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QUALITATIVE ANALYSIS OF THE INTERPRETATION OF PROVERBS BY CHILDREN AND YOUTH

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SUMMARY

Background:

The aim of this study is to formulate some statements about the components of information processing that define cognitive processes in the normal population, and about the neuroanatomical and neurophysiological basis of these processes in the healthy brain.

Material/ Methods:

A proverb explanation task consisting of 10 expressions was administered to 185 individuals ranging in age from 7 to 18 years. The task was designed to examine how patterns of language development in adolescents (14, 17, and 18 years old) compare to those observed in children (7 and 11 years old).

Results:

The interpretation of proverbs presented without a situational context changes with age. The proportion of statements indicating an understanding of the figurative meaning of proverbs and the ability to generalize them increases systematically, and the number of literal and unrelated statements, remaining in a loose or literal connection with the content of the proverb, decreases. On the other hand, the number of concrete statements, in which the subject uses an example or illustration to explain the symbolic meaning of the proverb, often referring to their own experience, varies slightly from 11 to 18 years of age.

Conclusions:

The study contributes to a small but growing body of information concerning later language development, and may have some important implications for the assessment of figurative language comprehension and language impairments.

Key words: figurative language, language comprehension, patterns of language development

INTRODUCTION

Neuropsychological aspects of proverb interpretation

Interest in the cognitive aspects of understanding proverbs goes back to early 20th century, when proverbs began to be used in various kinds of psychological tests. The first references in the literature, dating back to 1910, indicated that patients diagnosed as mentally ill (*dementia praecox* in most cases), when asked to interpret proverbs, created unusual associations (Bleuler, 1911; Kent & Rosanoff, 1910). Most systematic studies stem from the early work of Goldstein (1936; Goldstein & Scherer, 1941) and Benjamin (1944) concerning formal thought disorders in schizophrenics. This research shows that schizophrenic patients show serious difficulty in explaining the abstract meanings of proverbs: their interpretations are literal and, sometimes, nonsensical and idiosyncratic (Benjamin, 1944). The reasons for such interpretations were perceived to lie in the concreteness of thinking caused by the lack of an abstract attitude, which Goldstein (1936) defines as the ability to go beyond the given aspects of a situation and separate oneself from the impressions one has. "By adopting a specific attitude, we directly perceive and immediately recognize the situation. Our thinking and action is determined by the current requirements placed on us. On the other hand, when adopting an abstract attitude, we go beyond the immediate requirements of the objects or sensations. The specific characteristics of the situation are ignored. The action is guided by a conceptual point of view taking into account the requirements of the whole situation" (Goldstein & Scherer, 1941, p. 26). An abstract attitude is the basis for conscious and volitional forms of behaviour, such as thinking about various topics at the same time, the ability to grasp the essence of the whole, divide it into parts, extract them and make a synthesis of them, the ability to mentally extract common features, create hierarchical concepts, plan for the future, adopt attitudes towards what is "possible," think or act in a symbolic way, move in thought from one aspect of the situation to another (Goldstein & Scherer, 1941). According to Goldstein, "an abstract behaviour is essentially distinct from a specific behaviour, there is no gradual transition between them, adopting an abstract attitude is more complex not only because of the simple addition of a new determinant; it is a completely different function of the organism" (quoted by Walsh, 1998, p. 1570). A mentally healthy person, according to this author, can use two ways of thinking depending on the requirements of the situation, while many patients with brain damage are limited to one specific method. Impairment of an abstract attitude is the greatest in the case of the frontal lobe damage.

This concept of Goldstein underlay research on understanding proverbs carried out in later years within clinical psychology and psychiatry (Andreasen, 1977; Zeigarnik, 1983; Rubinsztein, 1962). According to this approach to abstraction, the main cognitive task during the interpretation of proverbs is to recognize whether or not the individual symbols or concepts they contained relate to more

general and abstract ideas. According to Benjamin (1944), interpretation of a proverb requires, in the first place, that one understand its literal layer, and then decode the symbols in order to discover a more general meaning. The next task is to apply it to a specific situation. However, Benjamin did not describe this process in detail. Quotes from schizophrenic patients show difficulty in recognizing the meaning of the symbols contained in proverbs or excessive symbolization. According to Goldstein and Benjamin, difficulties in verbal explanation of the meaning of proverbs indicate deficits in higher mental functions, that is, thinking.

From the time of Goldstein and Benjamin, the interpretation of proverbs began to be taken into account in the diagnosis of the thinking process in patients with schizophrenia and frontal lobe damage (Elmore & Gorham, 1957), depression (Cummings, 1985), patients with damage to the right hemisphere (Van Lancker & Kepler, 1987; Winner & Gardner, 1977; Weylman et al., 1989), patients with dementia (Bromley, 1957; Chapman et al., 1997), aphasia (Ulatowska et al., 2000b) and old age (Ulatowska et al., 1998). Research conducted in these groups of patients indicates that they have serious difficulty in explaining the figurative meanings of proverbs, which is commonly interpreted as an indicator of the role of abstract thinking in their understanding (Andreasen, 1977; Zeigarnik, 1983; Rubinsztejn, 1962).

