Filter 2 – Level of information compression and profiling.

Filter 3 – Level of conceptual metaphors.

Filter 4 – Level of conceptual metaphonymy.

Filter 5 – Level of conceptual integration.

Result: Cognitive resonance/cognitive dissonance.

It should be taken into account that this scheme is ideal, and as it is not possible to look into the recipient’s brain while it is working, we can assume that recipients can overcome certain

filters at different speeds. What is more, some filters may be absent at all or get activated in a different order.

We assumed that if deciphering a createme during a communicative act, the recipient overcomes all the filters, then, at the end of the inference process, it is possible to predict the presence of cognitive resonance in the addressee. If a linguocreateme meaning inference on the part of the recipient requires enhanced cognitive efforts (i.e., some filters that have different influences can “delay” it), then the probability of cognitive dissonance occurrence is high. However, the recipient can often overcome the filters by investing more time and mental energy. In this case, we propose to label cognitive dissonance as positive (PCD). If more cognitive efforts are employed but they do not help overcome the understanding threshold, the result may be labelled as negative cognitive dissonance (NCD). Often, the author sets the task of evoking a certain level of PCD in the target audience, which allows for better salience and memorability of the linguocreateme. But in certain cases, NCD occurs, which is a highly undesirable outcome of a communicative act.

Let us consider the features of the functioning of each filter that makes up the MCF exploiting one of the linguocreatemes (a social advertising poster) used in the linguistic-cognitive experiment conducted in this study (Fig. 1).

**Filter 0** (the level of banner blindness) is crucial for determining the best location of a linguocreateme in a text. If a linguocreateme did

not attract the recipient’s attention or the recipient subconsciously ignored it for some reason, then we can immediately identify its communicative failure. The further analysis, hence, makes no sense. For this reason, when studying the MCF, we will by default believe that the recipient successfully overcomes Filter 0. However, the presence of this filter in the general scheme is necessary for the possibility of using the MCF not only for analyzing the decoding process but also for generating new linguocreatemes.

**Filter 1** (the level of evaluative categorization/ conceptualization) has a constant influence on the process of inference of the general meaning of a certain amount of information coming from the outside world. The recipient simultaneously assesses its objective nature and properties and then compares the result obtained with the existing system of values. The study results show that the most frequent assessments rely on primary conceptual metaphors X IS GOOD and Y IS BAD. For approximation, we will consider conceptual metaphors that use both verbal and non-verbal levels. One of the examples is the primary metaphor THE DRIVER IS A POTENTIAL CRIMINAL. We can identify the following primary conceptual metaphors in many famous advertisements: NEW PERFUME IS GOOD (Nina Ricci commercial advertisement), OUTDATED COMPUTER IS BAD (Apple Inc. advertising campaign for the Mac computer), FOLLOWING THE RULES IS GOOD (social advertising for motorists, motivating to drive more carefully and to buckle up while driving),

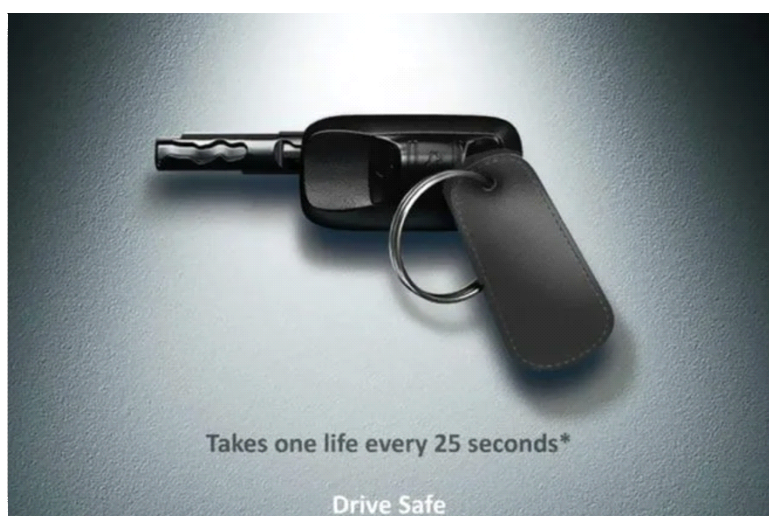


Fig. 1. Social advertising “Drive Safe”

