

## **COGNITIVE MAPPING IN THE STUDY OF MENTAL RESOURCE OF THE DISCOURSE**

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### **INTRODUCTION**

Present-day linguistic studies (S. Zhabotynska, V. Karasyk, O. Kybryakova, A. Martyniuk, A. Pryhodko, T.A. van Dijk, R. Jackendorff, G. Lakoff) are focused on systemic organization of the individual's thinking. It resulted in rather successful researchers' attempts to reconstruct the mental background of an activity as separate concepts containing specified knowledge, conceptual spheres and fields united by common logical-semantic or substantive content, and conceptual systems as discursive-relevant formations of concepts, interpretation frames and cognitive maps. Although, some researchers (N. Kravchenko, O. Selivanova, R. Axelrod, E. C. Tolman) interpret cognitive maps differently and claim the main purpose to be a representation of the global picture of communicants' programs, they render mental frameworks of a linguocultural community discursive practice and reveal an established way of comprehension of a certain segment of activity of its representatives.

Accordingly, the relevance of the study is determined by the orientation of modern linguistic studies within the cognitive-discursive paradigm on the objective determination of complementarities of the mental and verbal resources of discursive practices, which enables to describe their mental conditionality. The cognitive-discursive approach to the study of discourse practice allows presenting its information archive, discovering the roots of the national mentality, comparing its cognitive representation, linguistic objectification and communicative realization.

The proposed approach is based on the idea that mental resource is a cognitive space of a certain discourse containing representative and dynamic knowledge, introduced by a specific conceptual system. It can be modeled by using the methodology of cognitive mapping initiated by

I. Osovsk<sup>1</sup> and adapted by other researchers<sup>2</sup>. This methodology includes conceptual analysis within constructive method, which is used for determination of autochthon concepts, logical-semantic analysis allowing to define the type of inter-conceptive correlations connection, as well as linguo-statistical methods (chi-square calculation ( $\chi^2$ ), contingency coefficient K and the Pearson correlation coefficient r), which make verification of conceptual system elements and correlations between them possible. As the result of this methodology usage, cognitive maps of different discourse types are constructed. They represent a relevant conceptual nomenclature, connection system of its elements and make it possible to realize the main national stereotypes in certain spheres of life.

The aim of this research is a representation of the mentioned methodology usage results on the basis of several types of discourse practice.

The materials of the research are represented as wide range of methods of an existence of a discourse practice, studied on the basis of modern texts, oral interactions and films scripts (in accordance with the investigated discourse types).

### **1. Methodology: The Technique of Cognitive Mapping**

The attempts of scientists to represent complex mental processes are reflected in the suggestion of various types of structures, such as interpretation frames and cognitive maps. The latter, though differently understood by the researchers, but being aimed mainly at representing the global picture of the communicants' programs, represent the mental frames of discursive practices of the linguistic-cultural community and reveal the established way of comprehending a certain segment of its members' activities.

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<sup>1</sup> Осовська І.М. Сучасний німецькомовний сімейний дискурс: ментальний і вербальний ресурс. 2013. 404 с.

<sup>2</sup> Гуцол А.М. Німецькомовний матримоніальний конфліктний дискурс: когнітивний вимір : автореферат дис. канд. філол. наук 10.02.04 – Германські мови. Чернівецький нац. ун-т ім. Ю. Федьковича. Чернівці, 2015. 20 с.; Коропецька О.І. Сучасний британський парентальний дискурс: когнітивно-семантичний аспект : автореферат дис. канд. філол. наук 10.02.04 – Германські мови. Чернівецький нац. ун-т ім. Ю. Федьковича. Чернівці, 2018. 20 с.; Савчук Т.Г. Когнітивна карта сучасного англomовного гастрономічного рекламного дискурсу. *Science and Education a New Dimension. Philology*. Budapest, 2018. VI (45), Issue 152. Pp. 60–65; Томнюк Л.М. Сучасний німецькомовний тюремний дискурс (когнітивно-семантичний аспект) : автореферат дис. канд. філол. наук 10.02.04 – Германські мови. Чернівецький нац. ун-т ім. Ю. Федьковича. Чернівці, 2018. 20 с.

The creation of complete presentation of the concept system, reflected in the cognitive map, requires the determination of its "skeleton" – the autochthon concepts and the partial outline of the corpus of allochthons as discursive variables. At that, the adequate methodological approach was to define the synthesis of conceptual analysis, corpus linguistics techniques and linguoquantitative methods. This enables to observe the complete mental representation of discourse as a conceptual system in a statistically verifiable conceptual structure and a system of correlations among its elements.

Modeling a cognitive map includes several stages: 1) defining basic situational formers that outline the communicative frame as a situational "skeleton"; 2) determining the allochthons as a general complex of possible information elements; 3) determining autochthons as regular elements of the discourse through the procedures of statistical verification of actuals; 4) finding quantitatively significant dependencies (subordination, consequence, causation, and interconnection) of autochthons, that show the interconcept correlation within the discourse; 5) formulation of the so-called discourse integrators – its uniting presupposition elements.

Stage 1 is substantiated by the fact that the actualization of the discourse semantic space is provided with an adequate situational framework. On the other hand, due to anthropocentricity, the deictic characteristics of the dialogue discourse and understanding of the action transformations as a continuum of "causal chains", from which the consciousness of the interpreter "pulls out separate links"<sup>3</sup>, this situational framework can be outlined by the main formers presenting the spouses, the global strategic objectives and the spatio-temporal localization of the communicative action. The latter is the basis of the situational predictability of the discourse, represented by the locus of the common dwelling and the time parameters of interaction, characterizing the localization of the communicative action in relation to the repeating periods of human life and social and cultural traditions.

