LINGUISTIC INTERVIEWING AS A METHOD FOR DETERMINING THE DEGREE OF REPRESENTATIVENESS OF ANTONYMOUS PAIRS IN THE ENGLISH LANGUAGE

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Abstract. In this article, the degree of representativeness of the examples (pairs of lexical units) which illustrate antonymous relations in the English language has been determined, utilizing the method of linguistic interviewing. The article presents the procedure and the results of the psycholinguistic experiment conducted. The peculiarities of the method of linguistic interviewing as a type of psycholinguistic experiment have been defined. A selection of antonymous pairs provided by leading linguists in the area of lexical semantics as illustrative examples in thirteen English-language linguistic works (monographs, textbooks and linguistic encyclopaedias) serves as the material for the experiment. All of the 101 respondents are scholars in the field of linguistics (Candidates (Ph.D.) and Doctors of Philological Sciences, as well as postgraduate students from the higher educational establishments of Ukraine), and are native speakers of Ukrainian, English being their first foreign language. In the experiment, the respondents were to identify which pairs of lexical items given in the list illustrate the relation of antonymy. After analyzing the results of linguistic interviewing, we were able to determine the pairs of antonyms with the highest and the lowest degrees of representativeness. The research demonstrated that gradable and complementary antonyms, mainly adjectives, have the highest degree of representativeness. In addition, we identified certain correlations with the results of linguistic interviewing conducted earlier, the respondents being linguistics scholars, including university and college professors, who are native speakers of English from five English-speaking countries.

Keywords: psycholinguistic experiment, linguistic interviewing, degree of representativeness, lexico-semantic category, antonymy, antonymous pair.

Литвин Оксана. Лінгвістичне інтерв'ювання як метод виявлення репрезентативності антонімічних пар в англійській мові.

Анотація. У статті виявлено міру репрезентативності прикладів (пар лексичних одиниць), які ілюструють антонімічні відношення в англійській мові, використовуючи метод лінгвістичного інтерв'ювання. Окреслено процедуру й результати проведеного психолінгвістичного експерименту. Схарактеризовано специфіку методу лінгвістичного інтерв'ювання як різновиду психолінгвістичного експерименту. Матеріалом для експерименту слугують антонімічні пари, подані провідними лінгвістами в сфері лексичної семантики як ілюстративні приклади в тринадцяти англомовних лінгвістичних працях (монографіях, навчальних посібниках і лінгвістичних енциклопедіях). Респондентами в експерименті є 101 лінгвіст-германіст, які є носіями української мови (кандидати й доктори філологічних наук, а також аспіранти з вищих навчальних закладів України). В експерименті респондентам треба було розпізнати, які пари лексичних одиниць, подані в списку, ілюструють відношення антонімії. У результаті лінгвістичного інтерв'ювання виявлено пари антонімів, які мають найвищу та найнижчу міру репрезентативності. Дослідження показало, що найвищу міру репрезентативності мають градуальні та комплементарні антоніми, які є переважно прикметниками. Крім того, виявлено значні кореляції з результатами лінгвістичного інтерв'ювання, у якому респондентами виступили

лінгвісти (наукові співробітники, викладачі університетів та коледжів), носії англійської мови з п'яти англомовних країн.

Ключові слова: *психолінгвістичний експеримент, лінгвістичне інтерв'ювання, міра репрезентативності, лексико-семантична категорія, антонімія, антонімічна пара.*

1. Introduction

Categorization (as a process and a result) belongs to the relevant problems of modern linguistic studies. In the course of experimental research aimed at investigating natural categories, such as "furniture" (Rosch, 1975), "birds" (Rosch, 1973), "musical instruments" (Kotys, 2014), the heterogeneity of these categories (central and peripheral zones in their structure), as well as the fact that the members of the categories are not all equal (there are "better" and "worse" elements) were shown.