SMOKING IS BAD (social advertising for smokers, motivating to quit the addiction), FREEDOM IS GOOD (political memes on the topic of Scotland's independence from the United Kingdom), FUNNY IS GOOD (monomodal malaphors that demonstrate individual creativity and a sense of humor). In the majority of cases, the author of a linguocreateme purposefully inbuilds into its basis a high probability of positive or negative evaluative categorization and conceptualization. We propose that the recipient overcomes Filter 1 if the author's integrated evaluative categorization/conceptualization approximately matches the recipient's evaluative categorization/conceptualization.

**Filter 2** (the level of information compression) implies the embodiment of the principle of linguistic and non-linguistic economy, especially characteristic of modern English-language multimodal discourse. The nature of creative discursive elements initially contains the idea of compressing information necessary for the explication of general meanings. Deciphering the underlying meanings occurs in a sequence due to the activation of the cognitive profiling mechanism as alternate focusing and defocusing on various components of the linguocreateme. This filter is highly dependent on numerous personal qualities and background knowledge of the recipient. We accept the assumption that the target audience of a particular linguocreateme has approximately the same cognitive load, which the author is counting on. In the poster "Drive Safe", the recipient must be a motorist and recognize the ignition key on the poster. For example, to understand the malaphor "That's the way the cookie bounces" (1) (Malaphors.com), both the knowledge of the two idioms ("That's the way the cookie crumbles" and "That's the way the ball bounces") and the mental ability to overcome the effect of defeated expectancy are required while inferring the meaning. In commercial advertising, designers, as a rule, use verbal and non-verbal means to decipher the meanings of which the recipient needs general and permanent amounts of knowledge. It should be mentioned that the higher the specificity of a linguocreateme, the greater the likelihood of a breakdown in communication due to the occurrence of cognitive dissonance in the recipient. It is an often case in reaction-event internet memetics. Linguistic

creative neologisms also often depend on specific social, economic and political realities (i.e., numerous neologisms related to the COVID pandemic, many of which have now lost their relevance and require additional knowledge to decipher their meanings). Based on all of the above, we propose to consider Filter 2 as an "overcome" if the level of information compression does not exceed the maximum possible level of its decompression by an average member of the target audience.

**Filter 3** (the level of conceptual metaphors) includes the identification and analysis of orientational, ontological and structural conceptual metaphors involved in the construction of a linguocreateme. Metaphors in discourse can be expressed by both linguistic and extralinguistic means. When identifying the presence of several different conceptual metaphors, we can think of a linguocreateme as a mixed metaphor (mono- or multimodal). In this case, the iconic component can be seen as:

1) a visual metaphor-comparison, when the target domain and the source domain are present in the image and located in proximity/superimposed on each other;

2) a hybrid visual metaphor, when the constituent iconic elements belong to different conceptual areas and the explication of their meanings occurs due to the recipient's interpretation of the meaning of one component in terms of another;

3) a contextual visual metaphor, when the source domain is missing but can be restored out of the context;

4) an integrated visual metaphor, when the source domain resembles the target domain in form or content.

Our research has shown that a linguocreateme with an iconic component contains the key conceptual metaphors IMPORTANCE IS SIZE and IMPORTANCE IS CENTRAL POSITION. In the example above, an ignition key/gun occupies a central position in the text and represents the most important metaphor for the linguocreateme (DRIVING IS DANGEROUS). We propose that the recipient overcomes Filter 3 if a verbal or non-verbal expression of the metaphors is understandable to the recipient.

