

## Research Article

# Methodological principles of research of social communication processes

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The purpose of the study was to identify the methodological principles of research into social communication processes.

Among the general research methods, we chose holism as a "methodological principle and worldview concept that asserts the integrity and indivisibility of the material and spiritual world. Based on the basic ideas of J. Smuts about holism and ideas about quantum mechanics, we interpret Unity as something that cannot be dissected even for scientific analysis.

As a method of further study of the analyzed problem, we chose the following research procedures: analysis of available sources of application of adequate methods for the study of social communications; highlighting certain close characteristics of the methods described by us; on the basis of the identification of similar signs of combining methods into groups; formulation of methodological principles of social communications research.

The results were obtained according to three criteria: the presence/absence of signs characterizing the theoretical or practical meaning of research procedures within the framework of information exchange between elements of the Whole; the presence/absence of signs of involvement of the research path in society as a Whole (individual, family, social group, social class, social institution, society, etc.); focus on the study of means of regulation of social relations and relationships affecting the state of the Whole.

Conclusions. It was found that the identification of common and divergent features of research methods of social communication processes allows for the classification (according to three holistic criteria) of frequent methods, approaches and techniques revealed in the description of the results of 50 separate studies (for the period from 1968 year until 2022). The mentioned classification is based on the methodological principles of social communication research.

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## Introduction

Today, among scientists who study social communications in detail as processes of regulation of information exchange for the functioning of society, there is a stable understanding of the instability and low level of effectiveness of the involved methodological tools. One group of social communication researchers is committed to the use of a conglomerate, which consists of the methods of sociology, psychology, linguistics, psycholinguistics, sociolinguistics,

psychiatry, united in the scientific field 27 – social communications (Korneev, 2015; Rizun, 2012; Romakh, 2020; Khilko, 2013-1; Khilko, 2013-2; Kholod, 2014). Another group seeks to remain in the methodological field of historical sciences (Ilganayeva, 2009), archival studies and document studies (Bezdrabko, 2008; Bezdrabko, 2006; Kuleshov, 2000; Palekha, 2009; Slobodanyk, 2003; Shvetsova-Vodka, 2007). We also record groups of researchers-bibliographers (Zelinska, 2002; Zelinska, 2013; Zelinska, 2018; Ogar, 2012; Pastushenko, 2016) and researchers-librarians (Navalska, 2005; Voskoboynikova-Guzeva, 2007-1; Voskoboynikova-Guzeva, 2007-2; Voskoboynikova-Guzeva, 2015; Kunanets, 2013). There are works within the scope of the use of methods borrowed from the scientific field of "History". Another group of researchers traditionally turns to methods used in journalism (Bohuslavskiy, 2008; Vasylyk, 2010; Kolisnyk, 2013; Mykhaylyn, 2002; Parymskyi, 2007; Rizun, Skotnikova, 2005), radio journalism (Lyzanchuk, 2006; Goyan, 2004; Yelisovenko, Nagornyak, 2017; Khomenko, 2012;) and publishing and editing (Vodolazka, 2015; Zelinska, 2013). Those representatives of research in social communications that do not depart from the methods of psychology and psycholinguistics (Kholod, 2020), cultural studies (Vdovina, 2021), philosophy (Zrazhevskaya, 2012), linguistics (Serazhim, 2002) and sociolinguistics (Shumarova, 2000; Shumarova, 2015), literary studies (Bilichenko, 2012; Ivanova, 2013), semiotics and semiology (Cheksturina, 2015), etc. There are well-known attempts to transfer to the study of social and mass communications the methods used by representatives of hermeneutics (Kvit, 2011) and holism (Kholod, 2020), information theory (Partyko, 2008), informatization of socio-communicative functions of libraries (Horova, 2019a; Horova, 2019b), runology (Chekshturina, 2016) and marketing (Kyrilyshen, Denisova, 2018), advertising (Khavkina, 2010; Hrytsyuta, 2012), public relations (Mantulo, 2012) and quantum psychology and psycholinguistics (Kholod, 2019), linguistics, psychology and cultural studies (Suprun, 2012).

Since the theory and methodology of social communications, which researchers have been actively forming in the last 15 years, involves the identification of their own methodological means of research, because of scientific developments, declarations of new approaches to the object of research within the framework of social communications appear. Such declarations should include the study of the media continuum as a spatio-temporal format of social communication activity (Porpult, 2021), network communication (Horodenko, 2012), from the standpoint of convergent research methods of social communications (Chekmyshev, 2011), and mass media monitoring from the standpoint of historical, theoretical, and pragmatic approaches (Chekmyshev, 2012). Social communications also we considered as specific means of regulating the parliamentary information space (Bilan, 2016) or from the standpoint of stereotyping, which functions in mass media conditions (Butyrina, 2009). In researching the theory and history of television journalism for children, the authors turned to the archival method, methods of psychology and pedagogy (Penchuk, 2011). Within applied social and communication technologies, online social networks we considered a platform for waging modern information wars (Kurban, 2018). The view of researchers on the social communication aspect of the analysis of media content of the digital age (Gorska, 2016) foresees new methodological means of research, which do not rely on the ways of social communication research existing in modern science, but require the use of a synergistic and cross-subject approach. New technical means in the distribution of journalistic content require the involvement of new views on its analysis in the system of social communications (Shevchenko, 2013). Scientists strive to understand the phenomenon of public relations as a communication (Mantulo, 2012) and social communication activity (Berezenko, 2013). Within the scope of social communications, the culture of media consumption in Ukraine is analyzed from both the consumerism

and proconsumerism perspectives (Kraynikova, 2014), which entails the objective necessity of using original research methods.