As may be evident from the foregoing, previous and current research on the process of understanding proverbs as an indicator of the accuracy of the process of thinking is mainly conducted within neuropsychology. The primary objective of the research conducted on clinical groups is to understand mental processes, and data from pathology are mainly used for building general models (Sartori, 1988; quoted by Walsh, 1998). Cognitive neuropsychologists draw conclusions about the functional properties of normal cognitive processes based on research on the impaired and preserved cognitive abilities in patients with brain injuries. They also seek conclusive clinical evidence of the relevance of different models of normal cognitive mechanisms (Denes et al., 1988). The aim of this study is to formulate some statements about the components of information processing that define cognitive processes in a norm population, and about the neuroanatomical and neurophysiological basis of these processes in the healthy brain (Caramazza, 1984).

However, the use of data obtained from patients with brain damage raises some concerns. Neuropsychologists often do not take into account recent work in developmental psychology, especially data regarding the development of formal thinking. Studies show that formal thinking (and therefore abstract) is not as common as Piaget previously assumed. Most people in everyday life function at the level of concrete operations. This means that not all patients with brain injuries had mastered, before the damage occurred, the ability to think abstractly. Thus drawing conclusions about the impairment of an abstract attitude would be possible after a prior diagnosis of mental operations in the patient during the pre-morbid period, or after conducting standardization tests concerning the understanding of proverbs in a given group. In addition, it should be emphasized that, despite the fact that in accordance with the assumptions of cognitive neuropsychy-

chology clinical data are used to build general models of cognitive processes, such a theory in regard to the understanding of proverbs has not been formed so far. Thanks to the results of clinical tests, we learn about a possible variety of interpretations of proverbs, but we do not know the mechanism of their understanding.

Developmental aspects of the ability to interpret proverbs – overview of research

In the literature, little attention has been paid to developmental aspects of the ability to understand proverbs. In this century, only a few studies have been conducted within developmental psychology concerning this issue. It seems necessary to consider this skill in relation to cognitive development and the increasing competence of the child in terms of understanding and action. Although the previous studies included various age groups, ranging from seven-year-old children to fourteen-year-olds, who, therefore, are at the concrete thinking stage or in the initial period of formal thinking, still, no systematic descriptions of the development of that skill have been created. The majority of studies on various aspects of understanding proverbs have been conducted in groups of adults (mostly from within psychopathology) and among students, which is to say, among people with potentially the greatest intellectual abilities.

It is widely believed that the interpretation of proverbs is more difficult than understanding metaphors of other types (MacQueen et al. 2004; Łockiewicz et al. 2012). Therefore, the ability to understand proverbs appears later than other forms of metaphorical understanding. The results of the study indicate that children before 11-12 years of age poorly perform tasks requiring verbal interpretation of proverbs and their appropriate paraphrase. In most cases, their interpretations are literal; there are few correct answers, and these appear only in older responders, i.e. children 11-12 years of age (Piaget, 1984; Gorham, 1956; Richardson & Church, 1959; Wiejak & Kostka-Szymańska, 1998, 2000). Starting from this period, a gradual increase in the ability to understand proverbs is noticed. In studies by Gorham (1956), 33% of 11-year-olds correctly matched a sentence to a proverb, while in a group of college students 81% of the answers were correct. Misinterpretations of the meaning of proverbs before 11 years of age (Billow, 1975; Piaget, 1984; Richardson & Church, 1959; Wiejak & Kostka-Szymańska, 1998) suggest that understanding proverbs requires sophisticated cognitive mechanisms that occur during this period of life, i.e. formal thinking.

However, studies in which the ability to interpret proverbs verbally was compared with performance on Piaget's tasks that require combinatorial reasoning did not confirm this hypothesis (Billow, 1975; Cometa & Eson, 1978). The results reported by Billow (1975) show a very low correlation (0.12) between the two types of tasks. In contrast, Comet and Eson (1978) found that children who performed Piaget's tasks well also provided 90% correct interpretations of the proverbs presented to them. It was observed, however, that also the children who have not reached the stage of formal operations still correctly interpreted some proverbs. These results led Comet and Eso to reject the hypothesis of

a relationship between the ability to understand proverbs and the stage of formal operations. The authors argued that if formal logic is measured by the ability to solve tasks that require combinatorial reasoning, then formal thinking is a cognitive ability which underlies the understanding of proverbs by children. This is probably due to the fact that Piaget's tasks measure paradigmatic and logical-scientific thinking and the interpretation of figurative expressions reflects narrative thinking used in situations of everyday life (cf. Bruner, 1986).

Almost all researchers emphasize that literal interpretations are characteristic of younger children (Piaget, 1984; Richardson & Church, 1959; Douglas & Peel 1979; Wiejak & Kostka-Szymańska, 1998; 2000). According to Piaget (1984), children functioning at the pre-formal stage who cannot understand proverbs with their current cognitive equipment resort to earlier ways of cognition, i.e. syncretic reasoning. Syncretic reasoning is a process in which one sentence entails the second, or the cause entails the effect, not on the basis of logical implications or a causal relationship, but on the basis of the scheme of the wholeness which combines these two sentences. Piaget considers them to be a consequence of egocentrism, transferred in this case to the plane of verbal and abstract thinking.

This phenomenon was described on the basis of an experiment in which the task of children ranging in age from 9 to 11 was to match proverbs with sentences containing an analogous sense given in the form of a general statement. It turned out that the children did not understand the proverbs, but they thought they understood them, so they did not want any additional explanations. Sentences were matched with proverbs not on the basis of a logical implication, but based on the implication the child's imagination creates with the help of a certain pattern on a whole in which both of the sentences given merge. Piaget explains that when reading a proverb a child creates a scheme which may include the symbolic meaning of proverbs, mental images triggered by reading the words, or the rhythm of a sentence. These factors form a single scheme focusing on concrete and pictorial ideas triggered by the proverb read. For this reason, children's answers seem "imaginary." Piaget placed the mechanism of syncretic thinking between autistic and mature logical thinking.