Stage 2 requires additional explanation. The lexicosemantic space is based on the structural representation of the categorical potential in each representative unit in the framework of the field system and is, in a

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<sup>3</sup> Croft W.A. Syntactic categories and grammatical relations. Chicago; London, 1991. P. 159.

certain way, a scheme of the paradigmatic organization of lexemes, which in a certain language are the conventional nominators of a certain categorical meaning. In this perspective, the lexical-semantic space can be regarded as a combination of means for verbal interpretation of a certain conceptual space whose nuclear component is compared with a verbal unit capable of activating the given concept in the consciousness of the native speaker. Considering such units the objectivators of concepts, one can detect the concepts that are regularly or occasionally represented in discourse.

The holistic theory as a methodological basis of modern cognitive linguistics combines the formats of the presentation of the semantic and the conceptual, considering language as the main means of categorization and conceptualization of the world, an open cognitive system that interacts with general mental capabilities. Cognitive structures are deep thought-based entities, the discovery of which can only be done through the study of meanings of the language units<sup>4</sup>, because "the lexical meaning is a concept activated by the word in thought"<sup>5</sup>. Raczaszek-Leonardi mentions that "being physically present in interactions, as utterances in dialogues, language is a part of co-action"<sup>6</sup> and the word used by a person is the "flash" of information, – both the nominator of a certain notion or meaning, and an element of knowledge of the native speaker in the context of his national mentality, social, psychological, gender, and worldview characteristics.

Without calling into question the statement that the concepts are segmented by conceptual, figurative and value cognitive features, we believe that the real text within the discourse gives an opportunity to examine, first of all, the conceptual side, in which the fixedness of the concepts is determined by certain verbal means, the set of which forms the concepts expression plan. Any mental formation is constantly in the relations and dependences, and therefore the determination of the algorithm for the exteriorization of concepts in the space of the text

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<sup>4</sup> Тукаева Г.С. Исследовательский потенциал когнитивных структур. *Вестник Башкирского университета*. 2009. Т. 14 (3). Ст. 862.

<sup>5</sup> Жаботинская С.А. Имя как текст: Концептуальная сеть лексического значения (анализ имени эмоции). *Когниция, коммуникация, дискурс*. 2013. № 6. Ст. 76.

<sup>6</sup> Raczaszek-Leonardi J. & Vallee-Tourangeau, F. Language as a part of action: Multidimensional time-scale integration of language and cognition. *Psychology of language and communication*. 2018. Vol. 22 (1). DOI: 10.2478/plc-2018-0012. P. 282.

enables not only to implement their profile, but also to construct the concept system of discourse.

The verbal interpretation of concepts leads to the need of identifying their actualizers (known as objectivators, explicators, nominants, verbalizers, conceptual qualifiers, etc.) – verbal units that provide the conceptual basis of the discourse, despite the fact that communicative and pragmatic parameters for defining qualifying senses of the lingual units are quite subjective both from the side of the communicants, and from the perspective of the investigator. The actualizers of concepts can be presented explicitly or implicitly, and "any particular actualizer of the concept – a word, a phraseological unit, a syntagma, etc., – is not an isolated unit, but a part of the general system of actualizers, which can be represented in the form of an associative semantic field"<sup>7</sup>. The explication of concepts in the form of a system of actualizers is performed by a speaker, who builds a chain of proposals, objectifying the concept.

The laws of logic and causal links lose their explanatory power, as soon as the weak implicational structures occur in the text – for example, metaphorical nominations containing a significant emotional component. The solution of the problem of the implicit meanings categorization, if there is no alternative, requires the introspective analysis, which enables to distinguish discursively significant meanings of certain language means. Consequently, in order to isolate the constants of the discourse concept system, an inventory of the texts was made, the objectivators of concepts (nouns, verbs, and adjectives) were fixed, the classification of which into the semantic domains allowed defining the matrix of concepts as the basic beams of meaning within the discourse.

Since only the repetition of particular verbals can indicate a certain relevance and regularity of certain conceptual configurations, elements of statistical analysis were used enabling to determine the statistical significance of a) domain presentation in the text, and b) certain concepts in the selected domains at Stage 3 of the study to give the status of autochthons to certain concepts from other fields. Selected lexemes as linguistic signs, fixed to the subjects of cognition and by relations between them, represent elementary meanings in the consciousness; the

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<sup>7</sup> Бобкова Ю.Г. Концепт и способы его актуализации в идиостиле В.П. Астафьева (на материале цикла "Затеси") : автореферат диссертации на соискание ученой степени кандидата филологических наук. Специальность 10.02.01 – Русский язык. Пермь, 2007. Ст. 8.

names of domains formed – generalized concepts that semantically combine all the elements of a group that, through their presentation in the family interaction, indicate the points of meanings condensation.

The need to distinguish between natural and random phenomena causes applying quantitative analysis. Verification of data using the techniques of calculating the  $\chi^2$ -criterion and contingency coefficient  $K$  allows to select the main meaning dominants, categorial units of the basis of its concept system from the set of fixed allochthons – conceptual variables presenting atypical knowledge quanta, regular autochthons of discourse concept system – by determining the correspondences between the frequency distributions of concept actualizers of a certain domain in the texts and specific concepts in statistically significant domains.

The traditional study of the fullness of conceptual structures is based, as a rule, on the definition of the frequency of lexemes that designate certain elements or nominal characteristics of the concept. However, quantitative techniques, in particular, one of the basic methods for verifying hypotheses in linguistics – the chi-square ( $\chi^2$ ) criterion, enable to determine the existence of correspondences or discrepancies between distributions of frequencies of the quantities under observation<sup>8</sup>, actually verifying their regularity of this discursive environment. The most widely used formula for calculating the  $\chi^2$  criterion is

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

where  $O$  – actually observed values,  $E$  – theoretically estimated ones,  $\Sigma$  – the total amount.