However, insufficient scholarly attention has been devoted to the structure of the artificial categories of the consciousness. Such categories contain abstract elements (members) and they are identified by scholars who are specialists in various fields of knowledge in the course of their gnoseological activity. For instance, the categories "circle", "cone" and "triangle" in mathematics; the categories "noun", "predicate" and "polysemy" in linguistics. Unlike natural categories (such as "furniture", "birds", "vehicles", "vegetables") that are formed at the perceptual level of categorization (Bruner et al., 1986:9–10) (it involves identification of a certain object using its relevant defining attributes, for instance, a certain colour, shape, size), artificial categories are logical (notional) based only on abstract thinking; they are formed at the conceptual level of categorization. Among artificial categories, the lexico-semantic categories of antonymy, hyper-hyponymy, converseness, meronymy can be named. These artificial linguistic categories consist of lexical units of concrete languages. Since the above-mentioned terms denote certain lexico-semantic relations between lexical units, the members of these categories are not separate lexical items, but pairs of language items (for example, *long – short, flower – tulip, buy – sell, hand – finger*).

In our opinion, it is reasonable to investigate lexico-semantic categories utilizing the method of psycholinguistic experiment, in particular the method of linguistic interviewing where linguists are respondents. In order to study these categories, it is necessary to examine the consciousness of linguistics scholars, due to the fact that these specific categories were created by specialists in the field of linguists. These artificial categories exist in the consciousness of linguists, but ordinary native speakers are very unlikely to be aware of them. Using the linguistic consciousness which they have formed, linguists analyze the verbal content and the structure of these categories.

The current relevance of our research is related to the fact that the method of psycholinguistic experiment needs to be applied to the study of artificial categories as well as natural ones. In addition, it important to investigate the processes by which artificial categories are constructed within the human consciousness and to describe the structure of these categories. *The practical value* of our research is connected with ESL teaching. First of all, the results of the present research can be

utilized in the compilation of ESL textbooks. In addition, both the source material and the results of the research may be used for teaching students disciplines such as English lexicology, cognitive linguistics and psycholinguistics.

2. Methods

The *aim* of this research is to analyze the results of a psycholinguistic experiment conducted for the purpose of determining the degree of representativeness of illustrative examples which are the elements of the lexico-semantic category of antonymy in the consciousness of the linguists who are native speakers of Ukrainian. For this aim, a psycholinguistic experiment consisting of linguistic interviewing (hereinafter – LI) was designed and conducted. Linguistic interviewing is defined as a method when informants are asked questions of directly linguistic nature by a researcher (Levytskyi et al., 1989:94–95). LI includes several successive stages: a) presenting a questionnaire to informants, and receiving written answers; b) identifying as well as summing identical responses; c) summarizing different in terms of their form, but similar in terms of their content responses; d) formulating linguistic parameters on the basis of the responses received.

As scholars have noted, the minimum sufficient number of respondents, or informants, for a linguistic experiment is 30 participants; moreover, more reliable data can be obtained when the number of informants is more than 60 people, cf (Levytskyi et al., 1989:10). Therefore, the number of respondents in LI conducted can be considered quite reasonable (101 informants). 101 questionnaires completed by linguists who were respondents in this experiment serve as the *material* for the research. The questionnaires contain a total of 6060 written marks. In order to process the results of LI the method of quantitative calculations has been utilized.

In this experiment we received responses from 101 scholars in the field of linguistics, who are native speakers of Ukrainian and for whom English is the first foreign language. The questioned linguists – native speakers of Ukrainian, while studying English or teaching English, need to receive from linguistic works the illustrative examples that fit into their general notion of the corresponding category. Thus utilizing the method of LI we intended to evaluate the representativeness of the given selection of pairs form the perspective of "consumers" (readers) of English-language textbooks, monographs or reference books, particularly linguistic encyclopaedias. The respondents were Candidates and Doctors of Philological Sciences (that is scholars who have a PhD in Philology), as well as postgraduate students from the higher educational establishments of Ukraine (in particular, from such cities as Lutsk, Lviv, Kremenchuk, Sloviansk, Kyiv, Chernivtsi, Ostroh).