A review of scientific publications on social communications by authors-researchers working abroad (Kholod, 2022) allows us to ascertain the fact of an even greater object-subject stratification and diversity of methodological approaches to the study of social communication processes. The mentioned diversity we tracked by us since the middle of the 20th century and is connected, in particular, with various objects of research within the framework of the knowledge system, which in Ukraine are united under the auspices of the scientific field "Social Communications". As early as February 7, 1947, Carl Hovland, during his speech at a symposium on research frontiers in human relations, proposed considering social communication as a process formed with the help of four factors (Hovland, 1948), namely: 1) the communicator who transmits the message; 2) stimuli transmitted by the communicator; 3) persons who respond to messages; 4) responses to communicator messages. However, we know that the listed factors shape not only social communication, but also purely communication as a process of information exchange. Already in 1947, communication considered as a social activity (Communication and social action, 1947) and it not considered that such activity we are studying outside the boundaries of sociology. However, this position criticized for several decades. For example, F. Krotz (Krotz, 2009) states that communication considered a social science for many years, therefore, the methodology of its research should use the tools of sociology. At the same time, "communication was understood as a form of social action" (Krotz, 2009). During the study of communication, representatives of psychology analyze the processes of information exchange, first, as a fundamental feature of a person.

Studying modern processes of social communication, social informatics researchers (Xuan, Gharehyazie, Devanbu, Filkov, 2012) offer their own methodological path. According to the authors, the study "provides new quantitative methods for measuring the impact of social communication on individual work rhythms by analyzing the communication and code input records of dozens of open source software (OSS) projects" (Xuan, Gharehyazie, Devanbu, Filkov, 2012). The essence of the new method is to apply "complex network analysis and time series analysis" (Xuan, Gharehyazie, Devanbu, Filkov, 2012). According to the authors' definition, work rhythm is "the average time spent on a task" (Xuan, Gharehyazie, Devanbu, Filkov, 2012). The authors examine correlations between "work rhythm and communication frequency" (Xuan, Gharehyazie, Devanbu, Filkov, 2012). The described method made it possible to establish that "developers with a higher social status, represented by nodes with a greater number of outgoing or incoming links, always have a faster work rhythm and thus contribute more to projects per unit of time" (Xuan, Gharehyazie, Devanbu, Filkov, 2012). The novelty of the described method also lies in the fact that it allows studying "the dependence between work (obligation) and conversation (communication) as types of activity" (Xuan, Gharehyazie, Devanbu, Filkov, 2012) in the order of the effect of their alternation. To assess the mentioned dependence, a new method of social informatics allows "to introduce time series of several types of activities and quantitative indicators based on activity delays. Comparison of simulated time series with actual time series suggests that when work and talk are close together, they can accelerate each other in OSS systems" (Xuan, Gharehyazie, Devanbu, Filkov, 2012). Thanks to the applied new method, the authors were able to establish the fact that "frequent communication

before and after actions are essential for effective software development in distributed systems" (Xuan, Gharehyazie, Devanbu, Filkov, 2012).

Traditionally, social communication researchers use the survey method and the document analysis method (Low-Beer, & Stoneburner, 2004). Such documents may include demographic and behavioral data, for example on HIV, "collected from men and women in Uganda and six other sub-Saharan countries through the Demographic and Health Surveys (DHS) and Knowledge, Attitudes and Behavior (KAPB) survey" (Low-Beer, & Stoneburner, 2004).

There are two types of DHS survey methodology, namely: State Surveys and Interim Surveys. "Standard DHS surveys have large sample sizes (typically 5,000 to 30,000 households) and are typically conducted approximately every 5 years to allow comparisons over time" (Demographic and Health Survey (DHS), 2022, October 26). DHS interim surveys "focus on collecting information on key performance monitoring indicators, but may not include data for all impact assessment indicators (such as mortality rates). The authors conducted such surveys between rounds of the DHS survey and had shorter questionnaires than the DHS survey. Although nationally representative, these surveys typically have smaller sample sizes than DHS surveys" (Demographic and Health Survey (DHS), 2022, October 26). The Knowledge, Attitudes and Behavior Survey (KAPB) methodology involved the following research procedures: the survey "was descriptive and cross-sectional using a large number of quantitative indicators... Qualitative data were collected through in-depth interviews with refugees living in officially designated camps..." (Report on Knowledge, Attitude, Practices & Behavior (KAPB) Survey, 2022, October 26). We cannot fully accept the aforementioned questionnaires as a methodological tool, but we must consider them as a means of gathering information about the specifics of social communications. In the future, we will consider such questionnaires as auxiliary. Let us also take into account that in foreign research, by methods, the authors quite often mean methods, that is, specific research procedures. In the previously analyzed sources, we can consider a survey as a method, and its varieties as methods.

Since there are several dozen definitions of social communications (Kholod, 2022), it would be logical to predict that each field, which interprets social communications in a unique way, offers its own research methods. For example, researchers of the American Speech-Language-Hearing Association (ASHA) (Social Communication, 2022) name the following methods: questionnaires (Cripps, Cooper, Evitts, Blackburn, 2016), automated hearing testing (DuoTone) (Hazan, Luberadzka, Rivilla, Snik, Albers, Méndez, Wack, Paytavi, Zarowski, Offeciers, Kinsbergen, 2022), a rating scale that "measures the success of text message transactions and reports the transaction success of a sample of ... individuals with chronic aphasia" (Lee, Cherney, 2022), "closed-ended word recognition tests designed mostly for vowel or consonant recognition and compared results with sentence recognition" (Buss, Felder, Miller, Leibold, Calandruccio, 2022); t-tests and analysis of covariance (Miller, Lewis, 2022), clustering of inequalities thanks to the comparison method (Pap, 2022). Analysis of the methods used by ASHA researchers shows that the methodological arsenal includes both statistical methods and psychological, psychiatric, psycholinguistic, linguistic (phonological and phonosemantic, lexical and syntactic) methods. We do not call such methods purely social communication, but, in our opinion, they we consider as auxiliary, adjacent or accompanying.

