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## The Use of the Method of Derivational Nests in Surdologopedic Therapy

### SUMMARY

The method of derivational nests can be applied in teaching of Polish as a foreign language. As there are analogies between surdologopedics and glottodidactics, it would be in order to consider the possibilities of its application in the linguistic training of hearing-impaired persons. The specificity of language disorders caused by limitations of auditory perception significantly influences, however, the characteristic features of undertaken therapeutic measures: it enables only a selective use of the achievements of other disciplines. The paper discusses the possibilities of the application of the nest method in working with deaf or hard-of-hearing persons, and presents examples of proposed exercises.

**Key words:** derivational nest, glottodidactics, surdologopedic therapy, programming the language of the hearing-impaired

### INTRODUCTION

Programming of the language of the hearing-impaired people is invariably the subject of discussion, one that continually provokes controversies, as does the problem of education of children with hearing impairments. In surdologopedics there are many methods of linguistic training; however, unequivocal solutions have not been developed so far although, because the group of hearing-impaired patients is not homogeneous, there probably cannot be one, i.e. universal way of language acquisition. Recently, however, there have been increasingly frequent discussions on the introduction of systemic solutions in the sphere of language training of deaf persons (cf. *Edukacja głuchych* 2014). Although surdologopedics has developed extremely dynamically over the last two decades, it still faces problems that require decisive resolutions. Taking into account one aspect of language education of children and young people with perception limitations, i.e. word-

formation, it should be said that on the market there are no teaching aids or teaching guides that would directly indicate how to teach it (as part of different teaching methods). Word-formation skills form lexical competence: consequently, the lexicon cannot be enriched without reference to word-formation in the language that, like Polish, is characterized by an immense diversity of derivational processes.<sup>1</sup> Despite the importance of the problem, the question of the way of teaching word-formation is an open one.

When seeking solutions to this problem, it seems obvious to refer to disciplines that are close to surdologopedics in certain respects. What comes to mind in the first place is glottodidactics because the situation of the hearing-impaired people is compared to the situation of foreigners learning Polish. In both cases, linguistic competence is built up through the teaching process, and it is enriched or verified only in the natural situations of social life. However, because of hearing impairments, it is the first language that develops in this way rather than a second one as is the case with foreigners, who can always refer to their native language in the course of language-learning. This difference makes the two situations incompatible despite the existing analogies. Also for that reason the use of achievements of glottodidactics in programming of word-formation in surdologopedics is helpful but only after corrections and its adjustment to the needs, abilities and limitations of people with hearing impairments. In teaching Polish as a foreign language the method of derivational nests is employed. That is why the discussion on the application of the method in the field of teaching language to hearing-impaired persons begins with a short survey of problems concerning the history of nest word-formation and its application in glottodidactics.

## DERIVATIONAL NESTS. A SURVEY OF PROBLEMS

A derivational nest (word-formation nest) is defined as

a set, in which around the non-derivative headword (base, root, and nest center) there are gathered all derivatives connected with it – directly or indirectly – by the relationship of synchronic derivedness. They do not form (...) an ordinary alphabetical list complementing the headword but an ordered system, a hierarchical structure in which each element, inter alia owing to the position occupied in the set, is characterized as a link in the network of formal-semantic connections with the (non-motivated) headword and with all the formations derived from it. (Jadacka 2001, 17)

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<sup>1</sup> The thesis is formulated by many authors, especially in the field of teaching Polish as a foreign language.: “(...) acquisition of the lexicon must be closely associated with the derivational potential of Polish (...) word-formation relations between lexical units are part of the most significant aspects in lexis acquisition” (Zgólkowa 1998, 423); “(...) teaching of the ability to interpret derivational formation and then the ability to actively use the knowledge of the rules of forming derivatives are the most conspicuous manifestations of the development of linguistic competence at the lexical level” (Pastuchowa 2007, 23).

The term suggests another one, with a longer tradition of application: “word family”. “A derivational nest is tantamount to a word family. The former term functions at the synchronic level, the latter at the diachronic one” (Janowska 1989, 60).