3. The study

LI was conducted in the following way. In the questionnaire, the informants were given a list of 60 different pairs of language units arranged in random order, which illustrate three types of paradigmatic relations: hyper-hyponymy, antonymy or converseness. The respondents were asked to identify which examples from the list corresponded to the category of antonymy.

The given list of 60 pairs was preceded by the following explanatory note:
"Dear respondents,

Identify the type of paradigmatic relations in each pair, putting a tick in the appropriate column".

The informants had to put a tick next to each pair on the list in one of four columns: 1) "hyper-hyponymy"; 2) "antonymy"; 3) "converseness"; 4) "difficult to identify". The fourth column was given since we assumed that it will include all or most of the debatable examples, that is certain specific cases of antonymy. LI was anonymous.

In order to determine the degree of representativeness of the given examples illustrating the category under investigation in the consciousness of the linguists, we calculated the number of correct responses (the number of ticks in the column "antonymy"), the number of incorrect responses, and the number of refusals (the number of ticks in the column "difficult to identify") for each antonymous pair. The number of correct responses was chosen as the determinant criterion for us. According to this criterion, we ranked the twenty pairs of antonyms (in descending order of the number of given correct responses) and then divided them into three groups. In addition, it was relevant for us which examples occurred in the fourth column, that is when it was difficult for the respondents to identify the type of paradigmatic relations to which some specific pairs corresponded. These cases constitute the subject of a separate analysis.

In the questionnaire, among the other pairs of lexical units, such twenty pairs of antonyms were presented: *aim – hit; alive – dead; ascend – descend; big – small; come – go; fill – empty; good – bad; happy – unhappy; honest – dishonest; hot – cold; long – short; male – female; north – south; old – new; on – off; pass – fail; proper – improper; seek – find; true – false; up – down.* It is necessary to note that the selection of pairs used in the experiment was drawn from the illustrative examples (involving a total of 996 pairs of language units) found in thirteen English-language textbooks, monographs and linguistic encyclopaedias, cf (Lytvyn, 2014). The selection of antonymous pairs given in the questionnaire constitutes about 9 % of illustrative material (pairs of antonyms) presented in the linguistic works used for our research.

When selecting antonymous pairs for LI we primarily took into account the patterns of their occurrence as illustrative examples in the linguistic sources examined. Thus from the total number of antonymous pairs (423 pairs of antonyms which were subsequently used as illustrative material, including 224 different pairs, not taking into account cases of their recurrence) we selected 20 pairs which had different patterns of occurrence in the linguistic works. In order to facilitate the evaluation of the illustrative examples given in the linguistic sources, all the pairs were divided into 11 groups depending on the rank they were given according to their recurrence in the sources (the pairs were allotted rankings of 13/13, 12/13, 9/13, 8/13, 7/13, 6/13, 5/13, 4/13, 3/13, 2/13 and 1/13). The rank was assigned in the form of a simple fraction to each pair of antonyms where the number of occurrences of a certain antonymous pair in the form of an illustrative example is indicated in the numerator, and the total

number of linguistic sources in the denominator. Our calculations show that the pair *alive – dead* occurred the most frequently among all the pairs of antonyms, being mentioned in all thirteen sources, the antonymous pair *male – female* was used in eight sources, in two of the works the pair *ascend – descend* recur. Therefore these pairs were given a ranking of 13/13, 8/13 and 2/13 respectively.

It is to be noted that the groups of antonymous pairs of the highest rankings contained only one pair of language units each. These pairs were primarily included in the questionnaire, namely *alive – dead* with a ranking of 13/13; *hot – cold* with a ranking of 12/13; *good – bad* with a ranking of 9/13. When groups comprised from 2 to 150 pairs of the same ranking, we selected a few examples from each group using online random number generator Randomus, also taking into account the criteria important for us. Thus antonymous pairs of all rankings are represented rather equally in the questionnaire.