Social communications are actively studied within communication medicine (Communications Medicine, 2022), the IMPACT model involvement method is used in comparison with the method of applying linear models and neural

networks (Qiu, Chen, Dincer, et al., 2022). Through the mentioned method (the IMPACT model), the authors "identify characteristics that increase the probability that a person will die earlier than expected, based on population life expectancy" (Qiu, Chen, Dincer, et al., 2022). Developing a computer program and applying it to information obtained about the characteristics and medical history of people in the United States allowed them to "identify previously unknown characteristics (such as arm circumference) that affect the likelihood that someone will die earlier than expected" (Qiu, Chen, Dincer, et al., 2022). The IMPACT model's engagement method helped researchers "identify combinations of characteristics that interact to increase the likelihood of dying earlier than expected" (Qiu, Chen, Dincer, et al., 2022). The authors entered a person's characteristics into the program and "calculated the probability of death within the next 5 years" (Qiu, Chen, Dincer, et al., 2022). The engagement method of the IMPACT model made it possible to "identify characteristics that a person could change to improve their health and reduce the likelihood of death during this period" (Qiu, Chen, Dincer, et al., 2022). The mentioned method the authors did not use in the studies of Ukrainian specialists in social communications, although, in our opinion, it has certain prospects in studies aimed at improving the social communications of people whom, having reached old age, psychologically "prepare" for death.

Each person records the processes of social communication in everyday life, for example, when a person makes a choice of a certain car model. In this case, decision-making theorists turn to the decision-making method thanks to the TOPSIS model (the TOPSIS method). S. Hwang and K. Yoon (Hwang, & Yoon, 1981), and S. Hwang, Y. Lai, and T. Liu (Hwang, Lai, Liu, 1983) method was proposed the mentioned for solving multi-criteria decision-making (MCDM). "The TOPSIS procedure is based on the intuitive and simple idea that the optimal ideal solution that has the maximum benefit is obtained by choosing the best alternative, which is far from the most unsuitable alternative that has the minimum benefits" (Yonghong, 2002). The best or ideal solution can reach the indicator "1" (one). However, the indicator «0» indicates the worst solution (zero). When making a choice, a person understands that the perfect car does not exist. However, the closer the rank of the decision is to the indicator "1", the more successful the buyer's choice will be. "Regardless of the absolute accuracy of the rating, comparing a number of different cars using one set of selection criteria allows one to accurately weigh the relative suitability of a car and, therefore, to make an optimal car choice" (Yonghong, 2002). Therefore, the buyer, relying on the TOPSIS method, can "build" the optimal version of the model of his behavior in relation to the seller and likely competitors on the car sales market. In other words, social communications involve modeling people's behavior even when making a choice of a certain product.

The authors study social communication not only within the framework of decision-making theory, but also in medicine. During the study of social communication disorders (SCDC) in neurology, in particular, the relationship between social communication and social functioning in pediatric traumatic brain injury (TBI), survey methods are used in the form of questionnaires, statistical methods, the axiological method and the experimental method (task performance, according to the theory of mind (Theory of Mind, or ToM). Researchers H. Genova, E. Heit, Y. Y. Natschek, J. de Luca and J. Lengenfelder claim, that "despite the fact that several measures are used to study social communication, no gold standard assessment tool exists" (Genova, Haight, Natsheh, DeLuca, & Lengenfelder, 2019). The authors sought to examine the "ability" of the Social Communication Disorders Inventory Disorders Checklist, or SCDC" to detect social communication difficulties in children with TBI... investigated the relationship between social

communication and social functioning as assessed by parents behavioral assessment and objective indicators of social cognition" (Genova, Haight, Natsheh, DeLuca, & Lengenfelder, 2019). Through the study, the authors concluded, "children with lower parental ratings of social communication skills... had lower scores on an objective measure of social cognition" (Genova, Haight, Natsheh, DeLuca, & Lengenfelder, 2019).

The effectiveness of training social communication partners for adults with severe chronic TBI and their families using a measure of perceived communication ability is being analyzed with the La Trobe Communication Questionnaire (LCQ) and with a program called TBI Express, or Social Communication Training for People with TBI and their communication partners" (Togher, McDonald, Tate, Rietdijk, Power, 2016). The authors consider the training as a method of adaptation of social communication of people with brain injury, as well as their family members, friends and caregivers. Since the behavior of people with TBI changes after the injury, researchers note the following signs: or increased talkativeness, or a feeling of lack of words, failure to follow the topic of conversation, a long search for (selecting) the right words and topics. The training consists of ten modules. To complete each module, subjects spend 150 minutes in-group and 45 minutes in individual classes. The best results of using TBI Express are recorded when the group includes both people with TBI and their family members or caregivers. It is possible to use TBI Express when the group consists only of people who have the effects of TBI, but in this case, the results are worse.

Social Communication Training for People with TBI and Their Communication Partners (TBI Express) aims to find out (diagnose) how TBI affects communication. The result of the training is the improvement of an active role in the conversation, the establishment of partnership in the communication process, the development of conversation support skills and effective speaking and listening skills, the inculcation of the ability to ask positive questions and formulate one's thoughts adequately to the purpose of communication. Specialists in the presence of input data about the patient's speech pathology (Togher, McDonald, Tate, Rietdijk, Power, 2016) carry out the development and renewal of these skills and abilities. It is clear that TBI Express training is not a research method, although it can serve as a methodological approach to the correction and renewal of social communication skills.

The following methods and techniques were used to study the specifics of learning social communication skills after traumatic brain injury (TBI): "Profile of Functional Impairments in Communication (PFIC), Adapted Social Communication Skills Questionnaire (SCSQ-A), Goal Attainment Scale (GAS), Craig Deficit Assessment and Reporting Technique – Social Integration Short Form and Occupation subscales, Social Integration Questionnaire, Social Integration and Productivity subscales, and Life Satisfaction Scale (SWLS)" (Dahlberg, Cusick, Hawley, Newman, Morey, Harrison-Felix, et al., 2007). The sample of the study was made up of volunteers – 52 people with TBI, in whose lives at least one year had passed since the injury. The subjects underwent rehabilitation and revealed a deficit in social communication. To improve social communication skills, the subjects attended twelve weekly group sessions of 1.5 hours each. Through a controlled trial of randomized treatment and delayed treatment with follow-up at 3, 6, and 9 months post-treatment, the authors concluded "TBI subjects who received social communication skills training had improved communication skills that were maintained at follow-up. Participants' overall life satisfaction was improved" (Dahlberg, Cusick, Hawley, Newman, Morey, Harrison-Felix, et al., 2007). In order to find and identify the

methodological principles of the research of social communication processes in our analysis, it is important to learn about the content of the mentioned methods; therefore, we briefly detail their essence below.