However, under specific conditions, i.e. when the proverb is presented in a realistic context and when the study included a simple proverb, children demonstrated the ability to understand much earlier (Chambers, 1977; Honeck et al., 1978). When children have to match proverbs with a situational example of its use, the results they obtain are also better than previously signalled (Nippold et al., 1988); in 11-year-olds, 77% of answers are correct. If the research methodology simplifies the task, then younger children perform better because there is less load on information processing.

Pasamanic (1983) also observed a good understanding of proverbs in children of 6-9 years of age engaged in an open discussion on proverbs conducted in a peer group. Such a research methodology, i.e. the use of a dialogue and social interaction, allowed children to link their own experiences with the basic meaning of the proverb, which, according to the author, allows for abstraction in

a more efficient manner than traditional experiments. In addition, the relationship that is formed between children helps them to learn from one another, while, at the same time, children at a higher level of thought provoke the children whose level of thinking is lower to use the new strategies of reasoning. Using the described strategy of research, the author observed in 6-9 year-olds as many as seven strategies of abstract thinking, of which the most common were situational illustrations, in which the child refers to its own experience. Creating illustrations, that is, examples of various applications of proverbs, as we know from the Honeck's theory discussed earlier (1998), requires abstracting the basic meaning of proverbs. Summing up the results of the research, the author states that group problem solving is a very strong incentive for development of abstract thinking, probably because social interactions reduce the difference between actual and potential development of the child (Wygotski, 1989).

The richness of the methods presented suggests that the results do not have to be considered contradictory. The variety of tasks covers a variety of cognitive mechanisms used in their completion (Haman, 1993). Empirical studies do not lead to a clear connection between the ability to understand proverbs and general cognitive development, and the link with specific cognitive skills is only slight (Honeck, 1998). A better understanding of proverbs is demonstrated by children who are good at reading (Gamlin & Trampusch, 1982). Early occurrence of the ability to understand the correct meaning of proverbs is connected with metacognitive capabilities, which direct the search for a broader (Gamblin & Tramposen, 1982) and metalinguistic meaning (Lutzer, 1988). Understanding proverbs is associated with the development of the ability to reason by analogy (average correlation), which requires the perception of similarities and differences in the stimuli presented (Nippold et al., 1988). In the literature, however, there is no systematic analysis of the issues involved.

Only in a few experiments was there a study group composed of adolescents (cf. Richardson & Church 1959; Nippold et al. 1996; Nippold & Hag, 1996; Nippold et al., 1988). This results from the belief, widespread in the 60s and 70s, that language development ends in late childhood, and the assumption that the 11-14 age bracket is followed by a sharp increase in the ability to understand proverbs. However, Richardson & Church (1959) found that in the group of adolescents and adults there are figurative and literal interpretations, and in the case of a few of the respondents the task is completed very poorly. Nippold et al. (1996) noted a large increase in this ability during adolescence, particularly evident when comparing the levels of understanding of 13 and 17-year-olds. The maximum ability to understand observed in 20-year-olds remained at the same level until 50 years of age, and at about 70 years of age this ability deteriorates.

When summarizing all these considerations, we should bear in mind that the studies conducted so far have shown no connection between the ability to understand proverbs and general cognitive abilities, and they have not shown a clear relationship with the stage of formal operations. Studies concerning adolescents are very rare and incomplete. The studies presented to date have not

included information about the level of cognitive functioning, nor have they demonstrated which cognitive processes are involved in the process of understanding figurative language. Few of the studies conducted to date have been devoted to specifying the characteristics of the task, i.e. proverbs which modify their level of understanding, and they omitted factors related to the subject researched. In addition, these studies were not based on a detailed model of understanding proverbs.

The aim of this study is to demonstrate some qualitative characteristics of the ways of interpreting proverbs in the developmental aspect, i.e. from 7 to 18 years of age. This will allow us to determine whether or not people from the same socio-cultural environment know the proverb, and whether they occur in the subject's own linguistic and conceptual system. A qualitative analysis of answers will allow us to recognize the different types of interpretation created by the responders in the developmental aspect, and not just the assessment of whether or not they are correct.

MATERIAL AND METHODS

The research group constituted 185 people in four different age groups (7, 11, 14, and 17-18 years of age). In the group of 7-year-olds, the test tasks were completed by 33 children; in the group of 11-year-olds, by 32 children; and in the group of 14-year-olds, 30 people were tested. In the group of young people of 17-18 years of age, 90 people were tested. The selection of test groups was determined by educational factors:

- 7-year-olds are children beginning their school education;
- 11-year-olds are students in the fifth grade of primary school;
- 14 year-olds are in the second year of secondary school;
- 17-18-year-olds are in secondary schools (High School, Vocational Technical School).

IQ was a controlled variable. The initial stage of the study eliminated the children repeating a grade, students with long periods of absence, and children with special educational needs (with dyslexia and students environmentally neglected). All responders were Polish, used Polish as their first language, and underwent a similar educational program.

