Associative Way from Perception to Understanding: Associative Field vs Lexical-Semantic Field

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Abstract: Nearly 1000 associative connections between words-stimuli of the economic area (capital, businessman, dumping etc.) and reactions to them obtained through the free associative experiment have been comprehensively analyzed in the article. Basic types of reactions have been characterized, their frequency ratios have been defined and the core-periphery relationship has been established. Associative fields and associative value of stimuli have been simulated. In the paper there was introduced the concept of lexical-semantic field by the author and the comparison of the lexical-semantic field and the associative field have been made. According to this procedure the similarities and differences between the linguistic picture of the world fixed in the dictionaries and the known concepts perception by modern native speakers have been delineated in this paper. In this way the dynamics of semantic changes has been revealed, i.e., the character of the linguistic picture transformation according to extra linguistic conditions. The methods of this work were manifold (free associative experiment, simulation, analysis of lexicographical definitions, elements of component analysis, comparative method and descriptive techniques such as continuous sampling, linguistic observation, generalization) which ensures the reliability of conclusions.

Key words: associative experiment, stimulus, reaction, associative field, lexical-semantic field, linguistic world picture of the native speaker

1. Introduction

Language as a form of existence of the mental activity covers all areas of individual and social life and it is an integral part of the human nature. It is clear that, words do not exist in our minds in the isolation from one another; they are all linked by various relations. Even when one word in a sense is present in our minds, others that remain in the shadows are related by the finest threads, ready at any moment to break into our consciousness. When we talk about the same concept and its interpretation by different people (do not mention to the people of different nationalities), this word takes many connotative meanings.

Associations studying and establishing of the associative relations between concepts in the minds of respondents allows to identify the individual world perception, to determine the semantic words structure, to

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represent associative concepts and to build a piece of the world picture. The associative experiment helps to identify the set of appropriate values. The associative experiment is an effective means of the access to the verbal consciousness, and the set of all reactions received from the associative experiment forms the associative value field of the concrete stimulus.

2. What is Associative Field?

Associative field is the set of word-reactions to the same source word, a set of associative ideas, one way or another associated with the word, but issued verbally (Ulianov, 1988). For example, the associative field of the stimulus BALANCE is formed by the following reactions: active/passive, wealth, balance, bank, ATM – 1[*], accountant – 2, accounts – 6, accounting – 2, budget – 2, money –142, amount of money – 87, speaker, discount card – 1, economy – 3, balance – 12 account balance, salary, balanced – 5, normal – 12, report – 19, impairment, yogurt, card, card balance – 18, quantity fluctuations, costs, limit, ball, mobile – 8, display, storage, inconsistency, do not know – 1, rule, zero – 18, number of money, enterprise, centered, profit, interest, credit score – v114, bank account, level – 2, equal, equality in all respects, balance – 93, uniformity, difference – 1, middle, system stability – 1, account status, standard, stability, amount, amount of money, charts, scales, financial – v16, something, something finished, etc.; the lack of the response 26. The associative field of the stimulus BANK includes reactions: index – 1, Aval – 33, a lot of money – 18, bank Vabank, banker – 1, ATM, house, building – 13, building, structure, currency – 12, large, profitable investments, invested – 1, grants, money – 161, cash center, cash transactions where money is stored, deposits, dividend, director, Exim – 1, salary – 1, to save money – 12, capital – 17, commercial funds – 16, credit – 81, loans, lender, lots of money – 5, people, million, place for money, place to store money, NBU, unpleasant, association, exchange, lending rates, organization – 4, transfers – 4, enterprise payment, loan – 2, service, Pravex – 2, Privatbank – 29, warehouse fee – 12, structure, storage, institution – 46, finance – 13, financial organization – 5, etc.; lack of the response: 3.

After reactions analyzing of the appropriate stimulus we can conclude that associative fields are rather stable and relationships between words are repeated regularly, for example, on the stimulus CAPITAL answer *money* repeated among recipients 132 times, *holding – 89, savings – 69, accumulation – 51, investment – 27*, and so on. The material analysis of the associative fields shows that they have unclosed character: in case of the experiment continuation and the participation of the greater number of informants, individual reactions will grow with the number of standard reactions (Butenko, 1979).

Associative field is a specific cognitive structure of the verbal consciousness, which is involved in the forming of the conceptual picture of the world. The field of reactions received on the stimulus allows to speak about the psychological structure of the original word meaning as a complex phenomenon, characterized by a number of parameters, including the presence of some emotional stress. This is reflected in the realization of the evaluation moment or related with emotional characteristics, emotive feelings (Goroshko, 2001).

