

# Features of the social dimension

## Abstract

The author focuses on the most important procedure of sociological research – measurement. The established attitude towards a predominantly numerical representation of the results of sociological measurement, based on classical and non-classical measurement concepts, is noted. The author examines in detail the features of the formalization of social variables in the process of real interaction between a sociologist and a respondent and comes to the conclusion that neither the vast majority of the properties of social phenomena nor the sociological concepts based on them have the possibility of numerical measurability, that numerical measurement and all procedures based on it rest on an overly simplified view of a person and his social environment. The concept of the humanitarian dimension is proposed, according to which measurement is a set of theoretical, methodological, methodological and instrumental actions through which the qualitative certainty of the measured phenomenon or its individual properties is established. The consequences of the adoption of this concept are considered, one of which is that the nominal is declared the main type of measurement.

**Keywords:** measurement, measurement concepts, social measurement, measuring scales.

The fundamental principle of scientific analysis of social processes is based on real facts, which are empirical data, i.e. information about certain fragments of the subject area, obtained purposefully, using specially developed techniques. Only in accordance with the content of these data, it is possible to develop and develop appropriate concepts. The empirical data itself is the result of determining the values of each of the space of variables describing the object and subject of research for all units included in the consideration. The procedure by which the values of a variable are determined in each specific case is called measurement.

## Classical and non-classical measurement theories

In the daily life of any person, measurement is a familiar, everyday procedure. When making a decision or experiencing any feelings, people (unknowingly) make certain measurements - determine the values of those factors or quantities that allow them to make a decision or affect their feelings. Thus, the measurement procedure plays a crucial role in our lives. Its role in science, including sociology, is especially great. There is a fairly popular point of view, according to which all modern science has grown out of a dimension without which it is unthinkable and thanks to which it has established its status. In other, non-scientific (but no less fruitful) forms of cognition, such as intuitive, heuristic, artistic, etc., this procedure, as a rule, is not allocated to a separate stage, but is implicitly present. The main methods that are used to obtain data on the state of social processes have been developed in sociology. Therefore, the problems of measuring the characteristics and properties of social processes have manifested themselves in the most dramatic form and have found a more or less acceptable solution within the framework of this particular discipline. For this reason, let's look at what sociologists have encountered when developing the measuring apparatus of their research methods.

Sociology, like most social sciences, has been overwhelmingly influenced by the natural sciences for a long time. For this reason, the content of the entire measurement problem in social science until very recently had a distinct natural science interpretation. The elevation of quantification to the rank of a universal principle of measurement is also a consequence of the long expansion of natural science concepts, which have managed to gain a foothold and take shape in a set of canonized rules. Therefore, the orientation and the whole pathos of

the measuring paradigm prevailing in modern sociology are focused on displaying the qualitative and quantitative unity of the studied social phenomenon (as required by the principles of natural science) only in the form of quantified numerical constructions. Within the framework of these concepts, a qualitative approach to the objects of research, when only a meaningful, verbal description of them is carried out, is considered only as the first, primitive and, in a certain sense, pre-scientific stage of their cognition.

In accordance with the classical understanding of the measurement procedure, it is the determination of the ratio of one (measured) quantity to another homogeneous quantity (standard) and obtaining the result in the form of a number. This number shows how many times the unit of measure (standard) is contained in the measured value.

It is obvious that this definition of a measuring procedure for measuring social variables is unacceptable for the simple reason that there are no standards here, just as there is no true value of the measured value (from which, by the way, the presentation of a probability-theoretic or statistical theory of measurement errors for sociologists is exclusively abstract, exotic). Indeed, what standards can be chosen to answer such questions, for example: "Which parties or political movements do you sympathize with?" or "Are you satisfied with the state of public order in the city?" This (and not only that!) this circumstance led to the expansion of the concept of "measurement". It began to be understood as a way of attributing numbers to objects, regardless of whether a unit of measurement was used. This approach is based on the assumption of the existence of isomorphism (homomorphism) between empirical and numerical systems with relations. As you can see, this approach eliminates the standard, but the "number" as a result of measurement remains intact.