To assess the understanding of proverbs and make a qualitative characterization of their interpretation, the Test of Interpretations of Proverbs (TIP) by B. Kaczmarek (experimental version) was used. The Test of Interpretation of Proverbs (TIP) by B. Kaczmarek contains well-known, widely used and understood Polish proverbs, which are not very complicated, and are diverse in terms of grammatical structure. Pilot studies were conducted among adult and healthy people differing in terms of education, age and gender. The experimental version of the Test of Interpretation of Proverbs can be used to study children, adolescents and adults.

The study was divided into two parts:

- Part I: free interpretation of proverbs,
- Part II: matching sentences with proverbs.

The use of these two tasks allowed us to take into account various aspects of understanding figurative expressions: expressive and perceptual.

In order to obtain fuller and more interesting analyses of the research results, the system of evaluation and research results obtained in the first part of the TIP - free interpretation of proverbs - will be presented in this article. The statements (interpretations of proverbs) in the developmental aspect will be subject to a thorough analysis.

The first part of the study was to interpret the meaning of proverbs. Ten consecutive proverbs were presented, and then the participants were asked to explain the meaning of each statement. The answers were classified into account one of four categories, as shown in Table 1. The interpretation of each proverb is classified only into one of these categories.

Many researchers (Resnick, 1982; Kemper, 1981; Nippold, 1988, 1986; Nippold et al. 1996, 1998) indicate that in order for figurative expressions (proverbs) to be properly understood, i.e. symbolically, they should be presented in an adequate situational context. At the same time, they consider the task of interpreting

Table 1. Evaluation system of free interpretation of proverbs

Type of interpretation	Criteria for classification
ABSTRACT	Explanation of the meaning of the proverb at an abstract level expressing the general idea contained in the proverb, e.g. "Not everything is so good even though it seems so" (Dominika, 11;5, interpreting the proverb, "All that glitters is not gold.")
CONCRETE	Statements in which the subject uses an example or illustration to explain the symbolic meaning of the proverb, often referring to their own experience e.g. "For example, if we get good grades through all the years, we can become someone important and if we don't, then this is the case" (Ania, 11;6, interpreting the proverb, "As you make your bed, so you must lie on it.")
LITERAL	No understanding of the metaphorical meaning of proverbs; the interpretation refers to the real situation presented in the proverb, resembles it externally from the formal aspect, e.g. "If someone buys a horse from someone or gets it, they do not look into its teeth because it may bite them" (Stefcia, 7;8, interpreting the proverb, "Don't look a gift horse in the mouth.")
UNRELATED	The lack of understanding of the proverb, statements loosely associated with the content of the proverb or completely unrelated e.g. "To go from church to church to find out where it is ringing and ask the priest and if the priest doesn't know then no one knows" (Ola, 7;7, interpreting the proverb, "The bell is ringing, but I don't know in which church.")

isolated proverbs to be one of the most difficult, because it lacks a reference to a specific situation that could be an indication of what the proverb means. However, it is believed that the use of situational context will have greater importance in the interpretation of little-known and original proverbs.

It should be noted at this point that from the early-school period educational programs include all kinds of games with proverbs of a moralistic character (e.g. a literary text contains a clear instruction, and the child's task is to match the appropriate proverb to it, or the teacher gives the child a proverb and it chooses - points to - a life situation illustrating the proverb, or finds an appropriate written interpretation prepared by an adult). In addition, children over 9 years of age have the opportunity to get acquainted with a number of popular Polish proverbs and understand their meaning thanks to the proverb quiz. In the later stages of teaching, contact with figurative language and its proper understanding increases. This is connected with, among other things, the level of thinking (Kostka-Szymańska, 2005, 2006) and intellectual development (Wiejak, 2011).

The studies were of an individual character. They were conducted on a one-time basis with children of 11 and 14 years of age, and with youth of 17-18 years of age during a session lasting about half an hour. In contrast, because of the lower span of attention, the 7-year-old children were tested twice (on the same rules). Before the test, there was a talk about proverbs with each person. Young children (7 and 11-year-olds) were asked whether they know what proverbs are and what proverbs they are familiar with. Their attention was drawn to the fact that proverbs do not mean what they say literally, and this was explained with an example ("A grain of wheat in a bushel of chaff"). In contrast, older children 14 years of age and adolescents (17-18 years of age) were informed that each proverb contains a deeper thought which they have to identify.

The verbal interpretation of proverbs was recorded with a voice recorder, and then transcribed into a specially constructed answer sheet and subjected to a thorough qualitative analysis.

RESULTS

As a result of our study, we developed a number of statements which are interpretations of symbolic expressions (proverbs) and gained information on the most common choices of different types of interpretation at each age level (7, 11, 14, 17, 18 years of age). A thorough qualitative analysis of statements and errors made by the participants when interpreting proverbs can explain the understanding of proverbs in the developmental aspect.

Each proverb has two meanings: one literal and explicit, which is not its proper meaning, and another, hidden and symbolic, that represents the sense of the proverb. Fig. 1 shows the percentage presentation of specific interpretations of proverbs in each age group tested.

The group of 7-year-olds was dominated by literal interpretations relating to the real situation presented in the proverb, which represent 53.9% of all state-

ments. It is worth noting that some such statements are only repetitions of the proverb heard or some part of it, and others are an attempt to develop a thought or to justify it, but only on a literal level. Another way of interpreting proverbs typical for seven-year-olds are unrelated explanations, which are also a manifestation of a lack of understanding of the metaphorical meaning of proverbs. These are statements loosely associated with the content of the proverb or completely unrelated to it, and account for 40% of all statements. Only 6.1% of the answers of seven-year-old children demonstrate a clear understanding of the meaning of proverbs. These are concrete interpretations (4.7% of all statements). At this age level, abstract statements are rare, representing 1.4% of all interpretations. Fig. 2 shows the data.

