МОВНИЙ ТА МОВЛЕННЄВИЙ МАТЕРІАЛ У ЙОГО СЕМАНТИЧНІЙ, СТРУКТУРНІЙ ТА СТИЛІСТИЧНІЙ ІНТЕРПРЕТАЦІЇ

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VERBALIZING QUANTITY

Процес квантифікації представлений не лише у математиці, але й у мові. Наше дослідження ґрунтується на вивченні лексеми 'quantity'. Ми формуємо концептосферу 'quantity', будуємо лексико-семантичне поле даної лексеми та виділяємо шляхи її вираження.

Ключові слова: *квантифікація, підрахування, число, означеність, неозначеність, кількість, концепт, значення, компонент значення, лексема, лексико-семантичне поле, концептосфера, дефініційний аналіз, визначення слова.*

The process of quantification is represented not only in mathematics, but also in language. Our research is based on the study of lexeme 'quantity'. We model the conceptual system of 'quantity', build lexico-semantic field of lexeme 'quantity' and define the ways of its verbalization.

Key words: *Quantification, counting, number, definiteness, indefiniteness, quantity, concept, meaning, meaning component, lexeme, lexico-semantic field, conceptual system, definitional analysis, word definition.*

The process of quantification has two different meanings. In mathematics it refers to human acts, known as counting and measuring that help mapping human sense observations and experiences into members of some set of numbers [1]. The study of quantification has been widely investigated by Barwise and Cooper (1981), Higginbotham and May (1981), and Keenan and Stavi (1986), J. Channel (1990), K. Bach (2000), L. Matthewson (2001), M. Coop Glanzberg (2004). In the course of time the investigation of quantification process glides from the sphere of mathematics into the sphere of language.

Quantification in natural language has been investigated by philosophers, logicians, and linguists: J. Channel (1990), K. Bach (2000), L. Matthewson (2001), M. Coop Glanzberg (2004), N. Artyunova (2005), V. Levytskyj (2004), B. Toshovytch (2005), L. Hruzhak (2008). In linguistics, quantification refers to binding a variable ranging over a domain of discourse [1]. The variable thereby becomes bound by an operator called a quantifier [1].

The topicality of the investigation lies in the study of quantification process in natural language.

The objective of the paper is to model the conceptual system of quantity and to define the ways of its verbalization in language competence.

Quantification is a complex process referring to human acts, such as counting and measuring that cover human observations and experiences into a set of numbers. In language, quantification is a process that specifies quantity of individuals of the domain of discourse that refers to an open formula. The variable becomes bound by a word called quantifier. The resulting expression is a quantified expression, and we say that we have quantified over the predicate or function expression whose free variable is bound by the quantifier. The investigation of the categories related to quantification process: number and definiteness (indefiniteness) is essential. A number is a mathematical object used in counting and measuring. A notational symbol which represents a number is called a numeral, but in common usage the word number is used for both the abstract object and the symbol, as well as for the word denoting number. In linguistics the ways of expression quantity are somewhat different, than in mathematics or logics. We define quantity of a group of given subjects in two ways: accurately naming the exact number of objects or doing it approximately, not using numerals, but quantifiers. In the English language there are not only numerals to inform us about quantity of things, but also quantifiers. Quantifiers that do not inform us about the precise quantity or number of objects (substance or subjects) are called vague. Vagueness quantifiers do not emphasize the precise number of objects or value of substance they describe. In English the examples of quantifiers can be represented by: for all, for some, many, few, a lot, no etc; e. g.:

1. *It was just six o'clock and there was supper in **every** hurrying pedestrian's face* [4].

2. *One might see, now, **some** of the chief characteristics by contrast* [4].

3. *Ten thousand dollars. I heard he sent **most** of it back afterwards, though* [4].

4. *He troubled over **many** little details and talked perfunctorily to **everybody*** [4].

5. *Made **a lot of** money in his time, though, hasn't he?* [4]

All known human languages make use of quantification [3, c. 131]. Quantification is used in both formal languages and natural languages. In formal languages, quantification is a formula constructor that produces new formulae from old ones. The language semantics specifies how the constructor is interpreted in terms of validity. Quantification is an example of a variable-binding operation.