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The development of non-classical measurement theories is an attempt to go beyond physical science (and natural science in general) and create a universal measurement theory focused on non-physical measurements. Due to the vagueness of the potential subject area of application, the objects of measurement in these theories are not specified, and the spheres of application of theories are spoken about very abstractly, at the axiomatic level. In fact, the specific areas of application of these theories are not considered in themselves. The basic concepts of these theories are the concept of “scale” and its permissible transformations. These theories include the complex of ideas that was formed in the 40s of the twentieth century by the American psychologist S. Stevens, and then developed in the works of P. Suppes, J. Zinnes, K. Coombs, I. Pfanzagl, D.H. Krantz, R.D. Lewis, A. Tversky and others. The following formulations are most widely used.

Measurement is any assignment, attribution of numbers to objects or events (or aspects of objects or events) in accordance with rules, in other words, with any rule.<sup>1</sup> Measurement is a homomorphic mapping of some empirical relational system (empirical structure) to some numerical relational system (numerical structure).<sup>2</sup> Measurement consists in assigning numbers to things in such a way that some operations with attributed numbers and some relations between them correspond to the observed relations and operations on the things to which they are assigned or which are represented by them. <sup>3</sup>Measurement is the attribution of numbers to things in accordance with certain rules.<sup>4</sup> Despite the fact that non-classical theories have been around for more than 80 years, modern Russian authors have overwhelmingly made no progress in developing this problem and interpret the measurement procedure almost identically to the definitions presented. This is what it looks like.

“Measurement is a procedure by which research objects, considered as carriers of certain relations between them and as such constituting an empirical system, are mapped into some mathematical system with corresponding relationships between its elements. Any objects of interest to the sociologist can act as objects of measurement - individuals, production teams, working conditions, everyday life, etc. When measuring, each object is assigned a certain element of the mathematical system used. It is possible to use both numerical and non-numerical mathematical systems”.<sup>5</sup> Despite some (generally declarative) softness in the approach to measurement results, which is found in the definitions of domestic authors, “with all approaches to the problem of measurement, the fact remains unchanged that the measured property is described by a number”.<sup>6</sup>

The attitude towards a predominantly numerical representation of the result of sociological measurement, which prevails in Russian sociology, has led to the fact that the whole complex of extremely complex social problems associated with the assessment of the values of the properties of social processes is considered mainly from a formal and logical standpoint. For this reason, the issues of methodology and methodology of sociological measurement are developed as purely mathematical problems and, as a rule, professional mathematicians deal with them. Thanks to their efforts, a classification of scales has been developed (and sociologists have meekly accepted) according to the level of measurement, which is determined not by the degree of adequacy (reliability) of its display of the measured object, but by the range of possibilities that the scale opens up to mathematical methods. The absurdity of such a classification of measuring scales for the social world is already manifested in the fact that the nominal scale, which measures the vast majority of properties of social phenomena (social norms, verbal and non-verbal attitudes, value orientations, motivations of people, etc., i.e. almost everything!), the lowest level

of measurement is assigned, while the scales of relations, the degree of use of which in sociology is vanishingly small, are the highest.

The fundamental concept of all non-classical measurement theories, the scale, also receives a numerical interpretation: “Scale is an algorithm by which measurement is carried out in cases where it is a mapping of the studied objects into a numerical mathematical system”.<sup>7</sup> This definition clearly declares that the measurement result should be represented only by a number. It should be noted that the development of numerical scales, of course, can be considered as a step towards formalizing the assessment of the magnitude of properties that do not have a natural numerical measure. Moreover, at first glance, the creation of a certain numerical scale for some property seems to be a relatively simple task. However, even in the case of numerical scaling of only one property, one can see the main fundamental difficulties of such formalization in general.

The fact is that there are many intellectual factors that encourage a researcher to accept one theoretical construction and discard one or more others that are quite equivalent. And far from always in this case, the decisive word remains with a rationally justified experimental or some kind of formal logical argument: intuition, the aestheticism of the researcher, and that elusive “zeitgeist” that they like to refer to, but which is difficult to express in precise terms, work here. It turns out that no most thorough (but inevitably finite) descriptions of various conceivable combinations of features characterizing a given property can unambiguously determine the criteria according to which a particular value of a property is identified with a certain point on the scale (number). It remains only to recognize that the reliable operation of any numerical scale in measuring the properties of social phenomena can be relied upon only if sociologists, researchers and respondents have identical intellectual, ethical, psychological, ideological, aesthetic, etc. standards. Thus, the desire to use numerical scales to measure the properties of social phenomena is based on the implicitly assumed unity of intuitive subconscious processes, for example, in the interviewees and the questionnaire.