**Filter 4** (the level of conceptual metaphonymy) as a separate filter seems necessary to us because in many linguocreatemes the distinction between



metaphor and metonymy is impossible as both of them are the tools for conceptualizing and conventionalizing new human knowledge. It was shown earlier that the general metaphonymic model can be seen as  $Z = (X \text{ instead of } Y)$ , WHERE ( $Y \text{ is } W$ ). In the poster “Drive Safe”, one of the metaphonymic transfers is ( $X \text{ instead of } Y$ ) – a key instead of a car; ( $Y \text{ is } W$ ) – the car is a danger. Monomodal linguocreatemes (e.g., mixed metaphors) are usually characterized by one metonymic extension of the metaphorical source within one or more source domains and target domains. For multimodal linguocreatemes, the following most common metaphonymic schemes were identified: double metonymic expansion of one metaphorical source in the presence of a common target domain; double metonymic extension of one metaphorical source in the presence of two target domains; double metonymic extension of two metaphorical sources in the presence of two target domains; double metonymic extension of two metaphorical sources in the presence of three target domains. We propose to consider Filter 4 “overcome” if the process of metaphonymic transfers proceeds in the manner intended by the author, and there is no interruption of transfers at the stages preceding the formation of the meaning of the linguocreateme.

**Filter 5** (the level of conceptual integration) as a multidimensional model of metaphor allows us to analyze the nature of the general space and the mental spaces available, as well as those metaphorical linguistic and creative aspects that have an impact on the integrated meaning of the final blend. In this example, the meaning of the final blend is “driving is as dangerous as keeping and using a weapon, so you should be a careful driver.” The general results of the research conducted within the framework of this study show that the number of mental spaces in multimodal linguocreatemes is on average 4–6 and are activated by both verbal and non-verbal elements. If the functioning of the mechanism of conceptual integration at one of the stages (e.g., inferring the meanings of one or more mental spaces) fails, this does not allow the formation of an integrated space of the required volume. In this case, we believe that the recipient does not overcome Filter 5. Otherwise, when the semantic content of the integrated space is the totality of all the meanings put in by the designers, coinciding with

the conclusions of the recipient, the filter can be considered “overcome”.

This method can be used for analyzing the components that make up existing linguocreatemes, basing conclusions on the mental reactions of recipients, as well as analyzing potential target audience’s reactions when creating new linguocreatemes. This can be especially true in commercial projects, such as advertising posters. Undoubtedly, when using the MCF, it is necessary to take into account the typical background knowledge and the main characterizing factors (education, gender, age, social status, etc.) of the average representative of the target audience. In this study, we propose to create an “addressee’s avatar”. For example, for the linguocreateme “Drive Safe,” the addressee’s avatar can be an adult citizen of one of the sexes who owns a car and has a driving license (which, as a rule, indicates a certain level of wealth). Linguistic and extralinguistic elements of such a linguocreateme should be selected according to these data. Violation of this rule increases the likelihood of cognitive dissonance or positive cognitive dissonance arising when the deep meanings laid down by the author are inferred. Undoubtedly, there is no single formula for creating a linguo-creative discursive element that is perceived equally by the absolute majority of addressees. It was quite convincingly proven by the linguistic-cognitive experiment conducted within the framework of this study.

The **linguistic-cognitive online experiment** was conducted among 334 English-speaking respondents from 11 countries. The purpose of the experiment was to analyze the functioning of the MCF and prove or disprove the working hypothesis stating that the MCF can be used as a tool for “dividing” the recipient’s general impression of the linguocreateme into its constituent components. The experiment was intended to determine the probability of positive or negative cognitive dissonance or cognitive resonance occurrence in a recipient. To achieve this goal, the respondents were asked to analyze step-by-step several linguocreatemes representing commercial advertising, Internet demotivators and social advertising (including the poster “Drive Safe” above) and share their immediate reactions. The questionnaire was designed as follows: each linguocreateme was accompanied by six questions, and each question defined the result of passing one



of six cognitive filters. For the poster “Drive Safe”, for instance, the open-ended Question 1 was formulated as “What is your first impression of the poster?” to identify the result of the cognitive mechanism of evaluative categorization/conceptualization. To identify the results of the action of other cognitive mechanisms by the MCF method, the following questions were asked: “Can you connect the poster to a real-life situation? Can you identify any hidden (perhaps metaphorical) meaning in this poster? Do you think some objects in the picture can be associated with some other objects? What is the most accurate meaning of this advertisement? What is your overall impression of this ad?”

