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Theoretical and Empirical Basics of a Measure of Ability to Adequate Interpretation of Nonverbal Behavior

The present study is based on the theoretical approach to the structure of the ability to nonverbal behavior interpretation in which the following principal statements are stressed: nature and functions of nonverbal behavior are reflected in social interaction, attention to peculiarities of expressive behavior interpretation, significance of deliberate encoding of expressive behavior and explanation of social and emotional intellect as a complex of personality social abilities. Ability to psychological interpretation of nonverbal behavior consists of a number of sub-abilities which could be assessed through various types of social-perceptive and communication tasks. Adequacy of recognition and understanding of nonverbal behavior forms, adequacy of implementation of nonverbal behavior patterns in relationships regulation; adequacy of expression regulation (encoding) are integral indicators of the ability to adequate interpretation of nonverbal behavior.

Key words: social abilities, nonverbal expressive behavior, interpretation of expressive behavior, encoding of expressive behavior, interpretational scheme, ability structure.

It is well known that communication because of its various features could be perceived as a creative task which resolving is dependent from a number of partners' abilities and skills which in their turn develop in the sphere of social-psychological practices and represent individual's social-psychological traits and abilities. The development of social abilities of personality presents one of the main research problems in Psychology of Nonverbal Behavior and Psychology of Social Perception.

The problem of social abilities of personality is considered in the modern Social Psychology under following perspectives: social-psychological, social-perceptual competence, social intelligence, intelligence of interpersonal relations, emotional intelligence, social imagination, social acuity, social-psychological attentiveness. Only in the recent time the mentioned concepts and their accompanied phenomena became the subject of theoretical analysis and experimental comparative investigation. One of the reasons of renewed attention of researchers to the social abilities of personality was the discovery of the fact that laws of personality cognitive sphere development are mediated through its objective activity and do not coincide with peculiarities of personality development as subject of perception, communication, and social practice of interaction. In mid 60-th Q. Sullivan, D. Guilford, R. Miller showed in their study that there is a group of abilities which developmental level does not depend on development level of «real intelligence» [28].

D.V. Ushakov [20] defined the social intelligence as ability to social events perception. He underlined the dependence of social intelligence developmental level from

combination of several factors including individual's personality traits and his biography. This conclusion has a special significance for the present study because it stresses that development of different functions of nonverbal behavior, ability to perceive the individual nonverbal behavior and to establish connections between inner and outer aspects, are influences by combination of cultural, social, social-psychological personality characteristics, and individual's life experiences, that determine the direction of interpretation and turn the interaction situation into creative task. V.N. Kunitzina [12, p.469] describes social intelligence as „global ability that arises on the base of intellectual, personality, communicative and behavioral traits».

The results of emotional intelligence research are also very important for the present study. Emotional intelligence is defined as substructure of social intelligence consisted of several abilities. According to D.W. Ljusina [20, p.33] emotional intelligence is understood as „ability to understand one's own and others' emotions and to manage them» [20, p.33], whereas I.N. Andreeva [2] underlines that emotional intelligence – is stable mental ability which structure consists of ability to discriminate and to express emotions.

Thus, variability of terminology associated with the sphere of social abilities reflects its multilevel character. At the same time the used terms have a number of similar aspects. First, they define an ability and therefore are connected with special activity and relate to personality traits. Second, they are aimed at establishment of connection between events where the persons are main actors. Third, main indicator of high or low ability to establish relations between communication events is interpretation adequacy, inference accuracy, forecasting correctness, relevance of chosen reactions and verbal and nonverbal responding type. Fourth, independent from the context of social events analysis, they are described as complex structural formation consisting of ability to adequate interpretation and accurate understanding of nonverbal behavior.

Each social ability including ability to adequate interpretation of nonverbal behavior manifests itself in an appropriate context of activity with relevant social-perceptive communication tasks. Because of this fact the measure of nonverbal behavior interpretation should include a «task». The difficulty relates to the determination of «tasks» and indices of adequate interpretation of nonverbal behavior.

Principally important for the extension of knowledge about ability of nonverbal behavior interpretation and methods of its measure could be a statement that both social intelligence and its structural element - emotional intelligence, contain behavioral component and ability to regulate relationships and to manage emotions through control of emotional expression [4, 6, 7, 20].