Sociologists, as a rule, hope to overcome this quite fantastic condition with the help of careful development of rules and detailed rationing of the measurement procedure itself. The simplest and surest way out (according to tradition!) It is seen in the appeal to those seductive perfections of measuring technology, which was formed in the depths of natural science and was embodied in the science of measurement - metrology. This commitment is based on the belief that since measurement is a general scientific procedure in cognitive activity, it should be invariant with respect to the content and specifics of the task in which it is used. As a result, the unique, mobile, changeable procedure for the emergence of primary sociological data in the process of dialogue between living people is replaced by a dead, but strictly scientific scheme consisting of an abstract object and subject of measurement and measuring devices placed between them. Attempts to apply natural science approaches to a specific procedure of sociological measurement, of course, can be explained. These attempts are based on the desire to have unambiguous, formalized descriptions of social phenomena that allow further use of formal methods of transformation and analysis of the resulting empiricism. At the same time, they proceed from the belief that with the help of strict procedures and methods, their relentless improvement, it will eventually be possible to get rid of measurement errors or reduce them to a numerically determined and acceptable minimum.

The steady belief in the existence of a special scientific method that allows each time to develop a specific and unique set of rules and procedures, following which inevitably leads to a reliable or

accurate measurement result (in the terminology of adherents of this approach - “reliable”), encounters a contradiction. On the one hand, all sociologists, without exception, recognize the fundamental uncertainty of social phenomena, the impossibility of their exhaustive and unambiguous description using arbitrarily complex and detailed explanatory constructions. On the other hand, directing their efforts to search for and introduce formal logical methods and procedures into sociology, they actually proceed from directly opposite ideas. The uncertainty of sociological empiricism is considered as an annoying, but temporary characteristic of it, which in the future, when “strictly scientific methods” of sociological measurement are developed, it will be possible to get rid of. In general, it can be concluded that the strategy of mandatory numerical representation of the result of the measurement procedure turned out to be, to put it mildly, unproductive. And this strategy itself is sometimes considered as a pathology – quantumphrenia.

Indeed, neither the vast majority of the properties of social phenomena, nor the sociological concepts based on them, in fact, have the possibility of numerical measurability. Sociologists themselves determine the proportion of properties that can be numerically measured at no more than 5% of their total number. The static nature and logical unambiguity of numerical measuring structures turn them into a completely unacceptable tool for measuring mobile and multi-valued social processes. Choosing numerical scales as a measuring tool, the sociologist is always forced to arbitrarily establish a rigid connection between the multidimensionality of the meanings of a social phenomenon and the point of the numerical scale, attributing to it some single hypothetical content. Effective, at first glance, the accuracy and rigor of the use of numerical scales is achieved, as can be seen, through the so-called volitional measurement. It is impossible not to dwell in more detail on the purpose of such a persistent introduction of numerical measurement methods into sociology. This goal is to create formalized information models of social processes as the basis for the widespread use of formal, logical, mathematical means of analyzing materials of mass sociological research.

The very installation on the mathematization of cognitive science tools and the automation of related information procedures is a natural and objectively inevitable consequence of the development of civilization on a scientific and technical basis. Especially in the context of the so-called “digitalization” being intrusively introduced. However, for sociology, due to the specifics of its subject area, this setting actualizes the problem of the dialectic of the relationship between significantly different groups of methods — substantive and formal. The essence of the problem lies in the fact that instead of focusing on the optimal combination of these groups of methods in the research process, the modern direction of mathematization in sociology is based mainly on formal logical methods of analyzing the initial empirical texture, bringing it actually to the level of manipulating its symbolic representation. This is the reason for such strict requirements to the form of presentation of the initial data and a certain absolutization of formal methods, neglect of that part of the content of the studied phenomena that remains beyond the capabilities of numerical scales.

What are the prerequisites for the absolutization and insufficiency of formal methods of analysis in sociology?

The word “form”, when used as a philosophical term, means the external certainty of the subject. In philosophy, form acts as a relatively durable, stable result of the development of material content, since it fixes and consolidates the achieved level of development. There is a certain division of functions between form and content: if form acts as

an organizing principle, then content turns out to be the driving force of development. The form is only capable of recording a certain result of the development of content, and therefore only a part of this content is inevitably represented in it. From this, in particular, it follows that the external form can be a source of knowledge only when, in its features, it more or less adequately reproduces the internal content, the most important part of its essence.