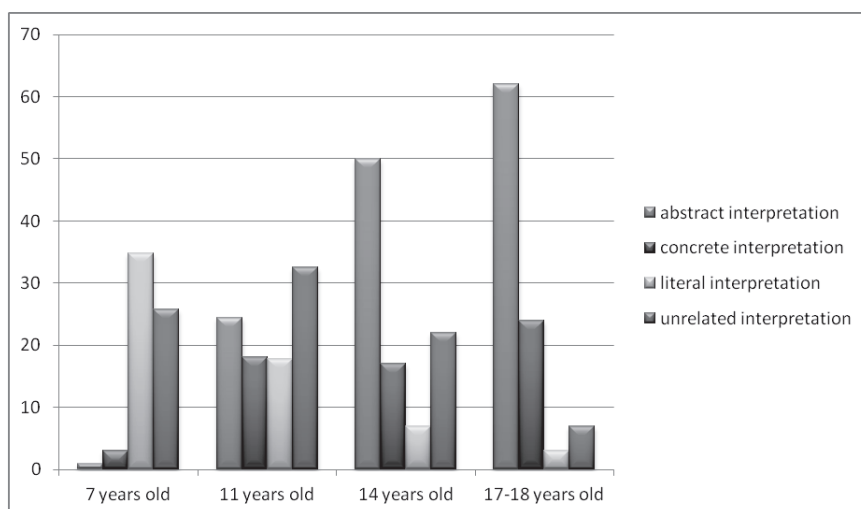


Fig. 1. The proportions of the various ways of interpreting in the respective age groups

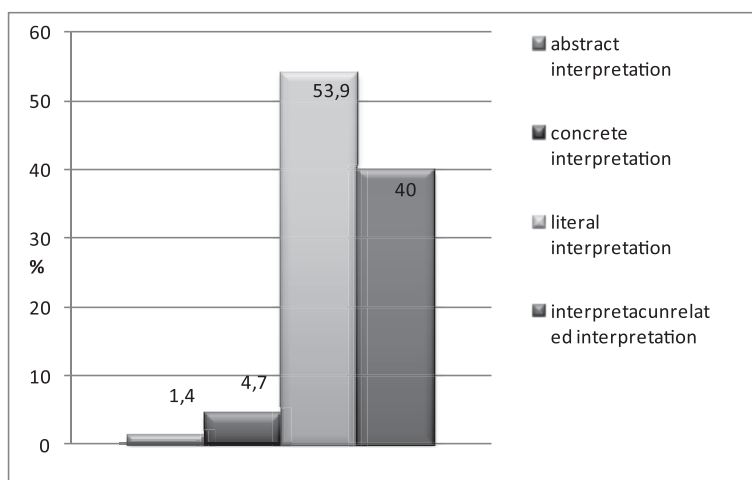


Fig. 2. The proportion of specific ways of interpreting proverbs by seven-year-old children in relation to the total number of statements

In the group of 11-year-old children, the greatest number of interpretations are unrelated statements (35%) which are loosely associated with the content of the proverb. In relation to the seven-year-old children, the number of literal interpretations (representing 19.2% of all statements) was significantly reduced. In contrast, the percentage of statements in which the child uses an example to explain the symbolic meaning of the proverb (19.5%), often relying on their own or others' experience, clearly increased. In addition, it is worth noting that the number of statements attesting to the meaning of proverbs at the general abstract level increased sharply, to 26.3% of all interpretations. Fig. 3 shows the data.

Among the 14-year-olds, more than half (52%) of all the statements obtained are abstract interpretations, demonstrating the understanding of the metaphorical meaning of proverbs. In addition to symbolic interpretations, there are also those that testify to their proper meaning, but at a concrete level. They represent 17.7% of all statements by fourteen-year-olds, a percentage similar to the proportion of these interpretations among eleven-year-olds. Literal and unrelated statements, whose percentages in the group presented are the lowest compared with the other groups, are an expression of a lack of understanding of proverbs. Literal interpretations (7.3%), which, like in other groups, mainly consist of the repetition of what is contained in the proverb, were the least numerous. As far as the unrelated explanations are concerned, it should be noted that their percentage (23%) ranks second in the proportion of abstract interpretations. Fig. 4 presents the percentage data.