We include the Profile of Functional Impairment in Communication (PFIC), which was developed "to assess communication impairment following traumatic brain injury" (TBI; Linscott, Knight, & Godfrey, 1996), as a scaled survey method. The profile consists of ten composite scales, which include the following: scale of logical content, scale of general participation, quantity, quality, internal relation, external connection, clarity of expression, social style, theme and aesthetics scale. "Each composite scale is scored on a six-point scale from zero (normal) to five (very severely impaired)" (Bushnik, 2011; Linscott, Knight, & Godfrey, 1996). At the same time, "summed scales are not summed up. In addition, there are 84 specific behavioral elements that the authors use to guide clinical care and intervention" (Linscott, Knight, & Godfrey, 1996). These items assess "the frequency of communication impairments from 'never' to 'almost always/always'" (Linscott, Knight, & Godfrey, 1996). Authors with the Profile of Functional Impairments in Communication (PFIC) (Bushnik, 2011) conducted other studies. Despite the complexity and volume of the recipients' answers, the "Profile of Functional Disorders in Communication" (PFIC) is, in our opinion, quite effective and objective for identifying problems in the process of social communication.

The survey method includes a research instrument, the Adapted Social Communication Skills Questionnaire (SCSQ-A), which has been extensively used in the search for effective group teaching tools for social communication skills after traumatic brain injury (Braden, et al., 2010). The essence of the questionnaire is "subjective assessment that allows participants to rate themselves on various social communication skills" (McGann, Werven, Douglas, 1997). The aforementioned instrument was "adapted to include a 5-point scale for research purposes (eg, 'I can start a conversation': 5 = always, 4 = often, 3 = sometimes, 2 = rarely, or 1 = never)" (McGann, Werven, Douglas, 1997). If the subject has a score of "5 points", it means that he has the best social communication skills. The original questionnaire has 26 "skill statements grouped into five sections" (McGann, Werven, Douglas, 1997). We adapted the questionnaire further "by adding 11 additional questions to cover all the topics presented during the treatment phase... We scored additional questions in the same format as the original questions and added them to the scores for each section of the instrument" (McGann, Werven, Douglas, 1997). Identifying the specificity of the patient's subjective self-assessment creates the basis for establishing an effective process of teaching social communication skills.

A variant of the survey method is the «Goal Achievement Scale» or GAS for short (Kiresuk, Sherman, 1968), which is aimed at clarifying various goals between the patient and the therapist. "This document proposes to conduct goal-based assessment... by establishing a pre-treatment measurable scale for each patient-therapist goal and specifying for each patient the conversion of his or her overall goal achievement into a standardized T-score" (Kiresuk, Sherman, 1968). From the point of view of social communication research methodology, the "Goal Achievement Scale" (GAS) method is quite progressive, as it allows balancing different goals of the communicator and the communicant. The mentioned balance is able to transform the processes of social communication into effective and unidirectionally directed towards the members of the communication.

The authors measured the level of proficiency in social communication skills taking into account the disability of the respondents. For this purpose, the authors used Craig's Disadvantage Assessment and Reporting Methodology (for

example, in the form of the Short Form of Social Inclusion and Employment Subscale). The mentioned technique, as one of the types of diagnostic methodology, is called the abbreviation CHART (Craig Handicap Assessment & Reporting Technique) (Craig Handicap Assessment & Reporting Technique, 2022). The analyzed technique is also called the "Craig Handicap Assessment and Reporting Technique" and is presented in the form of a diagram, which is intended to "measure the level of disability in a community setting" (Craig Handicap Assessment & Reporting Technique, 2022). Thanks to Craig's methodology, the researcher has the opportunity to obtain information about the extent to which the subject, who has limitations in his physical or mental activity, possesses the social communication skills that society needs and expects from a person who does not have the mentioned limitations. Indicators corresponding to the following six parameters are included in the chart: 1) physical activity (measures how the subject can maintain his own independent life activity: 2) cognitive independence, which gives an orientation as to whether the subject can maintain a normal level of independence without outside assistance; 3) mobility, which demonstrates the degree of ability of the subject to be in effective activity, for example, to move in the environment that is around him; 4) type of occupation, or what characterizes the subject's employment according to his age, gender, ethnicity, cultural specificity; 5) social integration (helps measure the individual's ability to participate in and maintain normal social relations); 6) economic self-sufficiency, which measures the extent to which the subject is able to maintain usual socio-economic activity and at the same time remain independent (Craig Handicap Assessment & Reporting Technique, 2022). There is an abbreviated form of the described diagnostic methodology in the form of CHART-SF, in which all six described parameters are preserved.

The CHART and CHART-SF diagnostic technique has a significant feature. It consists in the fact that the researchers focus on the last parameter only on the American style of activity and on the economic performance of US citizens and those who live in this country. Therefore, the application of the mentioned technique to measure the behavior of people with disabilities living in other countries is not possible. On the other hand, we take into account that the methodology (research technique) is not a method (conceptual method of research) and therefore cannot refer to it in further analysis. At the same time, the mentioned technique is an illustration of one of the forms of the diagnostic method.

The authors using a survey method in the form of a questionnaire also measure social communications. The Community Integration Questionnaire – Revised (or CIQ-R) is a detailed illustration of the mentioned method (Callaway, Winkler, Tippet, Migliorini, Herd, & Willer, 2014; Dijkers, 2000). The questionnaire has 15 questions with a maximum score of 29, where 29 is an indicator of a higher ability to integrate into society. We tentatively divided all questions into three groups. The first group is questions aimed at identifying the features of the subject's activities related to homework. The second group contains questions, the answers to which give guidance to the researcher in how he characterizes the subject in his activities. We associate such activity with the subject's socialization. The third group of questions allows us to identify the degree of activity and the ability to show such activity of the subject in educational or professional activities. The third group of questions allows us to identify the degree of activity and the ability to show such activity of the subject in educational or professional activities. The CIQ-R questionnaire as a form of diagnostic method also has certain shortcomings, in our opinion, because it contains such questions, the answers to which are not easy for the subjects to record. The reason lies in the fact that the subject may hesitate as to which answer

is better suited and to which activity: social, which is not related to the performance of professional roles, or professional, which is also a type of social activity. The disadvantage, in our opinion, of such a technique is that the instruction provides a certain hint-orientation for the subject, or a hint-encouragement to a certain answer. We understand that such interference with the responses of interviewed recipients is not a form of their original responses. Each researcher will question the degree of "purity" of the results obtained from such a questionnaire.