The relation between the features is confirmed by the  $\chi^2$  index, which is larger than the critical value, and its degree is determined by Chuprov mutual contingency coefficient  $K^9$  by the formula:

$$K = \sqrt{\frac{\chi^2}{N\sqrt{(r-1)(c-1)}},$$

where  $N$  is the total number of observations,  $r$  is the number of lines in the table,  $c$  is the number of columns.

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<sup>8</sup> Левицкий В.В. Семасиология. Винница, 2012. Ст. 156.

<sup>9</sup> Ibidem. Ст. 160.

The values of the mutual contingency coefficient can be from 0 to +1, while the significance is determined in correspondence with the value of  $\chi^2$ .

Exceeding the value of  $\chi^2$  testifies to the prevalence of the empirical use of the domain over the theoretical expectations, confirming its selective character and, consequently, its importance for the discourse.

The similar procedure determines the value of  $\chi^2$  for all allochthons actualizers within each of the distinguished domains. As a result of such calculations, the most significant concepts for each of the predefined statistically significant domains are determined in the text. The detected concepts are autochthons of discourse.

However, this result is not the final stage of the study of the discourse conceptual structure, since only "the analysis of the concepts connectivity, <...> enables to construct the picture of the world that is characteristic of everyday consciousness"<sup>10</sup>. Before starting this phase of the study (Stage 4), some explanation should be provided. Thinking of the connectivity motivation by semantic properties, the cognitivity of relations between the objects of reality and the closeness of the words related in their meaning placed in the text<sup>11</sup>, lead to the assumption that consideration of their co-occurrence, "neighbourhood" in the text may reproduce a fragment of the linguistic picture the world, on the background of which the concept space of discourse is realized. The determination of the pairs of autochthons, among which there is a statistically verified relation which is logical for this representation. This relation can be detected using the correlation analysis, which states the correlation (statistical) dependence characteristic of linguistic phenomena and, in our case, allows detecting the autochthons in the text fragments, the actualizers of which are observed in co-occurrence.

The simple linear Pearson correlation ( $r$ ) assumes that, as the values of some feature increase, the value of another one either increases or decreases in a certain order. If the values of both features are characterized by the increase, then a positive correlation is stated, but if it is characterized by a reverse relationship, there is a negative correlation. Correlation coefficient values can range from +1 to -1, indicating the degree of relation between the

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<sup>10</sup> Чернейко Л.О. Металингвистика: Хаос и порядок. *Вестник Московского университета. Сер. 9. Филология*. 2001. № 5. С. 39.

<sup>11</sup> Вдовиченко А.В. Расставание с языком. Критическая ретроспектива лингвистического знания. Москва, 2008. Ст. 15.

phenomena: the closer the value approaches zero, the lower the dependence; the sign in this case denotes the nature of the relation<sup>12</sup>. To calculate the correlation coefficient, we use the formula:

$$r = \frac{\sum (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum (x_i - \bar{x})^2 \sum (y_i - \bar{y})^2}}$$

where  $r$  is the coefficient of linear correlation,  $\Sigma$  is the sum of the obtained values,  $x_i$  is the value of the first feature,  $y_i$  is the value of the second feature,  $\bar{x}$  – the average value of the first feature,  $\bar{y}$  – the average value for the second feature.

Avoidance of random variables is ensured by determining the number of degrees of freedom – the number of independent values that participate in the formation of a particular parameter. This indicator for correlation analysis is determined by the formula  $df = (r-1)(c-1)$  where  $r$  is the number of lines in the table,  $c$  is the number of columns.

The critical values of the correlation coefficient for a different index of degrees of freedom  $df$  and different levels of significance  $P$  are fixed in special tables<sup>13</sup>. Using the level of significance, the validity of the results obtained is determined, as well as the percentage of cases, in which an error is possible (95% validity corresponds to the significance level  $P = 0.05$ , 99% validity –  $P = 0.01$ ). If the obtained result corresponds to the significance level of 0.05 to 0.01, then the values obtained are considered statistically significant.

Statistically significant pairs of autochthons indicate certain dependencies in the mental space, but do not explain it. Having detected the conceptual correlation, we turn to the qualitative logical semantic analysis and to the phenomenon of cognitive inference, which enable to explain it.

The meaning, modeled by interactants in the process of communication, does not exist in nature in its finished form due to its essence – simulation of the configurative features of the constituents, mobility and melting into the context, can only be established through the analysis of a particular semantic environment. The latter also enables the discourse modeling on the basis of the combinatory properties of its

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<sup>12</sup> Тулдава Ю.А. Проблемы и методы квантитативно-системного исследования лексики. Гарту, 1987. Ст. 82–84.

<sup>13</sup> Перебийніс В.І. Статистичні методи для лінгвістів. Вінниця, 2001. Ст. 17.



conceptual dominant. The specific collocability of the concept system elements depends on the combinatory power of the cognitive-semantic parameters, as well as on the discursive intentions of the speakers. An adequate interpretation of meaning of the expression/complex of expressions is performed through cognitive operations for obtaining deductive knowledge – inference<sup>14</sup> (Грайс 1985: 221).

According to the mentioned above decoding of discourse-making meanings represented in text fragments, in which the verbalizers of statistically relevant conceptual configurations of autochthons are recorded, should be performed on the basis of the analysis of each separate sentence/dialogical unity through fixation of both the conventional meanings of language forms, and decoding the implicatures – deductive knowledge gained due to formally logic deductive communication. The introspection method borrowed from psychology, which presupposes observation of the researcher over himself, his own perception of the environment, his own experience, is indispensable for such an approach<sup>15</sup>.

The analysis of utterances/dialogical unities, performed according to the above defined principles, enables to assert that the palette of inter-concept correlation is confined to four main types of relations – inclusion, consequence, causation, and mutual exclusion. These relations are based on the logical regularities symbolically designated by the schemes "X includes/implies Y" ( $\equiv$ ), "Y follows X" ( $\rightarrow$ ), "X causes Y" ( $\Rightarrow$ ), "X or Y" ( $\leftrightarrow$ ).