Formalization (in a broad sense) refers to any representation of internal content in an external form. Formalization is carried out only by a person. At the same time, there is a purposeful design of the content, giving it certainty from the point of view of a given criterion or a group of them. This is done in two stages. At the first stage, within the framework of the full content, some part of it that meets the criterion is highlighted. Then, at the second stage, a certain sign or a combination of them is assigned to this part of the content. The symbolic form obtained in this way further represents - does not embody, but rather represents — the highlighted part of the content.

The essence of formalization is that the real relations inherent in one substrate (content) are transferred with some degree of approximation (homomorphic, isomorphic, etc.) to another. Therefore, as a result of formalization, the form is not freed from the substrate at all, but is freed only from rigid attachment to the original substrate inherent in a specific content. Thus, in the course of formalization, firstly, the conditionality of the connection of the content with the form of its expression is predetermined, since the original content is replaced by another, symbolic one and, secondly, there is a temptation to bring the formalization to such perfection that in the future one can conduct reasoning without referring to any content, but simply watching the appearance signs and their combinations and following the logic of the formal language. Excessive reliance on this very possibility is the basis for the absolutization of formal methods of analyzing internal content. However, it is quite obvious that this possibility is significantly limited by the permissible level of substitution of the internal content with its symbolic form. And if this level can be determined in studies of the natural world (which is very important), and it often turns out to be quite acceptable, which determines the widespread use of formal methods of cognition here, then the application of these same methods in the social sphere and, in particular, in sociology, encounters very significant fundamental difficulties.

## Features of the formalization of social variables

The object of formalization in sociology is, as a rule, the ideal content that exists inside the respondent’s consciousness. One of the features of an ideal content is that, while it has an internal form, it does not have its own external form. The most important and, in fact, the only means of manifestation, external design of the ideal content of consciousness is natural language. And it is with the help of this purely utilitarian means, constantly distorted, clogged, and familiar to any work, which is a living spoken language, that the sociologist receives most of the information about the phenomena being studied.

The use of natural language in modern sociology is not based on implicit postulates:

- 1) The real phenomenon and its verbal description are in relation to strict mutual correspondence;
- 2) Language signs (words, expressions) are amenable to the same interpretation by all members of a given linguistic community, which ensures their linguistic identity;



3) Language itself is an ordered system of symbolic means suitable for expressing any thoughts, serving all groups of society equally and indifferently.

However, upon closer examination, the picture turns out to be significantly different, more complex.

Since thinking can occur both on the verbal and non-verbal levels, there is no one-to-one correspondence between thinking, which constitutes the ideal content of consciousness, and its linguistic form. Therefore, the formalizing ability of natural language initially includes the possibility of separating thought from its subject.

Performing its most important -communicative -function, language contributes to the further separation of thinking from the subject content, since before learning anything about the content, it is necessary to identify the external form of expression of this content. The perception of the linguistic design of the ideal content is far from an unambiguous process, fraught with many semantic aberrations.

The first (by no means the most important, but extremely obvious) possibility of distortion of meaning is due to the fact that signs (letters, sounds), which are the material carrier of a language message, are only conditionally related to what they relate to, and can be replaced by any other signs (for example, the content can be transmitted in Russian or English, by means of music, choreography, etc.).

The second possibility is related to the fact that the understanding of language occurs through words, through the meanings assigned to them. In this regard, it is impossible not to pay attention to the fundamental features of the meaning and meaning of the transmitted language message. The meaning is close to the personal, figurative and emotional level of reflecting the world, while the meaning is already the socially generalized content of the message. The transition from meaning to meaning is the transition from individual experience to social experience, the expression of individual experience through socially significant concepts.

M.M. Bakhtin also showed that each specific linguistic utterance is involved not only in the centralizing tendency of linguistic universalism, but also in the decentralizing tendencies of socio-historical "diversity", that "social languages" are embodied "ideological horizons" of certain social collectives, that being "ideologically filled", such a language forms an elastic semantic environment through which the individual must with effort "break through to his meaning, to his expression".<sup>8</sup> Thus, already in the process of linguistic formalization, the transformation of the ideal content of thinking takes place: it is replaced by another, symbolic one, the meaning of which differs from the original meaning. To a certain extent, language turns out to be a "template", the form of which thought is forced to take. He forces us not to perceive (and not to reproduce) everything that does not have a socially significant name. In principle, it cannot reproduce the fullness of the ideal content.