The study of the associative word structure suggests that it represents a microsystem in which there are the core (nexus) and the periphery, in the set of semes presented in a word, we can allocate main that reflect essential features of the denotatum without which the named object does not exist as such, and uneven — such, that reflect the second — rate signs of the subject. The core (nexus) vocabulary has the important semantic meaning. The connection of the core (nexus) of the lexical system and the periphery can be interpreted as "... dialectical unity of

[*] each time the figure means the number of repetitive reactions among recipients.

general and single, which can be determined by the basic laws of human consciousness and existence, in which a tendency to generalize and a tendency to specify are good linked" (Zolotova, 1987). In our case, core (nexus) reactions are repeated more than ten times. All other reactions form the periphery of the associative field. For example, the core (nexus) of the stimulus CAPITAL includes reactions: money + 132, deposits – 89, accumulation – 124, attachments – 27, estate – 23, income – 23, future – 19, large – 14, bank – 13, starter – 22; the periphery: $ – 8, Marx – 6, savings – 4, abundance – 3, preservation – 3, riches – 2, budget – 2, cash –2, earnings – 2, many – 1, plenty of money – 1, property – 1, well – 1, investment, enterprise, family – 1, the amount of – 1 and others. The core of the associative field DUMPING includes such reactions: reduction – 215, price – 146, economy – 116, prices – 74, do not know – 46, lower prices – 34, discount – 80 dumping – 12; the periphery: money – 8, low price – 6, sport – 5, depreciation – 4, inflation – 4, falling down – 4, game – 2, lowering – 1, camping – 1, jump – 1, rate – 1, antitrust impact, currency, commodity price and others. The core of the associative field BUSINESSMAN: entrepreneur – 334, lots of money – 85, rich person – 60, person – 44, money –33, business – 32, successful person – 32, rich – 53, rich man – 11; the periphery: cool – 7, people – 7, owner of – 2, business person – 2, guy –2, oligarch – 1, $, auto, rich Pinocchio, wealth, Lexus, a man with money, a person who earns money, the man who has much money and others.

The core of the associative field of each stimulus is formed by the most active units that come in a number of different connections. These units have the following features:

- high frequency, for example, on the stimulus LICENSE reaction resolution is repeated 318, right–96, document – 71, legality – 24, warranty – 12, goods – 12; DEVALUATION: inflation – 266, money – 115, of production – 18, of goods – 16, of item–16, crisis – 15, loss – 12, of hryvnia – 10;
- elementary form. All high-frequency units — are in most cases one lexical item — a noun in the nominative case, for example, BUSINESSMAN – businessman – 320, person – 44, money – 33, business – 32; LICENSE – resolution – 318, right – 96, document –71, legality – 24, warranty – 12, goods – 12;
- rather universal value. It usually has the categorical seme and one or two differential characteristics [91, p. 107], for example, DUMPING – decrease 215, price – 130, economy – 116, prices – 74, do not know – 46, lower prices –34; CAPITAL – money–132, deposits –89, accumulation – 120, investments – 27, property – 23, profit – 23.

Core reactions express the cognitive structure of consciousness of the average native speaker. The cognitive structure of the associative field represents the ratio of "language and people" because there is no knowledge without their unit. Units, forming a pragmatic structure of the field find reflected in the language relationship "man-reality" (Goroshko, 2001).

3. What is Lexical-Semantic Field?

The analysis of associative fields of stimuli suggests that the reactions in the associative field are not simply connected with each other, but also have certain semantic links. Therefore, with the concept of "associative field" we distinguish the concept "lexical-semantic field".

In modern linguistics lexical-semantic field is defined as a set of lingual (mainly lexical) units united by common content (sometimes also formal common indicators) and reflect the conceptual, substantive or functional similarity of denoted phenomena (Online Encyclopedia Krugosvet, 2015). Reactions that are common in sense (common component of value), have a common theme and reflect the conceptual similarity of the described

phenomena relate to lexical-semantic fields of the economic stimulus area. To the lexical-semantic field of the stimulus TAXES such reactions belongs: payment – 22, deposits, money – 170, state – 17, income, take money, wage – 3, collect – 88, collecting money – 2, extortion – 3, funds – 2, commitment, duty, fee – 53, charged in state payments – 54, payments required – 6, pay – 11, payment obligation to the state, tax – 23, payments – 6, pay – 3, charged to, charged to the money – 3, penalty – 13, profit given to the state, something to give etc. The lexical-semantic field of the stimulus BUSINESSMAN: rich man – 61, rich – 42, wealthy people – 12, a lot of money – 86, wealth, business – 33, businessman, businessmen, owner – 3, money – 34, business man – 3, business people, busy man, busy, wealthy man – 45, a person with money, a person who earns money, the man who has much money, millionaire, oligarch – 2, entrepreneur – 275, profit, employer, successful person – 33, successful people – 8.