The description of «tasks» in the «Measure of Ability to Adequate Interpretation of Nonverbal Behavior» is based on our theoretical positions concerning phenomena of «nonverbal behavior» and «interpretation». In one of the resent books [29] that includes a meta-analysis devoted to methodology and research methods of nonverbal behavior is stated that during the last 20 years (the starting point is the publication years of the

collective monograph [26] that formulate the problems of nonverbal behavior investigation) there is a growing interest towards nonverbal behavior of personality and group. A lot of studies are aimed at examination of facial expression, eye contact, gestures, postures, but the main characteristics of the modern nonverbal research generation consists in the tendency to use nonverbal behavior components as indices or assessment measures for attitudes, interaction styles, and as valid method of testing of various abilities and skills. Authors [29] concluded that the number of publications increased more than six times in comparison with 1984. They contain information about nonverbal behavior application as an indicator of infants' social development, personality attractiveness, level of prejudice, agreeableness, empathy, helping behavior. The cultural differences in nonverbal behavior are defined and nonverbal behavior patterns of dominant, introvert – extravert, dependent – independent personality are described. All these studies allow to conclude that in different social contexts nonverbal behavior has various functions: understanding of personality, exertion of influence, regulation of own and partner's behavior, control factor, indicator of professional and other skills development. It should be stressed that Western psychologists tend to replace the nonverbal behavior investigation into applied sphere. Attention is paid to the analysis of relation of nonverbal behavior to interpersonal sensitivity, systems of nonverbal behavior of different dyad types and experts evaluation of nonverbal behavior parameter of investigation participants. Another group of researches is devoted to so called «technical approaches» to encoding and decoding of nonverbal expression and its recognition. In the frameworks of the discussion about appropriate measure of ability to adequate interpretation the methods that test inference and level of nonverbal behavior encoding are of great interest. Often social abilities that operate during the processes of nonverbal behavior perception are defined as «interpersonal sensitivity», «social skills». Judith A. Hall, Frank J. Bernieri, and Dana R. Carney [29] listed the most used measures of interpersonal sensitivity. Those measures that include a set of «tasks» aimed at perception, recognition, understanding, interpretation, and encoding of expression are considered below. The test PONS «Profile of Nonverbal Sensitivity» developed by R. Rosenthal and colleagues [29] consists of 220 audio, video and combined clips depicting nonverbal behavioral patterns that differ in the level of positivity and dominance. This test is used in applied studies that testify the relation between high «nonverbal behavior sensitivity» and some personality traits. Another set of «tasks» is used in the test IPT (Interpersonal Perception Task) [29]. The «tasks» of IPT are aimed to measure the ability the relationships recognition between observed targets based on their verbal and nonverbal behavior.

Diagnostic Analysis of Nonverbal Accuracy (DANVA) measures the sensitivity to nonverbal emotional expression. It includes pictures of emotional expression and audio representations of emotional states. The results of this test correlate with social adaptation and «mental adjustment». Well-known measure of empathic accuracy was developed by Ickes [29] and named as Empathic Accuracy Standard-Cue Methodology. This method suggests to turn to real interaction situations with the purpose of investigation of communicative sensitivity, accuracy of nonverbal behavior inference,

and sensitivity towards own behavior. Participants interpret the partner's nonverbal behavior, relate it to the verbal behavior and on this basis define the partner's emotional states and thoughts. «Interpersonal sensitivity», accuracy of nonverbal behavior understanding, regulation of relationships based on expression is measured with the help of MSCEIT developed by the group of researches with initial aim to assess the emotional intelligence (EI) [2,4,6,17,20]. We would like to stress that MSCEIT tasks measure the ability to infer the emotional states with the help of emotional expression cues that usually applied in the studies of different nonverbal behavior components.

Thus, modern psychology of nonverbal behavior suggests relatively large range of measures aimed to solve a number of research and practical tasks. At the same time this research branch experiences some difficulties that limits the «tasks» and sphere of their application. As a rule, by the development of any measure the attention is paid only to some nonverbal behavior components (posture, facial expression etc.). This limitation of methodical tasks is caused by variability and complexity of nonverbal behavior phenomenon. That is why it is important to precise the author's original approach that served as a framework for the «Measure of Ability to Adequate Interpretation of Nonverbal Behavior».

First group of theoretical assumptions concerns the nature of diagnostic and regulatory functions of nonverbal behavior. From the whole spectrum of human nonverbal behavior we consider only expressive behavior which main function according to its concept and similarly to language main function consists in the fact of expression. At the same time the concept of expressive behavior underlines immediate association between individual's inner world and its outer expression. The accent is made on analysis of following aspects of personality expressivity: mimics, gestures, postures, touching behavior, eye contact. That is why the «tasks» in the «Measure of Ability to Adequate Interpretation of Nonverbal Behavior» contain mentioned above expressive channels related to emotional states, attitudes, personality traits, social status etc.