Talking about the process of quantification in language we are to investigate the conceptual sphere of quantification. We do that by modelling and classifying the lexical meanings of the word under study. The concept of quantification in language includes the following notions: quantify, quantity, measure, gradation, graduation, measurement, measuring, measure, mensuration, restriction, limitation, calculus [9].
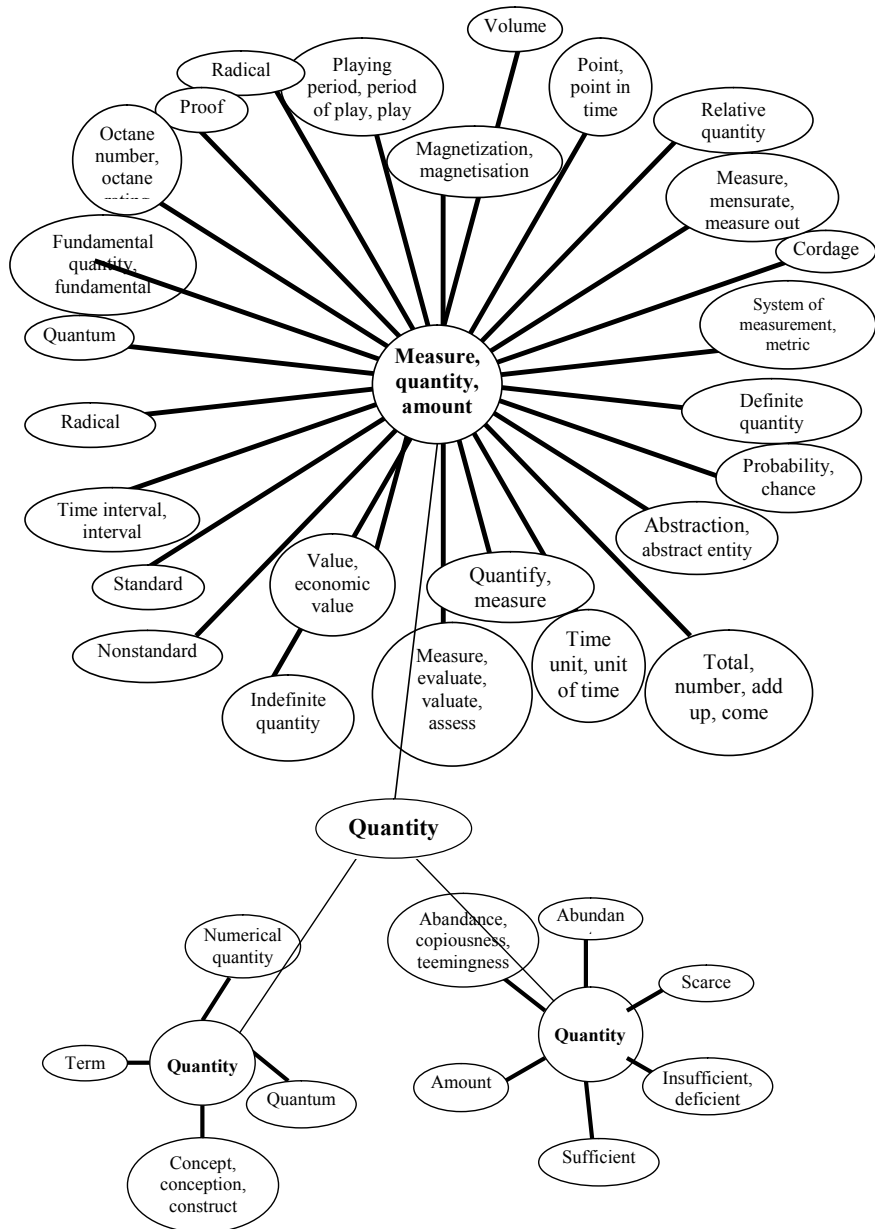
The concept of quantification includes the notion 'quantity'. But what concept does this lexeme have? Quantification process deals with amount and number of objects and subjects. That is why the notion of 'quantity' itself should be connected with number and amount of things.