The lexico-semantic field — a complex lexical microsystem, combining words according to the semantic principle and has a specific field structure. Whereas the basis of the field building has the hierarchy principle the lexical-semantic field consists of microfields. Lexico-semantic field has important structural features — the relationship of elements, their ordering and hierarchy. In addition, a number of linguists define the characteristics that distinguish lexical-semantic fields among different linguistic systems. These features include: lack of clear boundaries, openness and, consequently, the interaction with other fields, the components ability to attract other elements of the field, the presence of gaps, asymmetry of the construction, autonomy, independence in the lexical-semantic system, specificity in different languages (Kurenkova, 2008).

The analysis of reactions in the lexical-semantic field indicates that it is intuitive understandable to the native speaker and has a psychological reality; it is independent and can be selected as an independent subsystem of the language; Units of the lexical-semantic field are connected by certain semantic relations; each lexical-semantic field is associated with other fields of the language and together with it forms a linguistic system.

The analysis of lexical-semantic fields has allowed to reveal the main properties (Chumak-Zhun, 1996):

(1) Lexical-semantic fields are formed by a large number of values that have at least one common component (a common semantic feature). This component is usually expressed by arhilexeme (hiperlexeme), lexeme of the generalized value.

(2) The internal structure of the field is understood as a set of correlations that link the semantic units.

(3) The definiteness of elements is characteristic for the field that sometimes appears in the form of interchangeability of components.

(4) Lexical-semantic fields are not isolated from each other. Every word belongs to the lexical-semantic field, and, in most cases, because of its multiple meanings, not only one field.

(5) One lexical-semantic field may belong to another field structure of higher level.

In the lexical-semantic field microfields have been defined too — semantic associations whose members are connected by the integrated basis, expressed by the dominant of the microfield (the core lexeme). The external structure of the microfield has the core and several areas, some of which may be located close to the core (the near periphery), and others — in the periphery of the microfield (the distant periphery). For example, the lexical-semantic field of the stimulus PRIVATIZATION include core reactions: property – 158, appropriation – 100, assignment – 66. All other reactions form the periphery: take a good – 9, private property – 2, private, privacy, purchase, assignment of something, something to give and others. The core of lexical-semantic field DUMPING includes reactions: reduction – 216, discount – 60, lower prices – 35, off – 22. All other reactions form the periphery of the field: lowering – 2, impairment – 5, lower costs, lower prices – 7, restrictions, limitations, prices

falling down – 5 and others. The core of the lexical-semantic field SALARY is formed by reactions: money – 313, profit – 18. Other reactions of the field belong to the periphery: \$ – 5, much money, currency, reward – 8, remuneration, rate – 2, UAH, money for work – 2, gratitude for the service, wages – 7, earnings – 5, earned money, pennies, pay, get money – 3, get payment for work, payment for work, pay, payday, profit – 8, income for work, work – 2, scholarship – 2 and others.

In the analyzing process of the core and the periphery of lexical-semantic fields we can clearly see the organizing of fields by not binary opposition of relevant/not relevant, but by the principle of the graduation — the degree of signs importance: the center is formed by high degree of determinism, the periphery combines unites with high variability, for example, core reactions in the lexical-semantic field of the stimulus CAPITAL are money + 132, deposits + 89, savings + 120, investments +27, decrease + 215, price + 130, prices + 74, lower prices + 34, discount + 80. BUSINESSMAN – businessman + 320, person + 44, money + 33, business + 32 successful person + 32, entrepreneur +12; LICENSE – permission + 236, right + 96, document + 71, resolution + 42, legality + 24, warranty + 12.

Exploring all lexical-semantic fields there is evident that they are different in terms of the vocabulary of the material and their composition may include words of different parts of the speech based on the semantic similarity. For example, the lexical-semantic field of the stimulus TAXES includes the following parts of the speech: nouns (61%): business, budget, state, fees, collection, commitment, responsibility, credit, payment, taxes etc. Adjectives (18%): large, very large, mandatory. Verbs (9%) collect, pay etc. 12% of the semantic fields occupy phrases such as: public work required payments, replenishment, public regulation, payments to the state etc. In the lexical-semantic field of the stimulus INFLATION – nouns – 83%, for example, bankrupt, expense, loss, money, reduction, impairment, reduction, crisis, unemployment, crisis, lack etc. Adjectives – 9%, for example, special, public, large etc. Participle – 1%, for example, growing. Adverbs – 0.9%, for example, not very good, always. Word-combinations make 6.1% of the lexical–semantic field, like a lot of money, precious money, the decline of the country, currency devaluation, impairment of public currency, rising costs, price increases and others. Components of lexical-semantic fields belonging to different parts of speech are in complicated ways — semantic, derivational, structural, and etymological.

4. Assosiative Field VS Lexical-semantic Field

We define the associative field as the associative-semantic construct, realizing its connections within a particular semantic field, but never quite the same with it. To the lexical-semantic field we refer reactions that are common in sense (the common component of value), connected by a common theme and reflect the conceptual similarity of the described phenomena.