The group of young people aged 17-18 years is dominated by two types of interpretation of proverbs: explanation of their figurative meaning in an abstract way, expressing the general idea contained in the proverb or in a concrete way by giving an illustrative example of its general meaning. Although the Test of In-

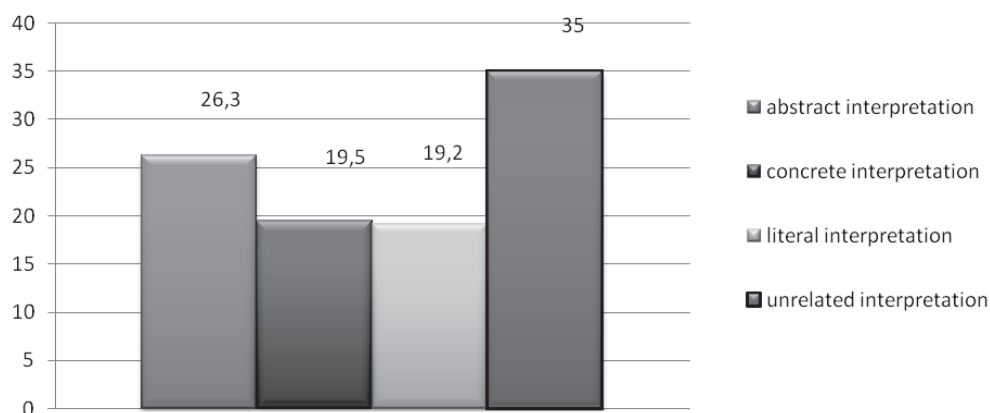


Fig. 3. The proportion of specific ways of interpreting proverbs by children 11 years of age in relation to the total number of statements

terpretation of Proverbs we used contains proverbs widely known and used, as many as 15% of the statements indicate a lack of understanding of their metaphorical sense (Fig. 5). This manifests itself in the form of bizarre interpretations, only marginally related to the meaning of the proverbs, which represent 7% of the total number of statements, and literal interpretations and no responses, whose proportion is roughly similar at 4%.

The analysis of individual statements by children and young people at different levels provides a basis for presenting the regularities characteristic of a way of interpreting symbolic expressions typical of a certain age. In the description of statements one should focus on the analysis of errors. This will allow us, to some

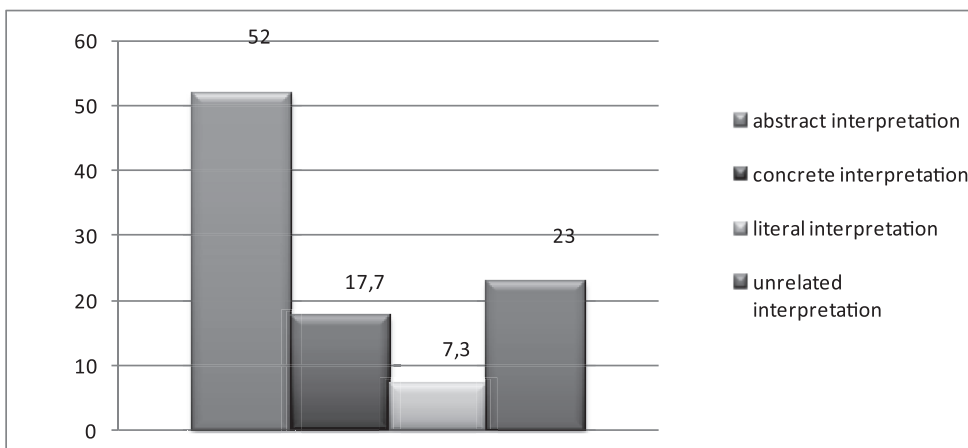


Fig. 4. The proportion of specific ways of interpreting proverbs by children 14 years of age in relation to the total number of statements

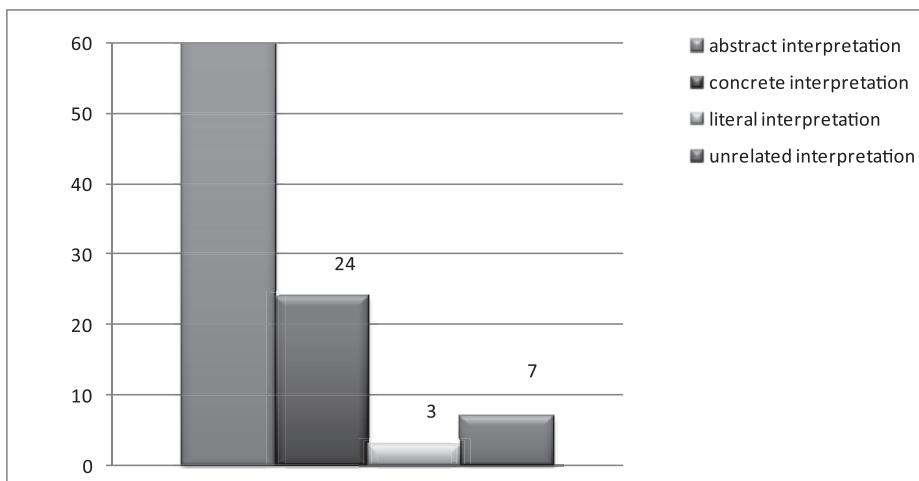


Fig. 5. The proportion of specific ways of interpreting proverbs by children 17-18 years of age in relation to the total number of statements

extent, to penetrate the secrets of thinking and reasoning of children and young people at different levels of age.

Qualitative characteristics of free interpretation of proverbs by seven-year-old children

As mentioned, children in the youngest age group examined exhibit the greatest difficulty in understanding proverbs. This indicates that the child at this stage of development is not mature enough to think symbolically (metaphorically) and is not yet ready to search for metaphors. This is most likely due to the lower level of reasoning and language restrictions (Kostka-Szymańska, 2003, 2006).

In the interpretation of proverbs, the subject does not go from the first literal meaning to the second deeper meaning, for which the literal meaning is only a form. An example of such behaviour is one of the many literal interpretations (53.9%) made by seven-year-old Kasia (7;5): "A bit fast and a bit slow so that he is on time," given an explanation of the proverb, "Make haste slowly." These interpretations exclusively concern the literal layer of figurative expressions, and are basically repetitions of what is contained in the sentence that illustrates the content of the proverb.