The presented types of relations show all the statistically verified inter-conceptive correlations stated in the texts. On Stage 5 of the research, the set of them allows formulating relevant for discourse integrators – presuppositions, discursive unifying representations, which essentially are the cognitive foundations of the communicative activity of an individual as a member of the family group within a certain linguoculture. The discourse integrators (the term seems to be apt due to its sense of a unifying rule) known as the elements of cognitive basis, fundamental stereotypical core of knowledge or common cognitive foundation formulate basic discourse adequate mental elements, indicator

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<sup>14</sup> Грайс Г.П. Логика и речевое общение. *Новое в зарубежной лингвистике*. 1985. № 16. Ст. 221.

<sup>15</sup> Комарова З.И. Методология, метод, методика и технология научных исследований в лингвистике. Москва, 2013. Ст. 332.

of similarity of their world picture, subconsciously available in the discourse communicants-participants.

Including the social intragroup structure of thinking of the group members on the basis of texts produced by them in the described method, it is possible to identify the common elements integrating the discourse within the network – concepts as cementing elements in the national consciousness that influence the process of linear strategic deployment of the communicative event, and their correlations – in the structure of thinking. All information obtained results in the cognitive map – a schematically presented information archive.

## **2. Results and Discussion. Cognitive Mapping of Discourses**

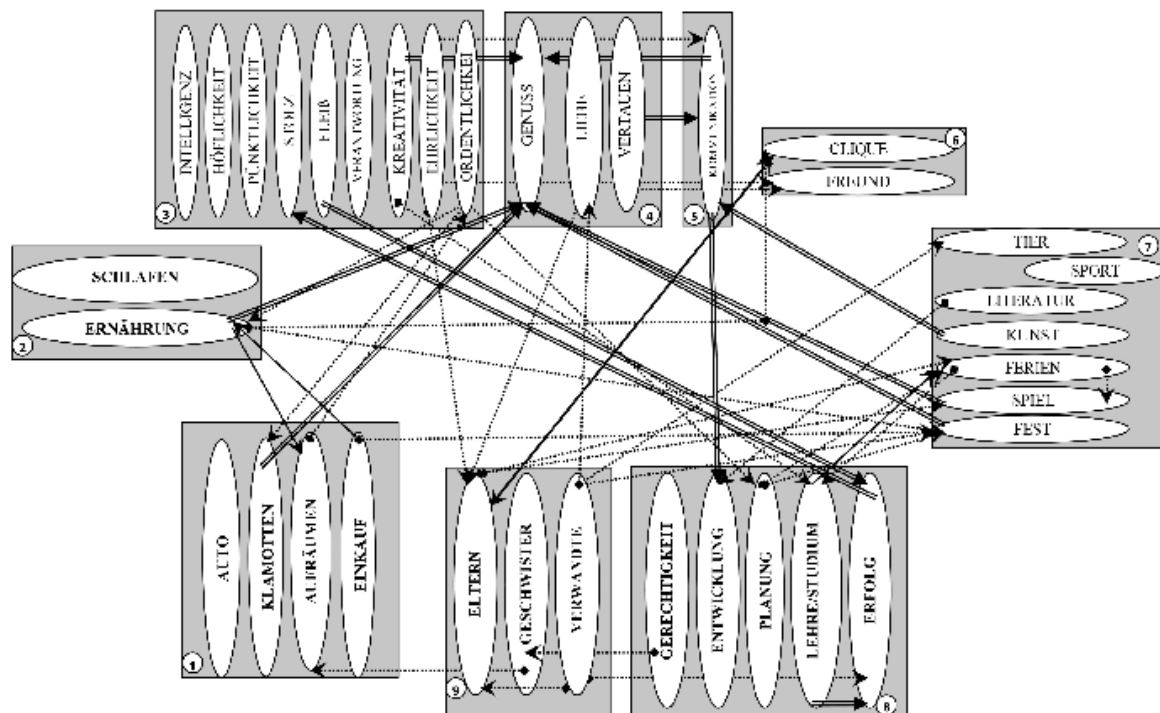
The research performed enables to state that the represented methodology of a detection of mental basis of different discourse practice types is applicable, relevant and efficient.

For instance, the study of the modern German cooperative parental discourse makes it possible to claim that its conceptual system is based on 37 autochthons<sup>16</sup>. They prove a relevance of an interpersonal (feelings, emotions and activity) and out-of-group (social values, service and leisure) information for a German family communication in a parental sector. It is revealed that the stereotypical priority of communication with children is an emphasis on social values and conventions (order, planning, development, study), as well as daily life physical needs (nutrition, sleep). Common everyday life and leisure are of a particular importance. Children are brought up to be tidy, diligent, responsible, polite, punctual, tolerant, sincere, clever, dignified and creative. The basis of feelings of a parental communication is trust, love and joy. An inner group of communicants include such important people as parents, brothers, sisters and relatives, while social group consists of friends and company.

Cognitive map of the modern German cooperative parental discourse (which besides autochthons, presents statistically verified connection between them) proves such main presuppositional ideas of the members (Figure 1): parents and children relations are based on feelings and emotions (16% of inter-conceptive correlations), socialization (24%) and upbringing (40%) in special ethnic values and traditions (19%).

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<sup>16</sup> Осовська І.М. Сучасний німецькомовний сімейний дискурс : ментальний і вербальний ресурс. Чернівці, 2013. 404 с.