The suggestion of analyzing the whole set of structural-semantic relationships between derivatives with the same base/root appeared in the late nineteen-fifties and early sixties. The aim of these analyses would be to know the network of formal-semantic connections in synchronically understood derivational families, i.e. nests. The representatives of this direction in linguistic studies did not challenge the validity of the intensely developing two-component analysis in word-formation, yet they drew attention to the word-series of the type: *balagan* [mess] – *balaganiarz* – *balaganiarstwo* – *balaganiarski*; *księga* [book] – *księgarz* – *księgarstwo* – *księgarski*; *farba* [paint/dye] – *farbiarz* – *farbiarstwo* – *farbiarski*. The study of this kind of sets, in which each following word is directly related to the previous one through derivation, was suggested in Poland already in the nineteen-fifties by J. Wierzychowski (1959). It was enthusiastically espoused by M. Dokulil (1979), who saw this as a chance to describe the word-formation system and to study it (Jadacka, 2001). The new method of lexical analysis aroused the interest of mainly linguists from the former Soviet Union, where it began to develop. The principal work on derivational nests began in Poland only after being inspired by the achievements of Russian linguists but also by the unquestionably growing need to study derivational systems consisting of more than two elements (Olejniczak, 2001) since in Polish there are expanded derivational nests owing to the developed derivational system. Work on the Polish dictionary of derivational nests was initiated by J. Puzynina in 1977 and was conducted by scholars from the University of Warsaw. Apart from lexicographical studies, many monographs were written devoted to nest word-formation (cf. survey of research, Olejniczak, 2001). Initially, the *Mały słownik słowotwórczy języka polskiego dla cudzoziemców* [The Concise Derivational Dictionary of Polish for Foreigners] by M. Skarżyński was published in 1989. It was only in the next years that the *Słownik gniazd słowotwórczych współczesnego języka ogólnopolskiego* [Dictionary of Derivational Nests of Contemporary General Polish] was developed, whose individual volumes were separately devoted to different parts of speech: the first volume published in 2001 embraced adjectival nests, the second volume contained noun nests (2001), and the next volumes published in 2004 described deverbial nests and nests motivated by numerals, adverbials, pronouns, prepositions, modulants, onomatopoeic words, and exclamations. The appearance of this kind of publications was a very important stage in the development of nest word-formation. The usefulness of the dictionary of derivational nests is not confined exclusively to the sphere of theoretical studies in word-formation and lexicology, for which it is an extremely convenient starting point. The dictionary material is an excellent

aid in teaching Polish at different levels, both in respect of descriptive grammar as an academic subject and teaching Polish as a foreign language (Skarżyński 1999; Jadacka 2001). If we adopt such assumptions and take into consideration the similarities of the objectives set in teaching Polish and in surdologopedics, the usefulness of the nest dictionary in programming of the language of hearing-impaired persons is unquestionable; nevertheless, because of differences between these disciplines, the scope and manner of using the dictionary will be somewhat different. However, the subject of the present study is not the analysis of the potential use of the derivational nests dictionary in surdologopedic therapy, but the potential for the application of the method of derivational nests.

### THE METHOD OF DERIVATIONAL NESTS IN GLOTTODIDACTICS

From the standpoint of teaching Polish, the term “derivational nests” is regarded as more useful than the related term “word family” with a longer tradition of use. This is because the word family, defined as a group of words derived from the common root, is a one-level, loosely structured construct, while a derivational nest has a more precise internal structure. In teaching Polish, both the selection and well-orderedness of the content are equally important, hence the concept of word family is too general and incompatible with the needs of the discipline (Seretny 2011, 180). In general, the method of derivational nests is regarded as one that brings practical benefits in teaching lexis to foreigners, together with the teaching aid, which is the dictionary of derivational nests (cf. *inter alia* Kern 2014; Pastuchowa 2007; Seretny 2011; Seretny, Stefańczyk 2015).

A. Seretny and W. Stefańczyk (2015), referring to the studies on the psychological reality of word families and derivational nests, oppose demands that foreigners learning Polish should be expected to know derivational types or categories (e.g. doers of acts), because there are no psycholinguistic grounds for that. Teaching the ability to use derivatives should, therefore, begin with the creation of “nest connections” in the memories of learners, and then automatic exercises, set in the thematic context, should be practiced, their objective being to recognize the newly learned forms and activate the potential vocabulary. Building derivational nests with learners is a technique that supports the productive knowledge of derivative forms. The nest methodology is thereby particularly helpful in production exercises.