Since the understanding of the symbolic expressions at this stage proved to be very difficult, the child could not understand its meaning, saying that it treats it like a riddle. That is how Sebastian (7;8) responded to the proverb, "All that glitters is not gold": he said merely "Lamp."

In many statements, there appear manifestations of reasoning based on the comparison of one thing to another (attempt to make an analogy). Children usually compare objects in some regard: shape, colour, structure, function, appearance, etc. However, the result of this comparison is not a symbolic solution of the problem. This phenomenon is illustrated in an attempt to explain the proverb, "All that glitters is not gold." Here is a statement that exemplifies this type: "Yes, gold glitters and shines, but, for example, silver also shines, but it means that not only gold glitters" (Ania 7;3).

The reason for such a large number of statements completely unrelated to the right symbolic meaning of proverbs is syncretic reasoning, which - according to Piaget (1992) - is typical of this period. Conclusions which the child draws when interpreting proverbs are often false due to the lack of experience and organized knowledge based on the hierarchical system of concepts and mental operations.

Qualitative characteristics of free interpretation of proverbs by eleven-year-old children

In this age group, the understanding of proverbs improved: there were more statements and their quality was better compared to the previous group (almost 49% of statements show a level of understanding at an abstract or concrete level). We can still see manifestations of a lack of understanding of figurative language, as manifested by unrelated interpretations.

11-year-olds, like 7-year-olds, try to overcome their inability to interpret proverbs. They do this in a slightly different way. They are increasingly aware of the fact that the statement directed at them must have another, hidden meaning, different from the literal one. Hence the decrease of literal statements in favour of the concrete (19.5%) and abstract ones (26.3%). However, unrelated interpretations are the most common (35%). Respondents try to give symbolic interpretations, but these attempts, in most cases, failed, e.g. "Do not be happy that you won," offered as a interpretation of the proverb, "Whoever digs a pit for somebody, digs a pit for himself " (Grzegorz, 11;1).

A characteristic feature in the case of difficulties in the interpretation of proverbs is the commentary offered by the subjects, and their attempts to assess the situation which is literally contained in the expression showing the content of proverbs. Here is an example: "You have to take care of order," given as an interpretation of the proverb, "As you make your bed, so you must lie upon it" (Jacek, 11;7).

It should be noted, however, that there are also statements manifesting the understanding of the correct meaning of proverbs. This applies, for example, to such statements as this: "When one day I prepared for the lesson well, I got an A in mathematics" (Krzysztof, 11;8), given as an explanation of the meaning of the proverb, "As you make your bed, so you must lie upon it."

With the increase (along with development) of the child's reasoning ability and generalizing significant features, there appear generalized statements. This is reflected in statements such as this: "If someone experienced something bad because of stupidity, he then tries to be careful even if he is in no danger" – offered as an explanation of the meaning of the proverb, "Once bitten, twice shy" by Kasia (11;7).

Overall, however, it can be assumed that respondents do not have fully developed metaphorical thinking, which is an integral part of abstract thinking.

Qualitative characteristics of free interpretation of proverbs by fourteen-year-old children

Among children 14 years of age, one notes marked progress in understanding proverbs at a general abstract level. Statements of this type constitute more than half of all statements. This situation is associated with the increasing development of more efficient reasoning, inferential thinking, and performing mental operations without support in a particular material. For example, here is how a fourteen-year-old girl interpreted the proverb, "Make hay while the sun shines": "Catch the opportunity when it happens" (Małgosia, 14;3). Abstract interpretations made by the respondents are somewhat different. Some are short and to the point, such as those presented earlier, and indicate a high level of generalization, while others are a more complex sequence of sentences.

Based on a qualitative analysis of statements of these children, we can say that their thinking, compared with other groups, is conducted in accordance with

the principles of logic. We can see, then, a gradual shift from concrete and pictorial thinking to abstract thinking.

It is worth noting that the literal statements are similar in nature as in other groups, i.e. are often a repetition of what is in the literal layer of the proverbs. However, such statements are now rare (7.3% of all interpretations). There are also concrete interpretations, in which subjects are looking for areas of application of the proverb only in the sphere of concrete facts.

By contrast, another characteristic feature is an unrelated statement that is an expression of a lack of understanding of the symbolic meaning of proverbs (23% of interpretations). An example of this is the statement "Proceed as conscience tells you" as an explanation of the proverb, "Make haste slowly" (Ania, 14;7).

Summing up, we can say that fourteen-year-old children exhibit an ability to think metaphorically. But often symbolic interpretation of individual words in the proverb is not enough to understand the proverb, because one also has to perceive some logical relations presented in a masked fashion.

Qualitative characteristics of free interpretation of proverbs by young people of 17-18 years of age

The general ideas contained in proverbs, according to the concept of Honeck (1999), can be expressed in two ways: either in the form of abstract denunciations or as an example which illustrates the general idea or statement of a generalized nature, such as the interpretation of the proverb, "The bell is ringing but I don't know in which church," given by a high-school student - "Someone has a very superficial knowledge of some areas" (Joanna, IQ = 105). As shown in the analyses, the so-called concrete interpretations, that is, involving the creation of an illustration of the application of proverbs to a particular situation, are quite common. An example of this type of interpretation is a statement by a student of a technical school, who gave the following explanation of the proverb, "Murder will out" – "If someone is an alcoholic and an anonymous alcoholic and it became known" (Jacek, IQ=78). In this type of interpretation it is common to refer to situations known from one's own experience, which is manifested *inter alia* in the form of a grammatical expression, e.g. by making statements in the first person. It is how a vocational school student explained the meaning of the proverb, "Don't look a gift horse in the mouth" - "If you gave me 100 złotych, I would not ask where it is from but I would just take it" (Michał, IQ=76).