The concept of 'quantity' is connected with the following notions: measure, amount, volume, probability, chance, relative quantity, abstraction, time interval, proof, point, indefinite quantity, metric, definite quantity, mathematical product, abundance etc [9]. Graphically the concept of 'quantity' is represented in Graph 1, where each circle stands for a word that is a part of concept quantity. Graph 1 contains nouns, verbs and adjectives. All of the words are connected with one another being synonyms, derivatives or opposites of the meaning components of 'quantity'. The widest variety of components is formed by the concepts of 'measure', 'quantity' and 'amount'. This conceptual system leads our research to investigation of the lexical meanings of lexeme 'quantity' in order to build its lexico-semantic field.
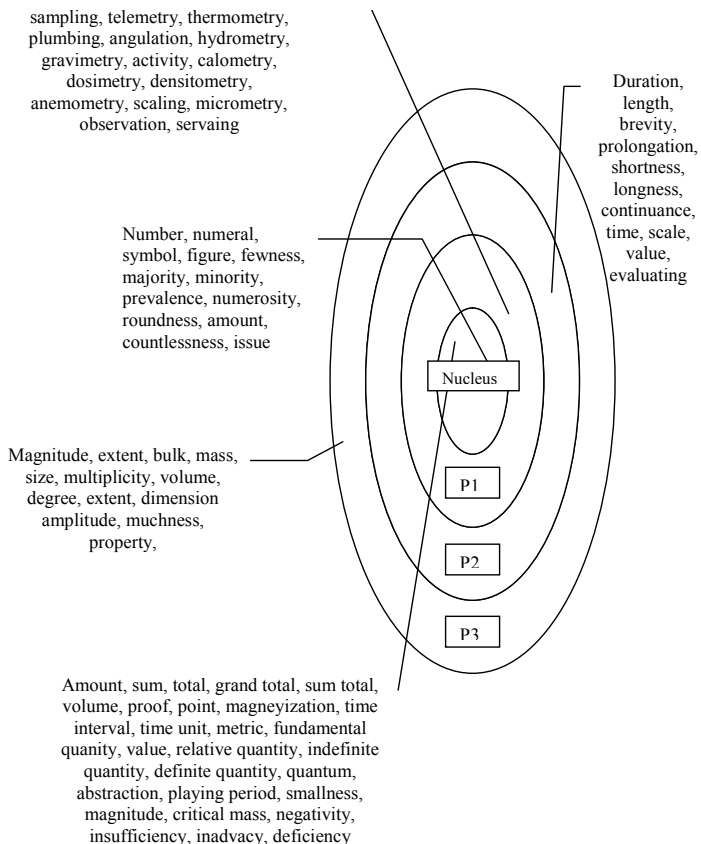
We have classified the lexical meanings of the word 'quantity' and presented them in the Table 1. We have chosen the most popular explanatory dictionaries to show the use of componential meanings of the lexeme 'quantity' in the English language.

Table 1
Definitional Analysis of Meanings of Lexeme "Quantity"

	The meaning of the lexeme	Oxford Advanced Learner's Dictionary	Encarta Dictionary	Collins Dictionary	Webster Dictionary
1	An amount or number of smth.	+	+	+	+
2	The measurement of smth.	+	+	–	+
3	A large amount or number of smth.	+	+	–	+
4	Things that are produced or available in quantity	–	–	+	–
5	You can use quantity to refer to the amount of smth., that can be contrasted with the quality	–	–	+	–
6	When someone/smth. is an unknown quality, it means that not much is known about what they are like or how they will behave	–	+	+	–
7	(phonetics) duration of speech sound	–	+	–	+
8	(logic) universal or particular nature of proposition	–	+	–	+
9	(math) entity with numerical value	–	+	–	+

Graph 1. Conceptual System of'Quantity'

sampling, telemetry, thermometry, plumbing, angulation, hydrometry, gravimetry, activity, calometry, dosimetry, densitometry, anemometry, scaling, micrometry, observation, servaing

Duration, length, brevity, prolongation, shortness, longness, continuance, time, scale, value, evaluating