Despite its unquestionable assets, confirmed by research results, the use of the derivational nest method in teaching Polish as a foreign language is subject to some limitations, for example, that the showing of the whole word-formation paradigm cannot be the goal in teaching foreigners. What is helpful in teaching

Polish as a foreign language is rather to present simple derivational nests and show certain proportions between them (Janowska 1989).

In literature on language teaching there are suggestions, with a different extent of detail, for the use of nest methodology. These are proposals in the form of more general remarks like: “The possibility of establishing by oneself the character of semantic changes occurring in words based on the same root, and building derivational nests with the use of the word-formation knowledge about the language being learned, are regarded as highly instructive exercises” (Pastuchowa 2007, 23). There are also more detailed proposals, setting successive stages of working on word-formation. We cannot fail to omit here the conception of Seretny (2011), who drew attention to the problem of structuring the derivational material in the programs of teaching Polish to foreigners, or more precisely, the order of introducing individual derivatives within particular derivational nests. A solution to this problem could be, in her view, to utilize the parallel teaching of grammar and vocabulary. The level of grammatical knowledge expected from learners at the successive stages of training would then be a factor specifying the order of work. The structure of a nest should, therefore, be cumulative rather than static. In practice this means that at the earlier stages of teaching, the nests should be uni-elemental, containing the base word and its inflectional forms, while at the next level, particular derivational formations will gradually enter, and most of them will appear only at the end. This way of nest organization requires redefining, hence the proposal of replacing the term “derivation nest” with another one: “word cluster”. Unlike a nest, a cluster is made up of the base word with inflectional forms, and the words that share the common root with the base word together with their inflectional forms. The expected size of clusters changes depending on the level of grammar knowledge expected from learners who are at a given stage of language learning. Seretny precisely defines the size that word clusters should have at individual stages of teaching (Seretny 2011, 183–191). This proposal requires analysis from the angle of requirements imposed on surdologopedic therapy. However, since the programs of language teaching in surdologopedics are not as well-ordered as in glottodidactics, and the internal diversity in the group of hearing-impaired people in terms of their capabilities and limitations is so high, the application of this proposal, even to a limited extent, is a highly complicated task.

If we want to take advantage of the achievements of glottodidactics in programming of the language of hearing-impaired persons, it is necessary to emphasize the justification of the advisability of using the nest methodology in teaching Polish:

It appears that for the purposes of glottodidactics the change of perspective, i.e. focusing on the derivational stem rather than derivational morpheme, may be highly effective. The departure from the binary understanding of motivational connections makes it possible to cre-

ate word groups (nests) structured according to specific linguistic mechanisms. This technique enables the learner to build up the lexicon on his/her own using his/her word-formation knowledge (...). Teaching word-formation using the nest method has one more advantage: it shows the potential of the word-formation system. Even if not all slots in individual derivational nests are used in the lexicon of contemporary Polish, by showing the existing models we give the learners a tool that allows them to know their way around in the multitude of present-day neologisms. (Pastuchowa, 2007, 25)

The development of specific language sensitivity, the creation of opportunities to arrive on one's own at the meanings of new words, and thereby to successively and spontaneously build up one's lexicon, are arguments that are indisputably in favor of using the method of derivational nests in teaching Polish, not only to foreigners but also to people with impaired auditory perception.

### THE METHOD OF DERIVATIONAL NESTS IN SURDOLOGOPEDICS

The method of derivational nests can, and even should, be applied in logopedic treatment of children and young people with different degrees of hearing impairment. It will, naturally, be most compatible with the abilities of young people (possibly of adults undergoing surdologopedic therapy) because it presupposes the acquisition of specific lexicon and parallel learning of grammar and vocabulary, i.e. it is based on certain already acquired skills.<sup>2</sup> In the work with hearing-impaired children, the use of the method of derivational nests will naturally be narrower, particularly at the earlier stages of therapy. This does not, however, alter the fact that the application of the derivational nest method in surdologopedic therapy classes will be helpful in each case when lexical and grammatical exercises are used.