Literal interpretations relate to the real situation presented in the proverb, such as the statement by one girl pertaining to the proverb, "All that glitters is not gold" - "Some people wear gold-plated rings and some do not know how to tell whether it is gold or gold-plated. For example, I do not know how to distinguish between them" (Barbara, HS, IQ=87). At the same time, another student of a vocational school explained the meaning of the proverb, "Once bitten, twice shy" - "If someone gets bitten, they will be less daring and more shy the next time so that they won't get bitten again" (Kamila, IQ=82).

Quite bizarre interpretations that have no connection with the content of proverbs did occur in this group, such as the statement by a student from a vocational school concerning the proverb, "Don't look a gift horse in the mouth" – "Do not judge a horse by his appearance but by the work it does" (Anna, IQ=87). A qualitative analysis indicates that expressions of this type are not homogeneous. Some of them completely do not correspond to the proverb, while others, even though they do not explain properly the content, are of a generalized nature. This is how a high school student explained the meaning of the proverb, "Don't look a gift horse in the mouth" - "Don't take account of someone's weaknesses" (Mark, IQ = 96). This statement does not reflect the meaning of the proverb, even though it takes the form of generalization. Other interpretations considered bizarre result from taking into account alternative meanings of some of the particular words used in the proverb. This was common in the case of the proverb, "Don't look a gift horse in the mouth," where a high percentage of respondents interpreted the word "gift" as "forgiven" (in the Polish version of the proverb, the word here translated as "gift" can mean both "given" and "forgiven"), and thus the basis for the interpretation has a different meaning than the one contained in the proverb. Therefore, it is no wonder that there are statements such as "You don't look into the past of some criminal if it has already been forgiven" (Mateusz, VS, IQ = 98). The occurrence of this type of interpretation may indicate either a complete lack of understanding of proverbs or an unsuccessful attempt to interpret it. Explaining the meaning of metaphors in the way discussed here can indicate the occurrence of an error in reasoning involving an inference based on incorrect assumptions. Often, as is clear from the qualitative analysis of statements of respondents, this kind of interpretation is generalized and abstract, but does not reflect the meaning of the proverb.

DISCUSSION

Many researchers dealing with the understanding of proverbs (Goldstein & Scherer, 1941; Honeck, 1997) argue that the correct understanding of the meaning of proverbs is reflected in statements of a generalized and abstract nature. On the other hand, other researchers (cf. Gibbs, 1995, Walsh, 1988) present the view that the correct understanding of proverbs is manifested by statements that are detailed, rich and contain concrete examples of its use. The authors of these theories assume that images are one of the components of figurative meanings, because reality is represented in the mind not only in language, but also in analogue-pictorial form.

Our research shows that the interpretation of isolated proverbs, presented without a situational context, changes together with the age of the respondents. Systematically, the proportion of statements indicating an understanding of the figurative meaning of proverbs and the ability to generalize them decreases, as does the number of literal statements, in which subjects perceive only the literal aspect of proverbs, and unrelated statements remaining in at best a loose connection with the content of the proverb.

In turn, the number of statements which are illustrated with the content of proverbs varies slightly from 11 to 18 years of age. Only in 7- year-olds do we see a small percentage of these statements, which indicates a lack of understanding of proverbs. However, in older children and adolescents statements of this type constitute approximately 20% of all interpretations. Referring to the theory of Honeck (1994), the basis for the creation of this type of interpretation is prior knowledge of abstract meaning. The previously created figurative meaning of proverbs can successfully be applied in new situations (Pachalska et al 2012). This is, according to the author, the last phase of the interpretation of proverbs, called the phase of revised meaning. In this phase there may be different interpretations of the same proverb, for example, the proverb, "Make the hay while the sun shines" has the general meaning of "It's better to do errands right away." Depending on the situation, it may have a number of meanings, such as, "You have to learn to be ready for the matura examination", "It's best to shape your character as a child" and many others .

The proverb can be used in almost every field of life. Moreover, any use of proverbs will undoubtedly alter its figurative meaning to some extent. In the context of developmental data and in relation to the theory of Honeck (1994), two types of interpretation of proverbs should be considered as correct: abstract, explaining its meaning in a generalized way, and concrete (illustrative), showing its meaning in a context that refers to the experiences of the subject. As shown in the analyses, the so-called concrete interpretations are quite common.

CONCLUSIONS

Although previous studies have reported that proverb comprehension remains quite literal before adolescence, the results of the present study indicate that some individuals as young as 11 years old performed quite well on a proverb interpretation task. It was also found that performance on the proverb task steadily improved from age 11 to 18. Qualitative analysis shows how figurative language comprehension develops from childhood to adolescence. Our study contributes to the small but growing body of data concerning later language development, and may have some important implications for the assessment of language comprehension. The results raise the question as to whether the statements of children from clinical groups, e.g. SLI or autism, differ qualitatively from those created by children developing properly, which requires further research.

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