In addition, we took into consideration the *semantic criterion,* that is the percentage of different semantic types of antonyms in linguistic works. It is necessary to point out that mainly gradable (30 %) and complementary (35 %) antonyms were presented in the questionnaire; the percentage of reverse and antipodal antonyms, as well as satisfactives, is lower (20 %, 5 % and 10 % respectively). These figures practically correlate with the data obtained from the linguistic sources examined.

In order to select examples for LI we also took into account the *lexico-grammatical parameter*, as well as the morphemic structure of antonyms, that is the *formal structural criterion*. The pairs of lexemes given in the questionnaire are mainly adjectives (55 %) and verbs (30 %). The percentage of nouns, adverbs and prepositions is considerably lower (5 % each). It is to be mentioned that this data correlates with the illustrative material in the linguistic works, since within the total selection of antonymous pairs found in the sources, adjectives (59.1 %) and verbs (26 %) also predominate. Nouns (6.62 %), adverbs (6.15 %) and prepositions (1.89 %) occur much less frequently (cf: Lytvyn, 2014). For this experiment, mainly morphologically unrelated, or absolute (root), antonyms were selected (80 %). Morphologically unrelated antonymous pairs (85 %) also exceed the derived ones in the sources examined.

4. Results and Discussion

In order to define the degree of representativeness of the antonymous pairs selected, we calculated the number of correct responses for each of the twenty pairs. According to the results, the twenty pairs were ranked in descending order of the number of given correct responses and then divided into three groups. The analysis showed the following. The first group contains the pairs that were classified as antonyms by the largest number of the questioned linguists. This group includes 13 pairs (65 % of the selection). The number of correct responses for these pairs is 100 % (*alive – dead, big – small*, *hot – cold, happy – unhappy, old – new, true – false*), 99 % (*honest – dishonest, good – bad, up – down*), 98 % (*proper – improper*), and 96 % (*ascend – descend, north – south, pass – fail*).

It is necessary to note that the first group comprises the pairs of different rankings in linguistic sources (from 2/13 to 13/13). The pairs which occupy the

three highest positions in terms of their rankings are included in this group (*alive – dead* with a ranking of 13/13; *hot – cold* with a ranking of 12/13; *good – bad* with a ranking of 9/13). *Semantic analysis* demonstrated that the group is mainly composed of gradable and complementary antonyms (5 pairs each type). In terms of *lexico-grammatical parameter*, adjectives (9 pairs) are the most prevalent. In terms of *formal structural criterion*, all four of the pairs of derived antonyms given in the questionnaire are included in this group.

Thus the first group contains the pairs of lexical units which over 95 % of Ukrainian-speaking respondents were able to identify as those illustrating antonymic relations. Having compared the results of this experiment and the results of the experiment with the linguistics scholars (including university and college professors) who are native speakers of English originating in five English-speaking countries (cf: Lytvyn, 2015), we identified certain correlations. In particular, almost all the pairs from the first group in the experiment with the scholars who are native speakers of Ukrainian (except the pair *proper – improper*) were also included in the group with the highest points in the experiment with the linguists who are native speakers of English.

The second group is less numerous. It is formed of four pairs: a pair of gradable (*long – short*), two pairs of complementary (*on – off, male – female*) and a pair of reverse antonyms (*fill – empty*). These pairs were identified as antonyms by 91 %, 90 %, 83 % and 89 % questioned linguists respectively. The second group also includes the pairs of language units of different rankings in the sources (7/13, 3/13, 8/13 and 2/13 respectively). As we can see, two of the pairs are composed of adjectives, one of the pairs consists of verbs, and the other one is formed of prepositions. As a result, the second group includes the pairs for which the number of correct responses is 83–91 %.

A considerable gap appeared between the pairs belonging to the second and the third groups. The third group comprises three antonymous verb pairs. It is necessary to consider them in more detail. The pair of reverse antonyms *come – go* with a ranking of 5/13 was correctly identified by only 37 Ukrainian-speaking informants (about 37 %). Almost as many informants (36 linguists) failed to identify what type of paradigmatic relations this pair illustrates, moreover most of the repondents (29 linguists) classified this pair as conversives. It is an evident mistake, since in fact the pair *come – go* expresses two oppositely directed actions with respect to a particular point in space.