### THE NEST BROADENING OF VOCABULARY DURING SURDOLOGOPEDIC THERAPY

This part of the study presents examples of word-formation exercises, using the nest method, meant for hearing-impaired people. The characteristic features

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<sup>2</sup> In glottodidactics, word-formation exercises using derivational nests are also not introduced from the very beginning but at the later stages of teaching: "To enable learners to cross the language threshold, i.e. to go to the B2 level, requires introduction into the teaching process more difficult, authentic, unadapted texts, in which there are more and more semantically divisible words. Their presence, thus, provides an opportunity to use the technique supporting the productive knowledge of derivatives, i.e. building derivational nests with the learners. Initially, they should be produced lexically, and then gradually in a systemic way as the formal knowledge of learners grows, which they will acquire at grammar classes" (Seretny, Stefańczyk 2015, 58).

of the proposed exercises depend on the specificity of linguistic difficulties caused by hearing deficits, *which is why they are intended for this selected circle of addressees*. In accordance with the order defined by the developmental regularities, according to which comprehension precedes the process of linguistic expression, reception exercises will be presented first, followed by production exercises.

**Comprehension level.** At the preliminary stage of work on word formation, what should come first is exercises in finding the common semantic element for a given derivational nest, i.e. in identifying the root word. The scope of the introduced constructions has to be initially confined to selected derivation types – preferably, what should come first should be examples of progressive suffixal derivation: the fundamental *and most productive* derivational process in Polish.<sup>3</sup> Other types of derivatives, e.g. like those formed through alternation or prefixation will be more difficult to recognize, because they do not respect one of the basic principles that govern the process, and, consequently, the order of acquisition of derived words: the principle of the simplicity of form (cf. Clark 1993). According to this rule, the fewer formal changes will appear in the derived word in relation to the base word, the more easily and quickly the child will learn it (Clark, Berman 1984). That is why, it would be good to initially select, as exemplification material, the word-formation constructions whose base will be easy to identify: without alternation, without being reduced by a non-inflectional element (as in, e.g. disintegral derivation).

Exercise I. Finding the root word as a common semantic element in a selected derivational nest. Instruction: “Underline (color) the common part of the given words”:

KOT [CAT] – *kotek, koteczek*.

PIES [DOG] – *piesek, pieseczek*.

RÓŻA [ROSE] – *różyczka, różany*.

SKLEP [SHOP/STORE] – *sklepik, sklepowy*.

POMIDOR [TOMATO] – *pomidorek, pomidorowy*.

POMARAŃCZA [ORANGE] – *pomarańczka, pomarańczowy*.

The introduction of new base words, i.e. new nests and their extension through successively increasing the number and diversity of formations, broadens the scope of practiced skills, thereby making the abovementioned proposal open to the possibility of adjustment to any specific case.

Assuming that the order of the practiced exercises will be determined by developmental regularities and the principle of gradation of difficulties, a special impediment to recognizing the meaning of the root word, and thereby finding

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<sup>3</sup> In progressive derivation the whole root word is part of the derived word, cf. description of the characteristics of derivation types, after: Grabias (1981).

the common semantic element holding together a given derivational nest, is the appearance of alternation in the root word, i.e. the so-called co-formatives (joint derivational morphemes) (cf. Grabias 1981). The results of conducted research show that the occurrence of alternations delays the process of acquisition of formations by children during the period of speech development because, as has been said earlier, they (alternations) do not respect the principle of simplicity of form (Clark, Berman 1984; Clark 1993). This regularity is confirmed in respect of the development speech in hearing-impaired children, who have serious problems in recognizing the meanings of the base words of formations derived through alternation (Rakowska 1992; Muzyka-Furtak 2010). The occurrence of this type of difficulties may be regarded as developmental; however, if they persist longer in the case of persons with limitations of auditory perception, this means the necessity of aiming corrective measures at this phenomenon.

Exercise II. Finding the root word as a common semantic element in a selected derivational nest (a nest with formations containing alternations in the root). Instruction: “Underline (color) the common part of the given words. Find pairs of sounds that alternate with each other”:

PAJĄK [SPIDER] – *pajączek, pajęczyna, pająkowaty*.

KWIAT [FLOWER] – *kwiatek – kwiaciarnia – kwiaciarz – kwiecień – kwietnik – kwiatowy – kwiecisty*.

Since alternations commonly occur in Polish, exercises in decoding derivatives that contain them should be introduced at the initial stages of work on word-formation, but only after the exercises for recognizing the meaning of formations arisen without alternations. Finding of the same semantic element among derivational constructions containing the so-called co-formatives in the root is an important but only a next stage of work on word-formation.