1 – domain ‘domestic and financial-economic spheres’

2 – domain ‘physiology’

3 – domain ‘personality traits’

4 – domain ‘feelings and emotions’

5 – domain ‘verbal activity’

6 – domain ‘social activity and collaboration’

7 – domain ‘rest and leisure’

8 – domain ‘social values and conventions’

9 – domain ‘family affiliation’

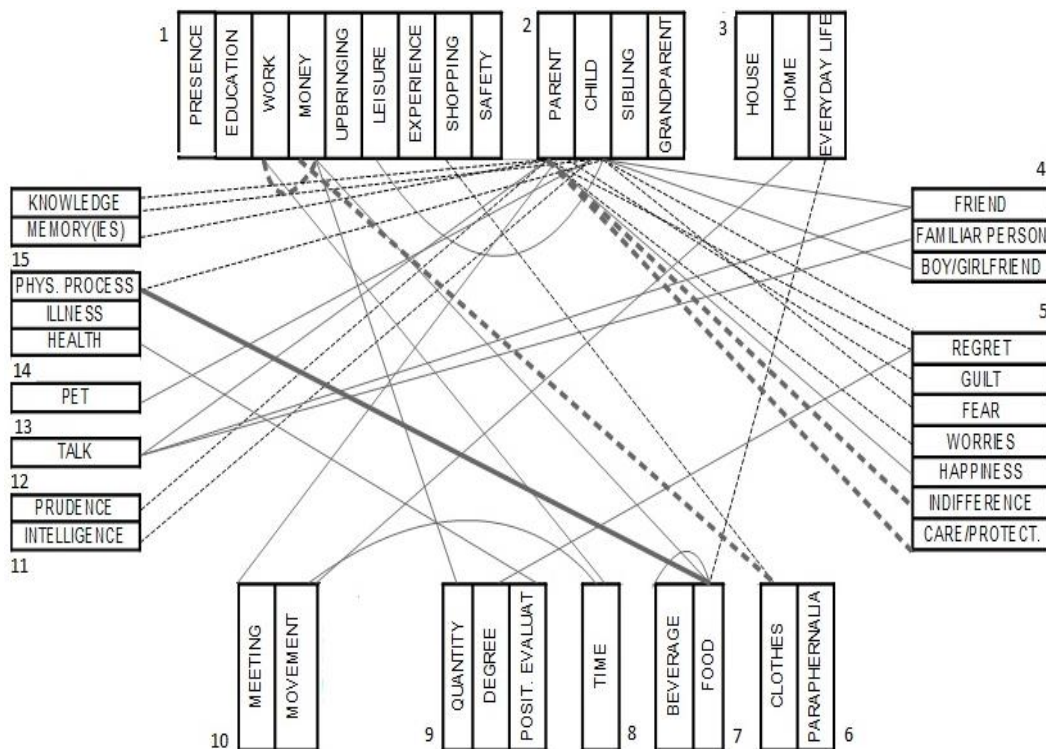
**Fig. 1. Cognitive map of modern German cooperative parental discourse**

Social conventions and values – tidiness in household and appearance, fair distribution of responsibilities and activity planning are vital for modern German cooperative parental communication. Parental love guarantees family unity. Diligence is a pledge of success of a child, which makes parents feel proud. Everything child participates in (study, celebration) should be creative and bring joy. Vital factor of an individual development is sincere and responsible communication – discussion of interests (art, literature, sport) or feelings with friends and parents.

The study of the modern British parental discourse, in particular, its cooperative and conflict types, with the help of proposed methodology<sup>17</sup>

<sup>17</sup> Коропецька О.І. Сучасний британський парентальний дискурс: когнітивно-семантичний аспект : автореферат дис. канд. філол. наук 10.02.04 – Германські мови. Чернівецький нац. ун-т ім. Ю. Федьковича. Чернівці, 2018. 20 с.

constitutes that: a) the conceptual system of the first type is formed by 45 autochthons, which claim that mental basis of cooperative existence of British parents and children forms information about family, heredity and health, house and presence in it, friends, support and care, work and money, emotions, physiological (water, food, sleep) and social (communication, upbringing, work) human needs, as well as necessity of an individual and social safety (habitation, health). 21 inter-conceptive couples with strong correlative connection prove the actuality for cooperative parental communication of the modern British family of information about parents functions in the process of upbringing – ensuring the basic needs, habitation, creating of safe life conditions and health of a child, respecting a child’s honour and dignity, forming of a child’s worldview, satisfying the requirements of communication and socialization. All examined information is represented in a cognitive map, which emphasizes on the main mental priorities of British people in a sphere of an appropriate communication between parents and children (Figure 2).



**Fig. 2. Cognitive map of the modern British cooperative parental discourse**

Mental resource of a conflict type of the modern British parental discourse is formed on the basis of 43 autochthons (for instance, UNDERSTANDING, KNOWLEDGE, WISH, FAIRNESS, WORK, MONEY, PRIVATE LIFE, TRUTH/LIE, MYSTERY, DUTY/OBLIGATION, MORAL, HOME, RESPONSIBILITY, INDEPENDENCE, AUTHORITARIANISM, INTELLIGENCE etc.), which prove that: dissatisfaction of actions of one of a family members provokes anger, disobedience of a child causes parents' fury, which may appear as a punishment, while an inappropriate reaction, as other members of a family may think, generates disagreement that appears as indignation; frequent educational measures and lectures directed to an individual responsibility for personal things, actions, future. In order to guarantee a peaceful life of a British family, it is vital for parents and children to communicate with each other, support one another, be interested and participate in family members' lives.