For example, stimulus BOND

Assosiative Field	Lexical-Semantic Field
Core: money – 81 document – 80, paper – 55, securities – 148, papers – 35 security – 34, bank – 24 contributions – 24, paper – 19, piece of paper – 15, economy – 14, paper – 13. Near periphery: people – 9, documents – 8, a large amount of money – 2, property – 5, grade – 2, shares – 6, commitment – 3 operations – 3 attachment – 2, debt – 2, take – 2. Distant periphery: stocks, application, banking bill, business, budget, banknote, a large sheet of paper, deposit money, state document that can be used, valuable paper, securities, paper for attraction of funds, money paper, money operations, commitment, value, deposits, generation, money for vouchers, cash, currency, state document that can	CORE: money – 81 document – 80, paper – 55, securities – 148, papers – 35 security – 34, bank – 24. Near periphery: people – 9, documents – 8, a large amount of money – 2. Distant periphery: state document that

be used, stock shares, collect, capital investment, amount of money, movie, team, valuable paper, securities, credit, man, Manko, navigation, blending, blending duty trash, oblihator, ok, paper, test, review, representation, taxes, big fish, occupation, certificate stable antiquity, sphere, Ltd, something in economics, something to do with money etc.	can be used, valuable paper, securities, paper for attraction of funds, money paper, money operations, commitment, commitment, value.

Stimulus TENDER:

Assosiative Field	**Lexical-Semantic Field**
Core: competition – 123 competitions – 88, do not know – 83 Economics – 49, gender – 48, business – 36, win – 28, resolution – 28, choice – 27, profit – 24, bids – 24, fighting – 20.	Core: competition – 123 competitions – 88, bids – 24, fighting – 20.
Near periphery: auction – 7, right – 9, action – 4, money – 4, sale – 4, advertising – 4, trend – 4, commerce – 3, dispute – 4, sale – 4, advantage – 3, market – 3, price – 6, bank – 2, exchange – 5, building – 2, exhibition – 2, property – 2, paper – 2, purchases – 2, international – 2, design – 2, for sale – 2, pay – 2, rate – 2 etc.	Near periphery: auction – 7, right – 9, commerce – 3, dispute – 4, sale – 4, advantage – 3.
Distant periphery: ☺, Bender, big money, choose another sign, won, winning, case, allocation of funds, high window, deposit, deposits, set minimum prices, hambur, money for development, congress of the acquisition, assembly, earth changes, competition, agriculture and line license, people, property, mark the monopoly place on gasoline prices, face, paper, test, win, championship, promotion, pay, poor thing in our country, the concept of the right to something, prerogative, profit, implementation, project level, equality, drawing, word, communication, tandem, tenders, toaster, coach, participate in the competition, football, bribe and so on.	Distant periphery: many members of which elected one, choose one winning business, funding, competition, championship, prerogative, participation in the contest, competition, obtaining right, right to run the projekt, transaction, competitions for rights.

The analysis of associative and lexical-semantic fields shows the common and different elements in their structures. All reactions of lexical-semantic fields belong to the structure (core-periphery) of the associative field. But reactions that have no direct connection with the semantic stimulus and only externally in tune with it, or even have a resemblance are not included to the lexical-semantic fields. For example, the lexical-semantic field of the stimulus BOND does not include reactions: Manko, Manko — bond, fish, navigation, etc; TENDER — do not know, gender, Bender, tandem, toaster, trend, football, etc. The volume of the associative field is always greater than the lexical-semantic field and includes all recipients' reactions, allowing to state peculiarities of the world picture of every native speaker.

5. Methodology

The analyzed empirical data were collected using the free associative experiment. The results obtained in the experiment course were processed using statistical methods: hierarchy detection of frequency reactions in the associative field of each stimulus; counting the number of identical answers and the total number of associates at a certain stimulus. For the classification we use the modeling method (including modeling of the associative fields). For analyzing and comparing associative values of lexicographical definitions there were applied elements of the comparable method. At all stages of the research the descriptive methods (continuous sampling, linguistic observation, comparison, generalization) were used.

6. Conclusion

Every verbal reaction, we have not studied in the isolation from the stimulus, but in relation to it, which made it possible to analyze the reasons of certain reactions occurrence ie. to reveal reflected relationships in these

respects between words in the language system. The set of all reactions form the associative field. It includes as the structural element the lexical-semantic field. The structure of the lexical-semantic field includes only reactions that have a direct semantic link with the stimulus. The semantic field is isomorphic with the associative field structure: core and periphery. The analysis of reactions in both lexical-semantic and associative fields allows concluding that the concept of "associative field" is more voluminous and meaningful than the concept of "semantic field". All core and periphery reactions of the lexical-semantic field are the elements from the associative field structure. The set of associative fields represents a world view peculiarities of language native speakers.

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