Apart from the morphological alternations, another difficulty in the process of learning the word-formation system of Polish is the complexity of derivational relations within one nest, especially regarding the direct and indirect derivative-ness in word-formation. For that reason the next proposed exercise will be aimed at recognizing, in a selected derivation nest, the chains (series) understood as sets of words containing the base word and derivative words directly derived from their bases at successive derivational steps (Jadacka 2001, 19). The ability to perceive direct word-formation motivation is so complex that exercises in this area should be applied at further stages of work, the more so that they often require identification of morphological alternations in the root. The objective of this exercise is to sensitize people with impaired hearing to the complexity of the network of formal-semantic relations in the word-formation system of Polish.

Exercise III. Finding the root word as a common semantic element in a selected derivational nest. Instruction: “Underline (color) the common part of the given words. Find pairs of sounds that alternate with each other”.

A sample derivational nest:

PTAK [BIRD] – *ptactwo*, *ptaszarnia*, *ptaszek* (*ptaszeczek*), *ptaszę* (*ptaszętko*), *ptaszyna* (*ptaszynka*), *ptaszysko*, *ptasi*.<sup>4</sup>

The exercise is a difficult one. Its immediate and most important objective is that the hearing-impaired child should discover by him/herself the network of relations and interrelationships between derivative words that make up a derivational nest (not all words in a particular nest come from the same base word, derivatives may be base words for others), i.e. s/he should achieve a higher level of competence in perceiving formal-semantic relations between units within a derivational nest, and thereby in recognizing the meanings of derived words (including new ones that the child has never had an opportunity to encounter).

In this case, like in the previous exercises, the broadening of the scope of the material will be an additional difficulty – the more derivatives, the higher the level of difficulty. The factor that additionally complicates this task is the formal similarity of the words.

What is characteristic of hearing-impaired persons is that they focus excessively on the form of words while trying to recognize their meanings, and are even influenced by accidental similarities of the forms. The result is associations termed associations by formal adjacency (Cieszyńska 1993), formal associations, or formal-semantic ones (paronymy) (Muzyka-Furtak 2013).<sup>5</sup> In view of their common occurrence, they should be regarded as a phenomenon typical of speech development in hearing-impaired persons, which thereby needs to be included in linguistic programming in surdologopedics. Structuring of formations belonging to two different derivational nests, yet similar in formal terms, will be, therefore, a particularly significant task for hearing-impaired persons because it will result from direct analysis of their language difficulties.

Exercise IV. Finding units in a selected word group that make up a derivational nest. The language material consists of words belonging to two different derivational nests but with a high degree of formal similarity. Instruction: “Find words with a similar meaning to the word SER [CHEESE] and to the word SERCE [HEART]. Divide them into two groups (divide the words into two groups: those that have something in common with the word SER and those that have something in common with the word SERCE)”.

<sup>4</sup> Parentheses contain words formed directly from the word preceding the one in brackets.

<sup>5</sup> On the phenomenon of paronymy in the language development in children cf. Grabias (1982).

Sample derivational nests:

SER [CHEESE] – *serek, sernik (serniczek, sernikowy), serowy (serowiec)*;

SERCE [HEART] – *sercowy, nasercowy, sercowiec, serduszko*.

A sample word group: *sernikowy, sercowy, serce, serek, serowy, serniczek, ser, serduszko, nasercowy, sercowiec, serowiec*.

The degree of difficulty of this type of exercise will grow as the number of examples will increase and as new units, formally similar but semantically different (thereby functioning as a kind of distractors) appear. The change of the proposed set of words from a closed one (as in the exercise above) to an open set (the next proposed exercise) and the use of units with different degrees of similarity determines the next stage of work on word formation.

Exercise V. Finding units in a selected word group that make up a derivational nest. The language material consists of formally similar words but belonging to different nests, and words that function as distractors (words with a different degree of formal similarity to the words of the two analyzed derivational nests). Instruction: “Find words with a similar meaning to the words: SER and SERCE. Divide them into two groups. Cross out words that mean something else”.

An example of a word group with distractors: *serek, konserwa, sernik, serduszko, duszek, nasercowy, nasenny, serniczek, pierniczek, pilniczek, sernikowy, kopek, serowy, serce, salowy, sercowy, sercowiec, serowiec, sarenka, ser, serdelek*.