The study of two representation forms of the modern German matrimonial conflict discourse – literary and oral<sup>18</sup> resulted in the following conclusions: a) dominant position with significant overbalance in the conceptual system take 56 autochthons in oral (in particular, ZEIT, GEFÜHL, FEST, GELD, ARRFTT, STUDIUM, ERHOLUNG, BEWERTUNG, BEZIEHUNG, BEWEGUNG, AUSSEHEN, NATUR, ABSTRAKTE BEGRIFFE, GEISTIGE AKTIVITÄT) and 86 autochthons – in literary type (FAMILIENMITGLIEDER, ESSEN UND GETRÄNKE, KLEIDUNG, SACHEN/TECHNIK, GEBÄUDE, FARBE, PHYSISCHE PROZESSE, KOMMUNIKATIVE TÄTIGKEIT, LAGE, PHYSIOLOGISCHE PROZESSE, KÖRPERTEILE, NATIONAUTÄT/ RELIGION); b) statistically, 12 strong and 12 medium inter-conceptive autochthons connections are relevant for the literary form, while for oral – 7 strong and 8 medium, represented in cognitive maps, which reveal the basic knowledge of a married couple communication about certain phenomenon in their consciousness during a conflict interaction; c) for real life picture of the world, represented in the matrimonial conflict discourse, it is common to detect mostly abstract ideas of personal and spiritual (feelings, rest, evaluation, relations,

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<sup>18</sup> Гуцол А.М. Німецькомовний матримоніальний конфліктний дискурс: когнітивний вимір : автореферат дис. канд. філол. наук 10.02.04 – Германські мови. Чернівецький нац. ун-т ім. Ю. Федьковича. Чернівці, 2015. 20 с.

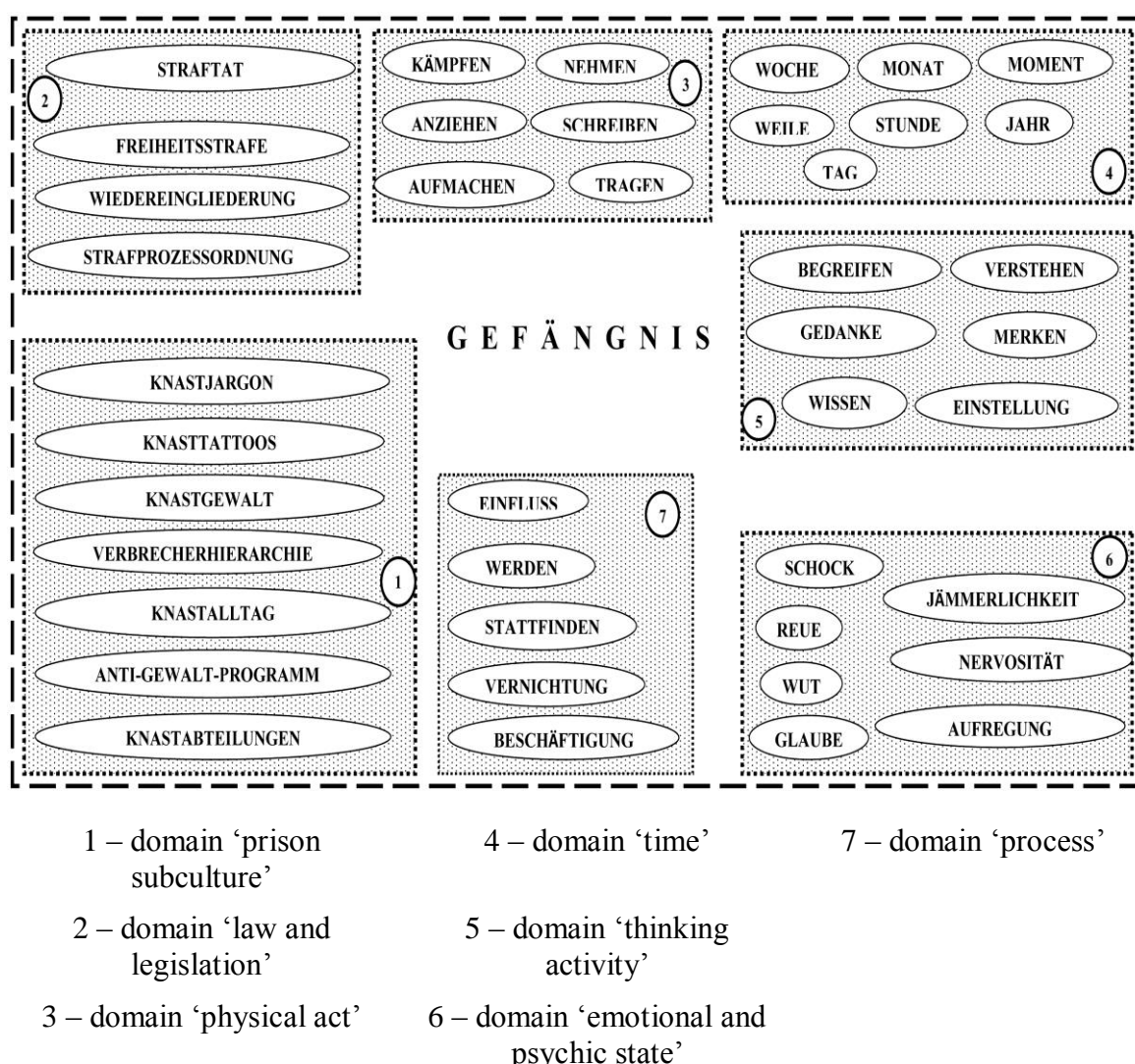
appearance, intellect), as well as general notions (time, activity, celebrations, nature). The component of rationality in a real life picture of the world is introduced as a step-by-step process of person's realization in society: firstly, education as a starting point for a professional career, then work that determines a social role of an individual, and finally, financial reward – money for the fulfillment of needs of a human and family. It is revealed that the formation of the modern genre of an author's worldview, represented in the literary matrimonial conflict discourse, includes shifts of emphasis towards the material side of a human's life as a biological creature (parts of body, food and drinks, physiological and physical processes), conscious in the environment (objects and technical devices, clothes, color, buildings, location), and as a social person (family member, communicative activity, nationality and religion) and at the same time, with complete insignificance of abstract and spiritual phenomena in comparison with a real life picture of the world, represented in an oral conflict of a married couple. In other words, the author's view changes the subject of the matrimonial conflict discourse worldview, making it socially oriented. An oral form in real life puts an emphasis on feelings as a necessary component of a married couple and family overall, which distinguishes it among other small social groups.