To find out the likely influence on the implementation of social communications on life satisfaction, experts use the Life Satisfaction Scale (SWLS) (Diener, Emmons, Larsen, & Griffin, 1985; Diener, & Pavot, 1993; López-Ortega, Torres-Castro, & Rosas-Carrasco, 2016; Satisfaction with Life Scale, 2022). From the methodological point of view, SWLS scaling refers to the survey method, which is a short instrument containing 5 items, thanks to which the researcher has the opportunity to measure global cognitive judgments about satisfaction with one's life (Satisfaction with Life Scale (SWLS), 2022). The essence of SWLS scaling is the scores, which consist of raw points (from 5 to 35). Moreover, higher scores correspond to higher life satisfaction. "Evaluators can be divided into six categories of well-being, and an explanatory text is provided for each of them: 30–35 – "very satisfied"; 25–29 – "satisfied"; 20–24 – "somewhat satisfied"; 15–19 – "a little dissatisfied"; 10–14 – "dissatisfied"; 5–9 – "extremely dissatisfied" (Satisfaction with Life Scale (SWLS), 2022). Note that the time to complete the scale tasks is limited to one minute, and the questions are "open to interpretation, making this scale suitable for adults with different experiences" (Satisfaction with Life Scale (SWLS), 2022). It is the interpretive style of fixing the reactions of the subjects that creates an additional burden for the researcher, who needs to develop an additional system of criteria. We consider this form of the survey method to be rather inaccurate, since the main factor in the analysis of the results obtained is the projective aspect. In other words, researchers use subjective interpretative assessments that project the research experience onto the data. On the other hand, a positive aspect of the SWLS for studying social communication is that "it is most suitable for use in non-clinical populations" (Satisfaction with Life Scale (SWLS), 2022). Non-clinical populations make it possible to collect objective data that are not affected by such factors: 1) the negative psycho-emotional state of the patient's stay in the hospital; 2) a depressive state that appears in the subject as a result of many hours of talking about illnesses with roommates; 3) "I miss my home and relatives"; 4) lack of a cozy homely atmosphere; 5) the absence of familiar things and the rhythm of life. We consider the survey method in the form of scaling to determine the degree of life satisfaction (SWLS) one of the more suitable for studying social communications in various areas of human life.

Application of methodological and methodological approaches nRCT (non-randomized control trial), RCT (randomized control trial), SCD (single-case design), SCED (single-case experimental design) show a wide range of results to study the utility of a behavioral intervention for adults with social communication difficulties after cranial trauma – traumatic brain injury (TBI) (Finch, Copley, Cornwell, Kelly, 2016).

The study of social communication in the medical field is carried out through the method of nRCT, or the method of non-randomized control research (non-RAN-duh-mized KLIH-nih-kul TRY-ul), which is interpreted as "a clinical trial in which participants are not randomly assigned to different groups treatment... Participants can choose which group they want to be in, or researchers can assign them to groups" (Non-Randomized Clinical Trial, 2022). Sometimes researchers study social communications outside the field of medicine, but in the field of social sciences, for example,

in journalism. There is a non-randomized control study. It is a way to effectively collect information about a scientific subject of interest. Similarly, in the social sciences, in particular in social communications, the RCT (randomized control study, RCD) method can be effective, the essence of which is the careful selection of the population and intervention methodology (Hariton, & Locascio, 2018). After the selection, it is necessary to calculate (according to the power calculation) the reliability of the performed sample, which will allow the random number method to allocate the study participants into the intervention (subject group) and comparison (control group) groups (Sibbald, & Roland, 1998; Bellad, Tara, Ganachari, Mallapur, Goudar, Kodkany,... & Derman, 2012). For a randomized trial, it is important to ensure that the investigator did not know which group he assigned the participant to at the time of grouping. In other words, the randomization procedure takes place covertly, which can be provided by a computer program or, for example, by a "man on the street" (a person who is unfamiliar with the study conditions) selection. For example, in medicine, "RCTs are often blinded so that participants, doctors, nurses, or researchers do not know which treatment each participant is receiving, further minimizing bias" (Hariton, & Locascio, 2018). The application of the randomization method in medicine involves the presence of "predefined primary outcomes" that are "registered in the clinical trial database and have appropriate ethical approval" (Hariton, & Locascio, 2018). Researchers who used the randomization method consider the high cost and time spent on research procedures. In addition, there is a significant disadvantage of the randomization method in that the researcher faces "problems with generalizability (participants who voluntarily participate may not be representative of the study population) and loss to follow-up" (Hariton, & Locascio, 2018). As can be seen from the description, the randomization method is not easy. Researchers have tested it enough. Its results will have a sufficiently high degree of reliability and probability for further practical verification of the results on other samples. We consider the research potential of the randomization method to be relevant for the study of social communication processes.

In research practice, the SCD method (single case design) and the SCED method (single case experimental design) can be effective when studying social communication.

The single-case design, or single-case design (SCD) method, is used to examine in detail "the success of an intervention or treatment in a specific case (ie, individual, school, community) and to provide evidence of the overall effectiveness of the intervention uses a relatively small sample size" (Design Options for Home Visiting Evaluation, 2022). A feature of the single-case design method is that experts use visual data analysis to compare the target behavior of study participants before and after the intervention. When the experimenter records changes after the intervention in the subject's target behavior, the comparison will provide an opportunity to confirm the degree of change and formulate conclusions that the intervention is responsible for the changed behavior. "In order to establish causal evidence that the intervention was actually responsible for the behavior change, an attempt is then made to reproduce the effect" (Design Options for Home Visiting Evaluation, 2022). There is a similar variant of the SCD method. Researchers call it the SCED method, or single experiment design. The latter is a set of experimental methods that are used to "test the effectiveness of an intervention using a small number of patients (usually one to three) and include repeated measurements, sequential ( $\pm$  randomized) implementation of the intervention, specific data analysis and statistics" (Krasny-Pacini, Evans, 2018). SCEDs are not descriptions, but more detailed pre-designed studies that

record the state of behavior of the subjects before the intervention. Thus, researchers in the correction of social communication skills can effectively use the SCED method. In addition, we should also pay attention to the fact that during the study of applied social and communication technologies (hereinafter abbreviated as PSCT; for example: public relations, advertising, HR activities and other social practices) measuring the state of the behavior of the subjects to application even after intervention in the form of PSCT will allow to clearly record changes in behavior not only at the level of generalized average statistical indicators, but also in an individual dimension.