The conducted studies show that the character of lexical associations in hearing-impaired persons is highly diversified (cf. Cieszyńska 1993; Muzyka-Furtak 2013); consequently, the number of units used as distractors in the foregoing exercise should increase, and their degree and kind of formal (formal-semantic) similarity should change.

**Production level.** The exercises proposed so far pertain to perception skills: understanding of derivatives. In teaching Polish as a foreign language, building of derivational nests is interpreted as “a technique supporting the productive knowledge of derived words” (Seretny, Stefańczyk 2015, 58). It is recommended that teaching word-formation at the production level should be carried out directly, and that the formations taught in class should form thematic circles prescribed at the appropriate level of advancement. With regard to the selection of exercise material, those root words should be built up which are the main carriers of the content within a given subject (Seretny, Stefańczyk 2015). Language-teaching publications emphasize the role of context in developing word-formation skills:

The formation of ‘nest connections’ in the memory of learners should be supported by thematically contextualized, automating exercises meant to elicit the newly acquired forms or activate the potential lexicon (i.e. subliminal knowledge). It is only then that learners can be required to employ the ability to use derivatives. (Seretny, Stefańczyk 2015, 59)

Severe problems with syntax in hearing-impaired children, and, consequently, with the understanding and production of texts, are a significant hindrance in recommended contextualized teaching of word-formation, thus determining the need to continually individualize therapeutic work (adjust in each case the degree of difficulty of an exercise to the attained level of language acquisition). In the linguistic programming of hearing-impaired persons, particularly helpful will be the interpretation of the word-formation status, proposed in the area of teaching Polish, which requires that exercises in understanding derivatives and forming them be treated in a separate way:

Formation of derivatives thus consists in the broadening (enlargement) of the lexicon rather than in building text words. Recognition of meanings carried by derivative formations in turn requires the knowledge that comes mainly from the domain of grammar, supported *inter alia* by the ability to discern connections, seek analogies, etc. That is why we believe that grammar should be left with the task of teaching the identification of the meanings of derivational formations (perception level) while the development of the ability to use them should be part of lexical competence. (Seretny, Stefańczyk 2015, 55)

Exercises in forming derivational constructions are, therefore, an element of lexical exercises and it is from that perspective that they should be perceived and programmed for the purposes of surdologopedic therapy. In connection with the problems outlined above, the proposed exercises presented below will exemplify only several selected ways of the application of the nest methodology.

An example of an exercise in creating derivational constructions using the nest method can be the forming of derivational nests based on a specific base word (selected from the discussed thematic range).

A sample exercise: The creation of derivational nests based on a selected base word – drawing the schema of a selected nest. Instruction: “Add a word with a similar meaning to the word given (e.g. ŚNIEG [SNOW])”.

An example of a derivational nest: ŚNIEG [SNOW] – *śnieżek, śnieżka, śnieżyca, śnieżynka, śnieżysko, odśnieżać (odśnieżarka), ośnieżać (ośnieżony), śniegowy, śnieżysty*.

The creation of new words by hearing-impaired children will be too difficult in many cases. That is why it should be assumed that the child, together with the speech therapist, creates derivative words based on a given base word, a prepared set of paraphrases and derivational morphemes, as well as on illustration material. During the exercise, they both draw schemas of selected derivational nests, which can be referred to any time during the next lexical-derivational exercises. The goal of this type of exercises would be to develop a special kind of word-formation vocabulary, thematically or situationally structured, which is a reference to the popular method of event diaries, which were positively verified in therapy practice (cf. Cieszyńska 2015).

A significant problem that appears at this point is the selection of exercise material prescribed at a given level of instruction. It depends not only on the developmental stage but also on the acquired level of linguistic competence in any specific case. The difficulty in selecting language examples in surdologopedic therapy is aggravated by the fact that the degree of language acquisition does not need to increase with age. It can be higher in younger children with lesser hearing losses than in the older ones, in whom such loss is greater. This unstable relationship between age and the level of language acquisition is a factor that additionally complicates the question of selecting not only base words for exercises, but also formations belonging to individual derivational nests. Indisputably helpful and even indispensable will in this case be the dictionary of derivational nests as an excellent material base for word-formation exercises in a complete and structured form. The problem of the right selection of language examples will still have to be resolved by the speech therapist.