Main feature of expressive behavior is its dynamics and variability connected with personality changes. From the other side, expressive behavior represents a unity of movements distinguished through different levels of intentionality, directionality and consciousness. Along with stable repeatable movements expressive behavior contains also elements that match with personality's dynamic states. In their turn they are combined with individual and group programs of expressive behavior. According to these circumstances personality expression is not organized as a system of codes with strict associated meanings, but it has the field of psychological meanings. Expressive behavior relates to poly-functional phenomena possessing communicative, affective, cognitive regulatory functions.

Basing on characteristics of expressive behavior mentioned above we define the expressive nonverbal behavior as nonverbal expression of personality, as external nonverbal self-image including conscious and unconscious components.

Thus, taking into account the interest of scientific society to expressive behavior underlying the dynamics and holism of human expression, we would like to stress that

developed «tasks» in our measure correspond only to few features of human expression. They regard indicative and regulatory functions of expression, level of holism, psychological ambiguity, and absence of verbal equivalents for each expressive behavior form. Suggested «tasks» do not reproduce main characteristics of expression – dynamics. As argued that examination of personality's nonverbal behavior, its expressive behavior is realized in many domestic and foreign studies applying the method «stop frame» that allows a post fact analysis using «frame-by-frame» technique. The transition of dynamic formation in static is one of the main difficulties of psychology of nonverbal behavior, especially, when nonverbal behavior is used for the purposes of demonstration and determination of social skills.

Analyzing the characteristics of expressive behavior interpretation researchers are interested to distinguish clear associations between facial expression and psychical states. This approach does not suppose the investigation of interpretation processes that in human sciences are reduced to personal experience and subjective opinion, as well as to various forms of explanations, analysis and translation of target event into images system and visual representations. In some studies the processes of perception, understanding, and interpretation are identified as establishment of strict associations between expression and personality traits that in its turn makes the concept of interpretation unnecessary and reduces it to a very narrow aspect – decoding. The reduction of interpretation to decoding does not correspond to the nature of expressive behavior, its special psycho-semiotic status and its final communication purpose – presentation for interaction partner [29, p.400]. Dependence of choice of expression «psychological meaning» from situation, from partner's position in communication makes the process of interpretation actualization unendless inevitable. Consequently, it is not enough to characterize this process as «accurate», it is more suitable to apply the term «adequacy». Taking into account that nonverbal behavior represents the system of signs consisting of stable repeatable movement dependent on situational conditions and individual and group behavioral programs, the establishment of connections between them and psychological traits of personality will not always lead to its accurate understanding. From this point of view interpretation processes could have also another connecting aspect with personality concept, if they are considered as interpretational schemes facilitating or complicating the accuracy and adequacy of inferences. This conclusion is supported by the studies aimed at analysis of association between decoding and nonverbal behavior interpretation and relation of different individual characteristics to adequate understanding of nonverbal behavior [8, 9, 17, 19, 23].

Along with these statements it is worthy to mention that in our study the interpretation is defined as creative cognitive process directed on reconstruction of not always evident psychological and socio-psychological meanings of nonverbal behavior, on analysis of connections between them and personality and group psychological, socio-psychological characteristics. This approach allows to determine the verbal identification of nonverbal behavior in terms of personality and group psychologi-

cal and socio-psychological characteristics. Analysis of interpretation and interpretational schemes through verbal meanings corresponds to the officially recognized in domestic psychology fact: the human perception is realized through socially developed etalons and exists on the basis of language. During interpretation verbal signs should not be understood as separated process but as a process that is included in interpretational activity. At the same time verbalization of meanings is dependent on level of verbal ability development and verbal repertoire. Thesaurus of psychological meanings of nonverbal behavior is formed in everyday communication and reflects the level of everyday consciousness. The influence of these factors on verbal attribution of relations between nonverbal behavior and personality and group psychological characteristics could not be overtaken completely.