The tables present the quantitative data with the percentage of respondents’ answers (Fig. 2), on the basis of which conclusions were drawn about the level of success in overcoming a particular MCF filter.

In addition, recipients were asked to give a detailed answer to Question 6, which contributed to a more in-depth further analysis. For the poster “Drive Safe”, some options were the following: “I felt very uncomfortable because the first thing I saw was a gun and it made me feel unsafe; A good metaphor, easy to understand, makes you think; I don’t like shocking advertising, but this was easy to understand; This is a truly revealing ad that shows the responsibility of the driver behind the wheel.” Based on these answers, the level of success in overcoming the last MCF filter was determined.

### Conclusion

The study of meaning-making mechanisms in multimodal linguo-creative elements showed that:

- linguocreatemes of various types are widespread means of expressing an individual’s linguistic creativity in modern English-language Internet discourse;

- linguistic creativity is one of the most essential aspects of the discursive activity of a linguistic personality, and, therefore, the development of new cognitive methods for analyzing the meaning of discourse elements that include various modalities is urgent;

- currently, the number of studies of multimodal linguocreatemes and the mental processes involved in their perception is relatively limited, which indicates the need for additional in-depth research.

To determine the level of cognitive resonance in the recipient when interacting with these units, we studied the mechanisms that form the meaning of multimodal linguocreatemes. It allowed us to solve the scientific problem of developing new effective methods for identifying the basic cognitive features of a multimodal linguocreateme.

The study of some cognitive mechanisms for generating the meaning of linguocreatemes allowed us to build a matrix of cognitive filters. The theoretical analysis and the practical linguistic-cognitive experiment have shown that the matrix of cognitive filters enables us to conduct a step-by-step

Poster 1 (Takes one life every 25 seconds. Drive safe)

Question 1. What is your first impression from the poster? (see Table 1)

A. it looks like a promotion	B. it looks like a warning	C. it looks like some funny pic
84.1%	12.7%	3.2%

Table 1. Poster 1, question 1

Question 2. Can you connect the poster to a real-life situation? (see Table 1)

A. yes, it’s quite simple	B. yes, but I had to think	C. not really
61.9%	36.5%	3.2%

Table 2. Poster 1, question 2

Fig. 2. Respondents’ answers (questions 1 and 2, poster “Drive Safe”)

analysis. Recipients process the meanings of linguistic and non-linguistic components in linguocreatemes in their entirety, which confirms the working hypothesis of the study. The method used to qualitatively assess the level of perception of various linguocreatemes and the emergence of cognitive resonance, positive cognitive dissonance, and negative cognitive dissonance can be of pragmatic value for further theoretical research and commercial projects.

#### NOTE

<sup>1</sup> An abridged version of the article is published: Taymour M.P. The Matrix of Cognitive Filters as a Tool for the Analysis of Linguocreatemes in Modern English Discourse. *Discourse in the Era of "Big Data": Variability, Creativity, Experiment*. Moscow, R. Valent Publ., 2023, pp. 328-336. (In Russian). URL: <https://www.elibrary.ru/item.asp?id=54631633>