It can be argued that in speech communication, the language itself imposes on the speaker, regardless of his will, someone else's thought. He, as P. Valery said, is "the most powerful tool of the other, residing in ourselves".<sup>9</sup> As a result, when we want to formulate and convey to the interlocutor our inner, uniquely unique state or feeling, we necessarily express this with generally meaningful, ready-made verbal constructions that do not belong, in fact, to anyone. When trying to express this feeling or thought for ourselves ("about ourselves") and go beyond the limits of speech automatism, we almost always feel that we do not have enough words. As you can see, the words of a living spoken language are by no means created for unambiguous logic: you can never be sure of the constancy and universality of their meanings.

A lot has been written about the blurring of the meanings of words in natural language, about its illogicality. Indeed! After all, each of us is by no means the first and far from the last to use words, phrases, syntactic constructions, even whole phrases, as well as the vocabulary of professional jargon, slang stored in the language system, which resembles not so much a treasury intended for our individual use as a rental point: long before us, all these units and verbal The structures have gone through many uses, through many hands that have left various marks on them: dents, cracks, stains, odors, etc. These traces are nothing more than the imprints of those semantic contexts in which the "national word" visited before it came to our disposal. This means that every word is imbued with a multitude of fluid, changeable ideological meanings that it acquires in the context of its uses. The real task of the speaker (writer) is not at all to learn and then correctly use a particular linguistic construct, but to discern the meanings that fill it and determine in relation to them.

Words can have any conceivable meaning, thanks to the use of intonation, stress, accentuation, context, situation, etc. The most insignificant words acquire enormous weight, the slightest pauses separating them. Language, in the words of A.F. Losev, is "teeming" with endless semantic valences.<sup>10</sup>

A language message, therefore, is like a framework surrounded by a multitude of potentially possible meaningful meanings. And it's not just the subtext. Beyond the text (but subtly related to it), there are bigger things than the subtext: this is not what is underneath, but something like a supertext. A supertext is something that exceeds the text, is not subtracted or subtracted from it in any way, but is somehow inexplicably connected with it.

As a result, the ideal content that the source subject wanted to convey to the receiver subject (Si) is overgrown with many distortions (aberrations) and presented in real form,

Sr. Formally, this can be displayed as the following expression:

$$S_r = S_i + \Delta_1 + \Delta_2 + \Delta_3 + \dots + \Delta_n,$$

Where  $S_r$  is the real content;  $\Delta_1, \Delta_2, \Delta_3, \dots, \Delta_n$  are errors (distortions) due to the reasons described above.

When perceiving  $S_r$ , the recipient's target a priori attitudes, his level of intelligence, culture, belonging to a particular political or social group, and many other characteristics are of great importance, since they determine the result of filling the formed peculiar semantic voids. And here the orientation of sociologists towards the strict unambiguity of the meaning of empirical information is fully manifested. There is no such obscure statement, no such bizarre talk, no such incoherent babble that sociologists would not be able to attach a very definite meaning to. They will always have some kind of guess that will give meaning (unambiguous, in full accordance with the chosen theoretical concept) even to baseless statements. At the same time, any clarity on the adequacy of understanding a linguistic message among sociologists, as well as among ordinary people, remains purely individual. The most contradictory opinions are allowed, each of which finds excellent examples and facts that are difficult to dispute.

As you can see, linguistic formalization can by no means be considered as a means of unambiguously displaying ideal content, and speech communication is not at all like putting thoughts of one person into words and sentences to convey them to another. Thought cannot exist outside of consciousness, therefore it never leaves it and does not pass from one person to another in the course of linguistic communication. Units of speech are purely material (sound, sign,

etc.) objects and there is no more meaning in them than, for example, in a meaningless combination of sounds. In the process of language communication, in fact, not a thought is transmitted, but only its material shell. At the same time, the symbolic elements of the language perform a transfer function, acting as a kind of reference points, with the help of which the content contained in them is reproduced in the thinking of the perceiving subject. Hence, in particular, it follows that understanding speech is not extracting information from it, but putting some kind of content into it for those who perceive it: the signs coming to the recipient's "entrance" seem to immerse themselves in his inner world, acquiring an individualized meaning. The meaning and content of human speech is extremely strongly influenced by the state of the person transmitting and receiving the message (oral or written). It is the state of well-being, positive or negative emotions, goals and interests, past experience, the degree of vital and mental activity in general and at the moment, the desire to learn a new or unconscious desire to limit oneself to stereotypes, etc. In other words, the understanding of human speech, natural language, in any case, cannot be complete if we limit ourselves to studying only objectified or any other manifestations of it that can be formally logically accounted for or experimentally fixed.