Another kind of production-level, word-formation exercises, based on the nest method, is those using the analogy mechanism. The proposed exercise below is one at a more advanced level. It should be classified as difficult, its point of reference being the scope and character of problems with word-formation in hearing-impaired children and young people.

A sample exercise: The creation of derivatives belonging to one derivational nest, based on the presented set of paraphrases (the possibility of support with illustrations) or sentences to be completed. Instruction: "Complete the sentences".

An example of derivational nest:

ROWER [BICYCLE] – *rowerek, rowerzysta (rowerzystka), rowerowy*.

An example of paraphrases: "*Rower, który jest mały to...*", "*Ktoś, kto jeździ rowerem to...*", "*Kobieta/Pani, która jeździ rowerem to...*", "*Ścieżka, po której jeżdżą rowery, to ścieżka (jaka?)...*"

In the case of hearing-impaired children, the level of attained linguistic competence can be so small that it will be necessary to provide a set of derivational morphemes to choose from (a closed or open set) or a set of sample formations from a derivational nest with an analogous structure like: "*Traktor, który jest mały to traktorek. Ktoś, kto jeździ traktorem, to traktorzysta. Kobieta/Pani, która jeździ traktorem, to traktorzystka. Przyczepa do traktora to przyczepa (jaka?) traktorowa*".

Reference to analogy is indisputably very important and helpful in word-formation exercises. Even in children with severe hearing impairments, the activation of the analogy mechanism at the level of understanding and creation of derivatives is noticeable (Muzyka-Furtak 2009; 2010). This often happens, however, with the use of wrong rules, the relationships between the base word and the derivative word being established in an individualized, i.e. non-normative,

way. The use of the analogy mechanism to stimulate word-formation activity in hearing-impaired children is theoretically and practically justified, based on the results of studies conducted in normally developing children and in children with development disorders (Maciejewska 2015).

A sample exercise: The creation of derivatives belonging to one derivational nest compared with analogous formations from another nest – the use of two derivational nests with a similar structure.

Examples of derivational chains:

DZIEŃ [DAY] → *dziennik* → *dziennikarz* → *dziennikarstwo*.

SŁOWO [WORD] → *słownik* → *słownikarz* → *słownikarstwo*.<sup>6</sup>

Instruction: “Complete the missing spaces in sentences:”

A) “*Gazeta, która jest wydawana co dzień to dziennik. Ktoś, kto pisze do gazety wydawanej co dzień to dziennikarz. Praca wykonywana przez kogoś, kto pisze do gazety wydawanej co dzień to dziennikarstwo. Dziennikarstwem zajmuje się dziennikarz*”.

B) “*Jak nie znam jakiegoś słowa, muszę sprawdzić w książce, w której są wyjaśnione słowa, to jest (...). Ktoś, kto opracowuje słowniki to (...). Praca wykonywana przez kogoś, kto opracowuje słowniki to (...). (...) zajmuje się (...)*”.

The foregoing exercise requires the attainment of fairly high linguistic competence. At the beginning, the use of analogy should, therefore, embrace a more limited scope of material, preferably word pairs of the type: “*Mały pies to piesek. Mały kot to (...). Bardzo mały i bardzo ładny pies to pieseczek. Bardzo mały i ładny kot to (...)*”. With time, at the next teaching levels, derivational chains will gradually expand to include next elements, in a natural way and in accordance with the principle of gradation of difficulty. In this way, this kind of exercise is relevant at different stages of work on word-formation.

## CONCLUSIONS

The question about the way of programming of word-formation exercises for surdologopedic therapy is still relevant. The use of the method of derivational nests is obviously a significant suggestion and should be taken into consideration when creating a program of the language training of hearing-impaired children and young people. The presented set of exercises is a contribution to the discussion on the possible use of the method of derivational nests in linguistic programming of hearing-impaired patients. It is a general set of exercises that structures activities and determines the directions of speech-therapy work. The presented proposals for exercises require a greater diversity and extension through added linguistic

<sup>6</sup> Examples of chains after: Nagórko (2005, 228).

examples and illustration material. Even if, because of difficulties discussed in this article, the use of the method of derivational nests in surdologopedic therapy is only fragmentary, it will be undeniably beneficial to patients with hearing deficits, if only by developing their linguistic sensitivity, which influences the degree of independence in learning Polish.

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