The study of cognitive space of the modern German prison discourse<sup>19</sup> also proves that communication between prisoners has different lexical meaning in the literary and oral forms (the range of full meaning vocabulary in the first form is 61,3%, while in the second – only 42,7%, which is, obviously, caused by an individual's preference in laconism and informational compression during communication). It is proved that: a) conceptual system of the modern German oral prison discourse includes 42 autochthons (Figure 3), while the literary one – 34 (Figure 4); b) the investigated conceptual systems are absolutely different: in German author's worldview (literary form of representation) knowledge about prison is actualized, first of all, as a social institution and conditions, in which the convicted complete their term. It is also stated that person as a biosocial creature, has his/her inner world and spiritual space, where belief in God takes a dominant place, as well as

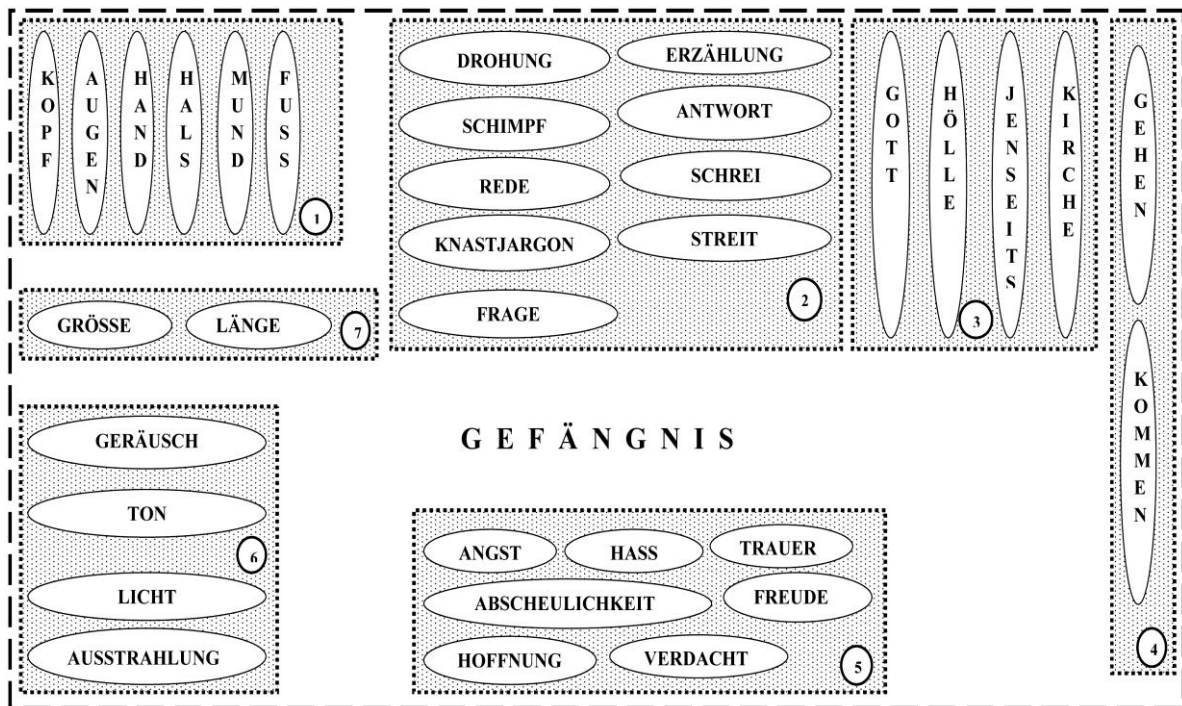
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<sup>19</sup> Томнюк Л.М. Сучасний німецькомовний тюремний дискурс (когнітивно-семантичний аспект) : автореферат дис. канд. філол. наук 10.02.04 – Германські мови. Чернівецький нац. ун-т ім. Ю. Федьковича. Чернівці, 2018. 20 с.

types of human activity, the main of which is communication. The least important spheres of knowledge operated by the prisoners and representatives of a penitentiary system are physical characteristics of objects of reality, sound and light phenomena (Figure 3). However, showing the peculiarities of communication between prisoners in real life, conceptual content of an oral representation form proves an active operation of knowledge about prison subculture, German code of criminal procedure, time, emotional and psychological condition of the convicted and cognitive procedures, which take place during correctional education of the criminal (Figure 4).



**Fig. 3. Cognitive map of the modern German oral prison discourse**



1 – domain ‘human body’

4 – domain ‘motion’

7 – domain ‘physical characteristics of an object’

2 – domain ‘speech activity’

5 – domain ‘emotions and feelings’

3 – domain ‘Religion / supernatural’

6 – domain ‘sound / light phenomena’