The list of methods mentioned and described by us does not strengthen the methodology of the scientific field of "Social Communications", but only scatters it. Sometimes one can notice signs of neglecting the process of forming the original methodological base of the mentioned scientific field. It is in this state that we state the presence of a problem – the absence of stable and clearly defined methodological principles for researching social communication processes.

In connection with the described problem, we chose the object of study and formulated its "processes of social communications". As a subject of research, we identified methodological principles for studying the processes of social communications.

We determined the identification of methodological principles of research into social communication processes as the goal of scientific research.

Hypotheses.

We predicted (hypothesis 1, or the main hypothesis) that the list and analysis of the specifics of the methods of studying the processes of social communication will make it possible to identify the common and divergent features of the methods of studying the processes of social communication. We put forward hypothesis 2, or a working hypothesis. If we identify common features in the methods of studying the processes of social communication, then we can classify them, as well as formulate general methodological principles for the study of social communication. We can consider the counter-hypothesis, or hypothesis 3, the prediction that the differences in the characteristics of methods of studying social communication processes will be so statistically significant that we will not be able to group them and, accordingly, we will not be able to classify them for identifying the methodological principles of researching social communication processes.

## **Research methods and techniques**

In order to distinguish the methodological principles of research of social communication processes, we turned to three groups of methods, namely: general methods, general scientific and branch (special) methods.

Among the general methods of research, we chose holism as a «methodological principle and a worldview concept that asserts the integrity and indivisibility of the material and spiritual world (Holism, 2002)». The holistic concept assumes the correspondence of the content of the thesis about the unity of everything in the universe. The mentioned concept "considers the integrity of the world as a consequence of creative evolution directed by an immaterial and unrecognizable "wholeness factor" (Holism, 2022). Based on the basic ideas of J. Smuts (Smuts, 1926) about holism and ideas about quantum mechanics of N. Bohr (Bohr, 1928), D. Bohm (1961), J. Bell (Bell, 1966; Bell, 2004), Penrose

(Penrose, 2014), Fock (Fock, 2019), we interpret Unity as something that cannot be dissected even for scientific analysis. Unity has no components, because the attempt to identify them nullifies the understanding of the inner potential of the unity of spiritual and physical energy. When researchers apply theoretical analysis to the understanding of Unity and try to identify the components of the concept of understanding Unity, it (the understanding of Unity) ceases to function and turns into an artificial unnatural phenomenon, presenting "at the exit" a distorted self-esteem. The whole has a probabilistic character, which means the impossibility of objective measurement of its physical functions, components and essence, since the latter constantly evolves and is in a state of movement, transformations and changes. Based on a holistic vision of methodological principles of social communications, we claim that:

1. the physical laws of materialism cannot be tools for knowing and describing the essence of Unity, or Holos (Greek: ὅλος, or holos);
2. the understanding of Holos is based on the idea of unity, which has signs of inseparability and indivisibility both at the theoretical and practical levels;
3. social communications are materialistic processes that rely on unexplained influence from the inner energy of individuals, social groups, social institutions and society as a whole;
4. observations of internal and external transformations of social communications are always biased, as they do not take into account the inherent influence of the observer;
5. every moment social communications change and cannot be measured, since they are different at the same time;
6. if one aspect of the vision of social communications changes, all other aspects reflect such changes without a noticeable push or influence from any side;
7. social communications function according to the "here-and-now" principle, which means that social communications have neither a temporal nor a spatial dimension; all attempts to interpret social communications through the categories of "time" and "space" receive a materialistic vector that distorts their holistic essence.

We consider the following general scientific methods sufficient for further research:

1. the analysis that allowed us to distinguish from the methodological descriptions that the authors presented in monographic studies, dissertations, abstracts of dissertations and scientific articles, specific methods and methodological approaches, concepts that made it possible to carry out research;
2. a synthesis, thanks to which we combined the methodological descriptions of the mentioned scientific works, separated by means of analysis, into a single idea of the methodological paradigm of studying social communications;
3. abstraction, which helped us during the analysis and synthesis to distract from a number of properties and relations of the analyzed methodological paradigms and focus on those properties and relations that allowed us to identify the methodological principles of research into social communication processes;
4. thanks to the method of generalization, we established the general properties and features of the methodological principles of studying social communications;
5. we needed the induction method to derive general provisions of methodological principles from observing a number of applications of specific methods in specific studies;

6. the induction method objectively entailed the application of the deduction method, which stimulated the derivation of a partial conclusion regarding the properties of each methodological principle from general principles about similar characteristics of the analyzed methods;
7. the analogy served us as a means of formulating a conclusion about the similarity of social communication research methods based on the similarity of some features, allowing us to transfer such features to a general idea of the methodological principles of social communication research;
8. we used the classification method as the division of methods into groups depending on their characteristics and fixing the regular connections between groups of methods in the system of the field of knowledge "Social Communications".

The arsenal of industry (special) methods is not wide and sufficient for adequate identification and description of methodological principles of social communications research. That is why we did not turn to narrowly specific scaling methods (for example, C. Osgood's semantic differential scale, or the Demographic and Health Surveys (DHS) method – demographic and medical studies, or the quantum chronos method, etc.).

As a method of further study of the analyzed problem, we chose the following research procedures:

1. analysis of available sources of application of adequate methods for the study of social communications;
2. highlighting certain close characteristics of the methods, which we have listed in the table;
3. on the basis of identification of similar signs, implementation of combining methods into groups;
4. formulation of methodological principles of social communications research.