Along with full evidence and possibility to study of interpretation on the basis of verbal meanings it is important not to forget the peculiarities of nonverbal behavior: a lot of aspects of nonverbal behavior is difficult to translate into any language code without some lost of its meaning. In the process of communication nonverbal behavior operates as target and becomes an equivocal interpretation covering different personality and group characteristics. In its turn verbal meanings represent not only a socially fixed knowledge form, but also features of individual consciousness. All these considerations require the development of special measures of nonverbal behavior interpretation assessment in interpersonal communication in order to identify the sphere of its psychological and social-psychological meanings that could be used as indicators of adequacy level of nonverbal behavior interpretation realized in verbal and nonverbal outputs of «tasks» resolving. The search for psychological meanings could be undertaken through the analysis of situation, of expected actions of partner, of partner's emotional states and experiences. That is why the process of interpretation could not be finished only by selecting of appropriate psychological relations between outer and inner cues, but also includes identification of situation, stimuli, expected partner's actions and another attributes of communication.

According to mentioned above statements not only psychological attribution of personality states and attitudes operate as an indicator of nonverbal behavior interpretation adequacy, but also the identification of situation and partner's activity. The list of «psychological meanings» of nonverbal behavior including both personality's psychological and socio-psychological traits revealed on the basis of nonverbal behavior and characteristics of communication situation and partner's activity was identified with the help of method «Free Semantic Evaluation of Nonverbal Behavior» [13]. In opposite to other measures applied for the diagnostics of interpretation of nonverbal behavior the method «Free Semantic Evaluation of Nonverbal Behavior» includes photos that depict individual nonverbal behavior or nonverbal interactions and its elements (posture, mimics, gesture); the list of categories for identification of nonverbal behavior is not provided. This paradigm allows to avoid artificial verbal limitation and to reveal those psychological meanings of nonverbal behavior that are actualized spontaneously, reflect the individual experience and personality traits. According to

these reasons this method was named «Free Semantic Evaluation of Nonverbal Behavior». The main purpose of this method is to disclose the structure and content of psychological interpretation of individual behavior and nonverbal interaction that in its turn serves as the basis for establishment of an account of «psychological meanings» of nonverbal behavior and nonverbal interaction and could be used as indicators for adequacy level of nonverbal behavior interpretation. For the detailed description of the method «Free Semantic Evaluation of Nonverbal Behavior» see [13]. In the present study we concentrate our attention on statistically verified schemes of psychological meaning «networks» of nonverbal behavior and nonverbal interaction. Every form of nonverbal behavior activates the corresponding psychological meaning «network» in which field different psychological characteristics of personality and group exist. Results of statistical processing testify the theoretical thesis that individual nonverbal behavior and nonverbal interaction represent different interpretation and inference cues. They belong to different classes of «tasks» which resolving relates to the psychological and socio-psychological levels of nonverbal behavior interpretation. Identified psychological meanings for each form of nonverbal behavior are used as criteria (indicators) of nonverbal behavior interpretation adequacy.

In the recent time because of increased interest towards the problem of conscious and unconscious components of personality's nonverbal expression and because of development of theories of social and emotional intelligence another social ability was included into the structure of nonverbal behavior interpretation – ability to decoding of nonverbal expression of emotional states. According to this the term «ability to adequate interpretation of nonverbal behavior» could be criticized. From the other side, the theoretical assumptions about association between processes of decoding and interpretation were empirically testified in a number of studies [9, 14, 22, 23] and allow to preserve the concept of nonverbal behavior interpretation. Structure of this ability becomes more complex because it includes both ability to identification, recognition and understanding of partner's psychological features on the basis of his nonverbal behavior and ability to deliberate encoding and management of expression.

According to our concept about abilities composing the ability to adequate interpretation of nonverbal behavior, we developed the set of social-perceptive, communicative tasks. They differ in relation to formal parameters (nonverbal behavior forms), content parameters (psychological, social-psychological characteristics of personality, group, and dyad), and functional parameters: expression identification, encoding tasks (control of own nonverbal expression) and regulation tasks in dyad, group. «Tasks» differ in types of answers format: verbal and nonverbal. Thus, adequacy of interpretation is registered through: 1) verbalization of psychological and socio-psychological content of nonverbal behavior (psychological meaning sphere); 2) comparison and choice of nonverbal behavior form corresponding to each other in psychological meaning; 3) choice of definitive patterns of expressive behavior with the purpose of attitudes «regulation» in a dyad in positive and negative direction; 4) identification of associations between target's nonverbal and verbal behavior; 5) efficacy of decoding of facial expression of

four basic emotions. Tasks on facial expression decoding efficacy include: deliberate modeling of emotional facial expression of four basic emotions; record of models' facial expression; exposition of pictures with facial expression both to decoders (observer) and to experts; interpretation of the expressive codes by experts and decoders; correspondence analysis of interpretation outcomes with the set of emotional states [9,23]. The indexes of emotional expression encoding efficacy that indicate the level of own expressive behavior control are calculated on the basis of the named procedure.