The pair of satisfactives *seek – find* was identified as antonyms by 28 questioned linguists (about 28 %). Interesting seems the fact that this pair was mainly confused with converseness (28 respondents) and less frequently with hyper-hyponymy (19 respondents). The remaining 26 respondents noted that it was difficult for them to identify the type of paradigmatic relations this pair corresponds to.

The other pair of satisfactives *aim – hit* was classified as antonyms only by 12 respondents (about 12 %). More than half of informants (55 linguists) stated that it was difficult for them to identify the type of paradigmatic relations this pair illustrates. The remaining 34 informants confused this antonymous pair with hyper-

hyponymy (17 linguists) or converseness (17 linguists). Such respondents' reaction, in our opinion, can be explained by the fact that this class of antonyms was defined (as "a rather weak form of oppositeness") only in one of the linguistic sources examined (Cruse, 1987: 202); satisfactives cannot be considered typical antonyms. It is to be noted that these two pairs of satisfactives also occupy the two lowest positions in the experiment with the scholars who are native speakers of English.

5. Conclusions

The fact that linguists use certain language units as illustrative examples in their scientific works indicates that the authors consider these units to be sufficiently representative examples (members) within a certain linguistic category.

In this experiment, 17 pairs of language units (out of 20) were correctly identified as antonyms by over 4/5 of Ukrainian-speaking informants. Only one pair of reverse antonyms (*come – go*) and two pairs of satisfactives (*aim – hit* and *seek – find*) turned out to be debatable examples.

This experiment was conducted in the form of linguistic interviewing with linguistics scholars who are native speakers of Ukrainian, from the perspective of "consumers" of English-language linguistic works (monographs, encyclopaedias or textbooks). In linguistic interviewing with the linguists who are native speakers of English, conducted earlier, the respondents assessed the representativeness of the same antonymous pairs using a scale of 0 to 3 points. Having analyzed the results of the two experiments, we observed close correlations. Thus it made possible for us to conclude that certain antonymous pairs have a higher degree of representativeness than the other pairs in the system of language.

References
1. Bruner, J. S., Goodnow, J. J. and Austin, G. A. (1986). *A Study of Thinking*. New Brunswick; New Jersey: Transaction Publishers.
2. Cruse, D. A. (1987). *Lexical Semantics*. Cambridge: Cambridge University Press.
3. Kotys, O. (2014). Psykholinhvistychnyi esperyment yak metod doslidzhennia pryrodnoiyi katehorii [Psycholinguistic experiment as a method of investigating a natural category]. *East European Journal of Psycholinguistics,* 1(1), 114–121.
4. Levytskyi, V. V. and Sternin, I. A. (1989). *Eskperimentalnyie Metody v Semasiologii [Experimental Methods in Semasiology]*. Voronezh: Voronezh University Publishers.
5. Lytvyn, O. L. (2014). Leksychne napovnennia katehorii antonimii (za danymy anhlomovnykh linhvistychnykh prats) [Lexical content of the category of antonymy (based on a selection of English-language linguistic works)]. *Nova Filolohiya, 64,* 49–54.
6. Lytvyn, O. L. (2015). Doslidzhennia antonimichnykh vindoshen u psykholinhvistychnomu eksperymenti [A study of antonymic relations as evidenced in a psycholinguistic experiment]. *Naukovyi Visnyk Skhidnoievropeiskoho Natsionalnoho Universytetu imeni Lesi Ukrainky: Filolohichni Nauky: Movoznavstvo, 4*(305), 71–75.
7. Rosch, E. H. (1973). Natural categories. *Cognitive Psychology*, *4*(3), 328–350.
8. Rosch, E. H. (1975). Cognitive representations of semantic categories. *Journal of Experimental Psychology: General*, *104*(3), 192–233.