## Results and discussion

After getting acquainted with the content of the methods and analyzing their specific features, we recorded the identified data in a table and created a diagram, which were placed on the platforms of international repositories Figshar, SSRN (Kholod, 2023–1; Kholod, O. (February 26, 2023).

In one of the tables, we provided information on the mention of research methods, approaches and techniques that we found in the description of the results of 50 separate studies carried out by authors from different countries of the world for the period from 1968 to 2022. We counted 465 such mentions, or 100%. Among the 50 sources, there were 25, or 50%, monographs by Ukrainian authors (including abstracts of dissertations for obtaining the scientific degree of doctor of sciences in social communications). We analyzed four monographs of Ukrainian doctors of philological sciences in the specialty 10.01.08 – journalism (since 2007, equated to the specialty 27.00.04 – theory and history of journalism) in the scientific field 27 – social communications. We analyzed the monographs of Ukrainian doctors: historical sciences (1 or 2%) and political sciences (1 or 2%). We also analyzed the monographs of Ukrainian candidates of sciences: in social communications (1 or 2%) and historical sciences (1 or 2%). During the analysis, we considered 15 or 30% of sources (scientific articles, electronic resources of websites) of foreign authors whose title contained the phrase "social communication (s)". We considered one (2%) source (an electronic website resource) from a foreign

academic organization. We also paid attention to one (2%) electronic resource. It described design options for evaluating home visits (see Table A below).

15 or 30% of sources (scientific articles, electronic resources of websites) of foreign authors whose titles contain the phrase "social communication (s)" were analyzed; one (2%) source (electronic website resource) from a foreign scientific organization and one (2%) source was an electronic resource that described design options for home visit evaluations (see below, Table A).

No	Source type and type	Number of sources (in note)	Number of sources (in %)
1.	<i>Monographs</i> of Ukrainian authors (including abstracts of dissertations for obtaining the scientific degree of Doctor of Sciences in Social Communications)	25	50
2.	<i>Monographs</i> of Ukrainian doctors of philological sciences in the specialty 10.01.08 – journalism (from 2007 they are equated to the specialty 27.00.04 – theory and history of journalism) in the scientific field 27 – social communications	4	8
3.	<i>Monographs</i> of Ukrainian doctors: – historical sciences	1	2
	– political sciences	1	2
4.	<i>Monographs</i> of Ukrainian candidates of sciences: – social communications	1	2
	– historical sciences	1	2
5.	Sources ( <i>scientific articles, electronic website resources</i> ) of foreign authors whose titles contain the phrase "social communication (s)"	15	30
6.	Foreign sources (electronic site resources): – a scientific organization	1	2
	– an electronic resource	1	2
7.	<b>In All</b>	50	100

**Table A.** The Quantitative and Qualitative Composition of the Analyzed Sources.

We selected information about methods (paths, techniques, principles, scales, models, profiles, training) according to three criteria to determine the methodological principles of social communication research.

1. Presence/absence of signs characterizing the theoretical or practical meaning of research procedures within the framework of information exchange between elements of the Whole.
2. Presence/absence of signs of involvement of the research path in society as a Whole (individual, family, social group, social class, social institution, society, etc.).
3. Orientation to the study (measurement, interpretation, interpretation) of means (instruments) of the regulation (influence) on social relations and relations affecting the state of the Whole.

Of the 465, or 100%, recorded methods (approaches and techniques) used in the works of 50 authors analyzed by us, we subjectively identified 55 as frequent, and 410 methods as non-frequent. We determined the degree of frequency as follows: we considered frequent methods that we identified in the range of 2–32. We considered the method used by the author-researcher once infrequent.

Based on the results of the analysis of the frequency methods used by the authors in the research, we compiled a table. B (see below).

	Classification criteria										
	1*				2**			3***			
	Theoretical and empirical (+/-)	Theory	Practice	Total Σ	Availability (+)	Absence (-)	Total Σ	Measurement	Explanation	Interpretation	Total Σ
SACH ****	4,6%	≈49,9%	≈45,5%	99,1 (≈100%)	100%	0%	100%	≈36,4%	14,5%	≈49,1%	100%

**Table B.** Classification (according to holistic criteria) frequency methods, approaches and techniques (Σ=55, or 100%), found in the description of the results of 50 separate studies (for the period from 1968 to 2022).

Notes:

1\* – Presence/absence of signs characterizing the theoretical or practical meaning of research procedures within the framework of information exchange between elements of the Whole.

2\*\* – Presence/absence of signs of involvement of the research path in society as a Whole (individual, family, social group, social class, social institution, society, etc.).

3\*\*\*- Orientation to the study of means of regulation of social relations and relationships that affect the state of the Whole.

SACH\*\*\*\* is the average arithmetic number.

The application of practical and theoretical research methods gave us the opportunity to state a number of features, among which we attributed a few.

1. According to the criterion "Presence/absence of signs characterizing the theoretical or practical meaning of research procedures within the framework of information exchange between elements of the Whole", we recorded the dominance of theoretical (49.9%) methods over practical (45.5%) and theoretical-practical ones (4.6%). We can explain this ratio from two positions. First, researchers' desire for generalization and abstraction in the analysis of social communication processes. Secondly, adding up the frequency indicators of practical (45.5%) and theoretical-practical (4.6%) methods in the sum fixes the indicator of 50.1%, which exaggerates the indicator of the dominance of theoretical methods. With such an interpretation of the facts, there is a basis for asserting that the weight of dominance prevails on the side of practical and theoretical-practical methods, rather than theoretical ones. This means that the researchers used theoretical methods, on the one hand, and practical and theoretical-practical methods, on the other hand, in almost equal proportions (49.9% and 50.1%). At the same time, there is an option of compiling the frequency indicators of theoretical (49.9%) and theoretical-practical (4.5%) methods, which in total fixes the indicator of 54.4%. The interpretation of the last indicator can be the statement that the use of practical methods by researchers is dominant over theoretical methods during the study of social communication processes. We established that there are three variants of interpretation of the ratio of indicators of the frequency of use by researchers of various methods of analysis of social communication processes. We formulate two opposite conclusions. The first conclusion concerns the dominance of the rate of use of theoretical methods by researchers (50.1%). The second conclusion, on the contrary, shows that researchers are inclined to use practical methods (54.4%). The difference in the preference of indicators is small, but it exaggerates the statistical error rate of 2%–3%, which gives us the right to assert the fact of the dominance of practical methods over theoretical ones.