#### REFERENCES

- Boldyrev N.N., 2020. The Interpretive Dominant in the Cognitive Theory of Language. *EpSBS European Proceedings of Social and Behavioural Sciences. Proceedings of the Philological Readings, PhR 2019*. London, s.n., pp. 1-8.
- Fauconnier G., 1985. *Mental Spaces Text*. Cambridge, Mass, MIT Press. 258 p.
- Festinger L., 1957. *A Theory of Cognitive Dissonance*. Stanford, Stanford University Press. 291 p.
- Forceville C., 2009. Non-Verbal and Multimodal Metaphor in a Cognitivist Framework: Agendas for Research. Forceville C., Urios-Aparisi E., eds. *Multimodal Metaphor*. Berlin, New York, Mouton de Gruyter, pp. 19-42.
- Gapanyuk Yu.E., Terekhov V.I., Ivlev V.Y., Kaganov Yu.T., Karabulatova I.S., Oseledchik M.B., Semenov D.V., 2024. Principles of Creating Hybrid Intelligent Information Systems Based on the Granular-Metagraph Approach. Samsonovich A.V., Liu T., eds. *Biologically Inspired Cognitive Architectures 2023, Proceedings of the 14<sup>th</sup> Annual Meeting of the BICA Society. Studies in Computational Intelligence*, vol. 1130. Cham, Springer Nature, pp. 356-366. DOI: 10.1007/978-3-031-50381-8\_37
- Golubkova E., Taymour M., 2021. Mixed Multimodal Metaphors in Advertising in English. Kolmakova O., Boginskaya O., Grichin S., eds. *European Proceedings of Social and Behavioural Sciences*. European Publisher, pp. 618-625. DOI: <https://doi.org/10.15405/epsbs.2021.12.76>
- Grady J.E., 1997. *Foundations of Meaning: Primary Metaphors and Primary Scenes. Dr. Philosophy in Linguistics diss.* Berkeley.
- Gridina T.A., 1996. *Language Game: Stereotype and Creativity*. Yekaterinburg, Ural State Pedagogical University. 225 p.
- Gurevich L.S., 2022. Expressive Speech Acts in Political Discourse: An Integrative Approach Perspective. *Journal of Advanced Research in Social Sciences. Mokslines Leidybos Deimantas*, vol. 5, no. 2, pp. 18-32. DOI: 10.33422/jarss.v5i2.783
- Karabulatova I.S., Lagutkina M.D., Borodina N.V., Streltsova M.A., Bakhus A.O., 2021. Formation of Ethnosocial Identity in the Matrix of Media Discourse. *Amazonia Investiga*, vol. 10, no. 43, pp. 224-234.
- Lakoff G., Johnson M., 1980. *Metaphors We Live By*. Chicago, University of Chicago Press. 276 p.
- Taymour M.P., 2022. Linguistic Creativity: Cognitive Dissonance vs Cognitive Resonance. *Linguistic Existence of Human Being and Ethnos, Institute of Scientific Information for Social Sciences RAS*. Moscow, Rusayns Publ., pp. 135-140.
- Taymour M.P., 2023. *Linguistic Creativity in Modern Multimodal Microtexts in English. Vol. 1*. Moscow, RuScience Publ. 128 p.
- Zhang L., Karabulatova I., Nurmukhametov A., Lagutkina M., 2023. Association Strategies of Speech Behavior of Communicators in Coding Discourse: An Interdisciplinary Approach Towards Understanding the Role of Cognitive and Linguistic Processes in Communication. *Journal of Psycholinguistic Research*, vol. 52, no. 5, pp. 1571-1587. DOI: 10.1007/s10936-023-09966-z

#### SOURCES

- Malaphors.com*. URL: <https://malaphors.com/2012/12/30/thats-the-way-the-cookie-bounces/>
- Pinterest Creative Ads*. URL: <https://ru.pinterest.com/dganda/creative-ads/>

**Information About the Author**

**Maria P. Taymour**, Candidate of Sciences (Philology), Associate Professor, Department of Foreign Languages No. 1, Plekhanov Russian University of Economics, Stremyanny Lane, 36, 115054 Moscow, Russia, Taymour.MP@rea.ru, <https://orcid.org/0000-0001-6033-0034>

**Информация об авторе**

**Мария Павловна Таймур**, кандидат филологических наук, доцент кафедры иностранных языков № 1, Российский экономический университет им. Г.В. Плеханова, пер. Стремянный, 36, 115054 г. Москва, Россия, Taymour.MP@rea.ru, <https://orcid.org/0000-0001-6033-0034>