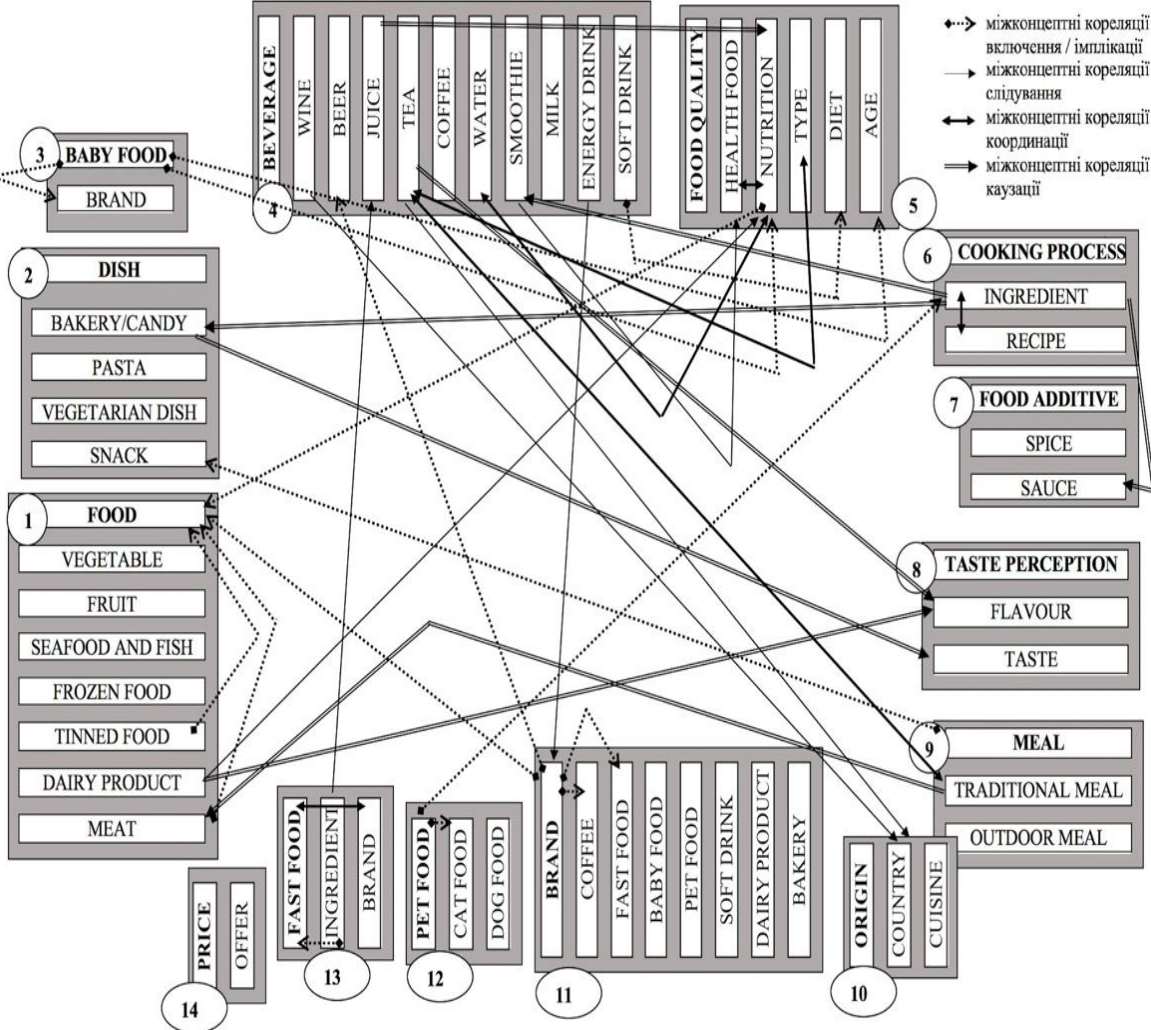
**Fig. 4. Cognitive map of the modern German literary prison discourse**

The study of mental basis of the modern English-language gastronomic advertising discourse using the above mentioned methodology<sup>20</sup> made it possible to state that the conceptual system consists of 49 autochthons and 37 inter-conceptive connections, which prove that the traditional English-language worldview, represented in the modern English-language gastronomic advertising discourse, can be characterized by significance of nutritiousness, brand, freezing and canning of products as the main way of their preservation and usage, taste and sensation, dietary description, baby food, food for animals, water,

<sup>20</sup> Савчук Т.Г. Когнітивна карта сучасного англомовного гастрономічного рекламного дискурсу. *Science and Education a New Dimension. Philology*. Budapest, 2018, VI (45). Issue 152. Pp. 60–65.



non-alcoholic drinks (tea, coffee, juice, smoothie), and alcoholic drinks (beer, wine, energetic drinks), bakery and sweets, where attention is paid to the quality of taste, fast food, recipe, healthy nutrition and meals as the most important factor in the process of person's nutrition, where emphasis is put on traditional or non-traditional conditions, sea products and fish, as well as prices for products, in particular, special offers and discounts.



**Fig. 5. Cognitive map of the modern English-language gastronomic advertising discourse**

**CONCLUSIONS**

The research performed enables to assert that the discourse cognitive system is an indispensable part of the individual cognitive space of a human being – a complex hierarchically structured self-regulating system

of formation and development of human experience. The main conceptual constants of its varieties, determined by its strategic-role divergence, are segments of a specific concept system. Including the structure of thinking of the group members in the cooperative / confrontation situation on the basis of texts produced by them, we tried to identify the elements integrating the discourse in the structures of thinking – concepts-autochthons that create a matrix, a framework, affect the process of linear strategic development. Discourse autochthons, like cores of a cognitive map, indicate apparent spheres of stability / instability в певному сегменті соціуму.

Cognitive maps of the discourse practices are complemented with a different quantity of original autochthon configurations, fixing certain relevant dependencies in the consciousness of the representative of the ethnospace. Schematically represented in the cognitive maps, they are reflected in the integrators – relevant prototypic presuppositions being the cognitive factors of the communicative activity.

The prospects of further research in this regard may be associated with an in-depth analysis of the elements and structure of the conceptual space of the other discursive practices based on the proposed methodology, in the comparative linguocultural dimension in particular.

### **SUMMARY**

The article proves that the methodology of the cognitive mapping of the discourse is efficient and appropriate. It consists in a reconstruction technique of the conceptual system of the discourse on the basis of a synthesis of conceptual analysis and linguoquantitative methods. It allows to create a cognitive map, which schematically traces the integral mental representation of the discursive practice of a certain type in a statistically verifiable conceptual structure and a correlations system between its elements.

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