Number, numeral, symbol, figure, fewness, majority, minority, prevalence, numerosity, roundness, amount, countlessness, issue

Nucleus

P1

P2

P3

Magnitude, extent, bulk, mass, size, multiplicity, volume, degree, extent, dimension amplitude, muchness, property,

Amount, sum, total, grand total, sum total, volume, proof, point, magneyization, time interval, time unit, metric, fundamental quanity, value, relative quantity, indefinite quantity, definite quantity, quantum, abstraction, playing period, smallness, magnitude, critical mass, negativity, insufficiency, inadvacy, deficiency

Graph 2. Lexico-semantic Field of Lexeme 'Quantity'

Definitional analysis is applied to the study of the concept of 'quantity' in order to build its semantic field. Definitional analysis comprises the act of defining a word in a number of different dictionaries and it shows the most frequent lexical component of meaning that occurs in each dictionary under study. Definition is the act of defining a word, phrase, etc [6].

The results of the definitional analysis represented in Table 1 indicate that the most frequent in use is the component 'an amount or number of something', which appears in each dictionary under study. So this component is the dominant meaning-component of lexeme 'quantity'. The least frequent are components, such as 'things that are produced or available in quantity', 'you can use quantity to refer to amount of something that can be contrasted with the quality', 'particular magnitude of something'. The components of

meaning that occur in three out of four dictionaries are 'the measurement of something', 'a large amount or number of something'. The components, which occurred only twice, are 'when someone/something is an unknown quality, it means that not much is known about what they are like or how they will behave', 'duration of speech sound', 'universal or particular nature of proposition', 'entity with numerical value'.

The definitional analysis represented above outlines the frequency of dictionary components' use of lexeme 'quantity' in English. On the basis of our definitional analysis we have built a lexico-semantic field of the following lexeme (see Graph 2).

Lexico-semantic field of lexeme 'quantity' is represented by the nuclear components of word meaning (Nucleus), the most frequently occurring components of the meaning in the investigated dictionaries that form the centre of our lexico-semantic field; and periphery (P1, P2, P3), the less frequent components of meaning. Therefore the component of meaning, which occurs in the dictionaries the least number of times, forms periphery, P3, situated on the largest distance from the nucleus of the field. The similarity of the parts of speech that are presented in Graph 2 shows that the field is lexico-semantic.

We have represented the concept of quantification and exemplified the use of its components of meanings in the language competence. We have also built up a conceptual lexico-semantic field of the lexeme 'quantity' to emphasize its relation to the process of quantification as a process of determination of amount and number of something. Our future impetus is to build up a functional semantic field of the lexeme 'quantity'.

Literature:

1. Артюнова Н. Д. Проблема числа: Сб. Логический анализ языка. Квантификативный аспект языка / Артюнова Н. Д. – М.: Индрик, 2005. – С. 5-21.

2. Грижак Л. Детермінація та індикація в системі англійської мови / Грижак Л., Ніколаєва Т. // Актуальні проблеми романо-германської філології в Україні та Болонський процес: Матеріали Міжнародної наукової конференції (24-25 листопада 2004). – Чернівці: Рута, 2004. – С. 64 – 66.

3. Wiese H. Numbers, language, and the human mind / Wiese H. – Cambridge: CUP, 2003. – 239 p.

4. Dreiser T. Sister Carrie / Dreiser Theodore. – Dover Publications, 2004. – 368 p.

5. Collins English Dictionary [Електронний ресурс] – 8th Edition first published in 2006 HarperCollins Publishers.

6. Encarta Dictionary 2009 [Електронний ресурс] – 1993-2008 Microsoft Corporation.

7. New Webster's Dictionary [Електронний ресурс] – Режим доступу до сайту: http://www.merriam-webster.com/dictionary/group.

8. Oxford Dictionary (En-En) (для ABBYY Lingvo x3) [Електронний ресурс] – Oxford Dictionary of English, Revised Edition. Oxford University Press 2005.

9. Visuwords, online graphical dictionary [Електронний ресурс] – Режим доступу до сайту: http://www.visuwords.com/?word=quantification.