2. We note that in all 55 (100%) frequent cases, we record the involvement of the research path in society as a whole. Analysis of indicators according to the criterion "Presence/absence of signs of involvement of the research path in society as a whole (individual, family, social group, social class, social institute, society, etc.) testifies to this (see table B).

At first general glance, this fact indicates that the study of social communication processes, which, for example, are carried out between individuals in a family, or in a social group or within a social class or social institution, is focused on considering them as part of the Whole. Without calling the Whole a whole, researchers express opinions about the influence on a unit of measurement (for example, social action or social interaction) of factors characterizing the Whole. This is how the researcher T. Novalska (Novalska, 2005) formulates her thoughts, for example, when studying reader characteristics of Ukrainian librarianship. The researcher takes into account the influence on the social interaction between the reader and the employees of the library system, economic and political, socio-psychological conditions that influenced (influence) the mentioned social interaction in the period of the second half of the 19th century the beginning of the 21st century. The whole in this case is a synergistic factor of the system of economic, political, social and psychological factors.

Upon closer examination, we found that the authors do not declare the connection between social influence, social interaction, and social relations of the investigated social-communication processes. In other words, we recorded individual studies in which the authors declare a direct connection of the applied methods, approaches and techniques

with the Whole. For example, F. Krotz already emphasized in the middle of the 20th century "communication was understood as a form of social action" (Krotz, 2009). Such an opinion declares, in our opinion, a reference to the Whole, that is, social action, which in turn is a component of society as a Whole. It is well known that materialist psychologists, for example, S. Rubinstein (2019), L. Vygotsky (1983), M. Leontiev (Prykhodko, Yurchenko, 2020; Leontiev, 2020) recognize the fact that psychological action depends on psychological activity. In the works of the listed researchers, the Whole refers to mental activity as a component of Nature. It is obvious that different philosophical approaches to the study of Nature (the Whole) did not allow materialists to refer to the works of authors already known at that time, who openly declared the relationship of the Whole (Nature, Cosmos) with man. We include M. Fedorov (Turchyn, 2013), K. Tsiolkovskiy (Alekseeva, 2007), V. Vernadskyi (1977; 1978), L. Gumilyov (1989), I. Yefremov (Smirnov, 2018), E. Ilyenkova (Mareev, 1997), H. Skovorodu (Naidyonov, 2013), M. Kholodny (1982), O. Berdnyka (Ovsienko, Rapp, 2006: 67–71), M. Hrytsenko (2017), L. Drotynka (2023), V. Krutova (2014), O. Kholoda (2022).

1. We analyzed the data according to the criterion "Concentration on the study of the means of regulating social relations and relations affecting the state of the Whole" (see Table B). We found that 36.4% of the methods used by the researchers in the fifty selected sources indicated that 36.4% of the methods used by the researchers in the 50 selected sources focused on measurement. Such a measurement, according to one of the principles (laws) of quantum theory, affects the state of the Whole. In 14.5% of cases, researchers recorded methods aimed at interpreting the studied phenomena. The dominant indicator was 49.1%, which explained the frequency of use by researchers of methods that involved the interpretation of the studied process of social communications. We note that all three mentioned methods of analysis (measurement, interpretation and interpretation) in the methods employed by the researcher affect the state of the Whole. Such influence entails a change in the Whole (Nature, Cosmos, and Energy Center of the Universe). The signs of the mentioned change are often imperceptible to the researcher, but the logic of the action of quantum principles suggests that later such changes of the Whole cause the "butterfly effect", which was previously described by the mathematician E. Lorenz (Lorenz, 1963). The essence of the mentioned effect boils down to the following convention: "if there is even a small error in determining the initial state of the system (which is inevitable for any natural system), the prediction of its state in the future is impossible" (Butterfly effect (mathematics), 2023). In other words, "a small fluctuation in the initial conditions causes unpredictable consequences, and in our case there are three factors that affect the state of the Whole.

The first factor: researchers may choose invalid methods for the study of social communication, that is, those that do not correspond to the tasks. We fix the second factor of influence on the Whole, because we know: any measurement, explanation or interpretation brings irreparable changes to the Whole. The principle of quantum mechanics assumes the following proposition: both the measuring device and the observer can have a double influence. An object of observation has different properties when we do not observe the object, when we do not measure the properties of the object, or when we do not interpret the characteristics of the object. If one of the three listed forms of influence (measurement, interpretation or interpretation) is missing, then the display of the properties and characteristics of the Whole will be incomplete. The third factor is the variable (spontaneous, situational) relationship between the indicators of measurement, interpretation and interpretation, which distorts the real state of the Whole. Therefore, even the very

fact of the researcher's choice of a certain method (methodology) of studying the processes of social communication causes changes in the state of the Whole.

## Conclusion

At the beginning of the study, we put forward the main hypothesis that the list and analysis of the specifics of the methods of studying the processes of social communication will make it possible to identify the common and divergent features of the methods of studying the processes of social communication. At the beginning of the study, we proposed a hypothesis, which we proved, thereby rejecting the working hypothesis and counterhypothesis.

It was found that the identification of common and divergent features of research methods of social communication processes allows for the classification (according to three holistic criteria) of frequent methods, approaches and techniques revealed in the description of the results of 50 separate studies (for the period from 1968 year until 2022). We base this classification on the methodological principles of social communication research, to which we as apologists of holism include the following:

1. the world (the Whole, Nature, Universe) is information;
2. the information is whole;
3. when studying the Whole, the object of research is the exchange of information as a holistic process in which everything is everything: each component of such a process is a reflection of the Whole;
4. information is quantized (consisting of portions of energy that can only be reliably measured);
5. information exchange is aimed at regulating relations between individuals, social groups, social classes, social institutions and societies that are part of the Whole.

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### *Conflict of interest*

This study has no conflict of interest.

### *Ethics*

The material presented in this article meets all the points and requirements put forward by the Ethics Commission of the Editorial and Publishing Department of the public organization "Scientific and Educational Center "USPISHNYI".

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