The actual version of the «Measure of Ability to Adequate Interpretation of Nonverbal Behavior» contains 9 «tasks» combined in four groups. **First group of «tasks»** includes «task – 1» aimed at diagnostics of interpretation adequacy of states and attitudes on the basis of target's postures; «task – 2» is aimed at diagnostics of interpretation adequacy of emotional states on the basis of target's mimics; «task – 3» is aimed at diagnostics of interpretation adequacy of intellectual-volitional, emotional states and attitudes on the basis of target's individual nonverbal behavior; «task – 4» is aimed at diagnostics of interpretation adequacy of attitudes and interpersonal relationships on the basis of targets' nonverbal interaction (dyad, group); «task – 5» is aimed at diagnostics of adequacy of nonverbal behavior interpretation on the basis of identification of associations and differences between psychological meanings of different elements of nonverbal behavior. The last task differs from the other tasks in nonverbal answer format. The adequacy level is defined as matching between postures psychological modality and facial expression realized through choice of facial expression which is appropriate to postures psychological meaning.

Thus, the first group includes 5 tasks that differ in interpreted nonverbal behavior forms; intentionality, level of interpretation: psychological and social-psychological; responding formats: verbal and nonverbal. On the basis of efficacy indices the level of ability to adequate interpretation of nonverbal behavior demonstrated in verbal and nonverbal answers is defined.

Second group of «tasks» is aimed at diagnostics of ability to adequate regulation of relationships in dyad and group with the help of selected expressive patterns of behavior. It includes two «tasks»: «task – 6» relates to ability to regulate the relationships in emotionally negative direction; «task – 7» registers the ability to regulate relationships in a dyad, group in emotionally positive direction using selected expressive patterns.

Third group of «tasks» is aimed at diagnostics of ability to establish adequate associations between target's nonverbal and verbal behavior – «task – 8».

Fourth group of «tasks» is aimed at diagnostics of ability to encoding of expressive emotional states, control own expressive behavior – «task – 9».

During the development of the measure the «tasks» presentation order was modified. It was stated that participants become tired and irritated when the first five «tasks» are presented in the described above order. The post interviews with participants revealed that tiredness arises because of the verbal format of the tasks. In order to avoid the unnecessary additional intellectual and emotional stress the optimal

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«tasks» presentation order was identified - the «tasks» presentation was balanced in relation to answer format.

Conclusion.

Thus, our theoretical approach to definition of the structure of the ability to non-verbal behavior psychological interpretation is based, from one side, on those features of human nonverbal behavior, nonverbal expression of personality that are identified in numerous studies [5, 10, 11, 13, 16, 22, 24,25,27,29], from the other side, it takes into account the characteristics of psychological interpretation of expression, deliberate encoding of expression, and, from the third side, it is based on fundamental assumptions concerning the nature of social abilities, social and emotional intelligence.

Ability to psychological interpretation and adequate understanding of nonverbal behavior is multi-component and includes a number of abilities which diagnostics supposes the consideration of different social-perceptive and communicative tasks types.

 Diagnostics of the level of adequate interpretation of nonverbal behavior is realized in several stages:

At the first stage the level of inference into different nonverbal behavior forms is identified. It includes individual nonverbal behavior (elements of individual nonverbal behavior), nonverbal behavior of dyad and group, ability to establish the associations between elements and individual forms of nonverbal behavior.

At the second stage the level of nonverbal behavior interpretation is registered: psychological and socio-psychological. It is measured as adequacy of emotional states recognition, establishment of relations between nonverbal behavior and personality traits, adequate evaluation of target's attitudes and relationships.

At the third stage the level of nonverbal regulation of relationships in dyad and group is tested. The level of adequate management of nonverbal behavior as a regulation tool of relationships in communication is registered.

At the fourth stage the level of ability to encoding of expressive behavior, to control and management of expression is measured.

Summarizing, adequacy of recognition and understanding of different forms of nonverbal behavior, adequacy of activation of nonverbal behavior patterns for relationships regulation, adequacy of expression management (encoding) compose the integral indicator of the ability to adequate interpretation of nonverbal behavior and allow to define the types of perception.

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