The social background of each quantum of sociological data is, in fact, unique and varies depending on the individual characteristics of the respondents, the state they are in, the specific situation of the survey, etc. Therefore, the meaningful meaning of the same wording of the respondents' answers may be significantly different. For the same reason, the simple procedure of screening out irrelevant information is associated with enormous, almost insurmountable difficulties in sociology. Even with the highest professional skills, the sociologist is not able to completely sift out the interpretative garbage in the respondents' messages. In general, language communication is deeply social and relies on meanings about which there is a high degree of agreement among community members. Speech has no objective existence independent of human perception, it does not exist outside of man. Unlike nature, there is nothing unconditional in speech, it is all built on a system of conventions and contexts. The conditions are between people. People themselves obey and live not only according to the laws of nature, but also according to the laws of social development. In accordance with this, natural language is also evolving: its grammar, vocabulary, semantics of the words themselves are changing, etc. Therefore, the meaning of a language message is determined not only by the composition of words, but also by their lively interaction due to a specific socio-historical situation. That is why most of the semantics of any speech message is not represented at all in the material form of the text, but is enclosed in the consciousness of the speaker and listener. The text is something like an iceberg, of which only a small part is perceptible. In general, the perception of any text, as well as the process of human perception of the phenomena of the outside world in general, is not a passive assimilation of something ready, but a creative process of creating a new one.

As a result, the recipient of the message realizes not at all the ideal content that the respondent (Si) wanted to convey to him, but quite another (Sp), which can be represented as follows:

$$Sp = Sr + \Delta a + \Delta b + \Delta c + \dots + \Delta k,$$

Where  $\Delta a, \Delta b, \Delta c, \dots \Delta k$  are distortions caused by the characteristics of the message receiver.

Thus, the hope of dogmatic sociologists to create an ideal language that ensures the unambiguity of the transmission and perception of content not at the expense of the efforts of consciousness, but at the

expense of the correctness of the most iconic form, is fundamentally unfeasible.

It is not by chance that the humanities prefer an ordinary, spoken language: This is how it is more convenient to think about subjects that can never be fully defined, but, on the contrary, are redefined in each new context. Yes, the linguistic formalization of the content of ideal consciousness can give only a partial representation of it and does not provide not only its adequate representation, but also its unambiguous understanding. And yet, for all its instability, multidimensionality, vagueness, etc., it is remarkable that it is natural language that is the most effective means of expressing the most precise and subtle meaningful concepts. In this regard, it should be emphasized that the difference between exact and other sciences is only that in the former, meaningless expressions can be recognized already by their appearance, while in the latter, it requires referring to the analysis of the content. Indeed, in many cases, an unambiguous understanding of the message just indicates an incomplete understanding. An "inaccurate" natural language is able to convey such subtle nuances of thoughts, feelings, and moods that one cannot even hope to express them using the "exact" language of numerical systems.

However, many sociologists, guided by the ideas of the natural sciences about accuracy, strive at all costs to free themselves from the "shortcomings" of natural language. They simply prefer not to pay attention to the extremely subtle specifics of speech communication and base their research on the assumption, which plays a fundamental role, of the complete identity of the meanings of the messages exchanged between the researcher and the respondent. In doing so, they proceed from the implicit (and incorrect) premise that human behavior (real and verbal) is subject to perfectly conscious, as if calculated in advance, unmistakable unambiguous decisions. There is no place in sociological models for any doubts, insecurities, which are more or less characteristic of any person. But conditions are being created for the use of numerical measuring scales — the most important attribute of exact science, according to these sociologists. They are not bothered by the almost complete insensitivity of such scales to the actual social aspects of the phenomena under study and the fact that for the opportunity to use these scales one has to pay the price of an unacceptable simplification of reality, in fact, to avoid studying social processes in all their complexity and completeness.

This is expressed, in particular, in the fact that there is a certain insouciance about who should deal with the unaccounted-for sides of phenomena and the assessment of the admissibility of the abstraction that is accepted in the original conceptual model. Trying to convert the measuring apparatus to numerical scaling, sociologists go to such actions as replacing uncertainty with certainty, reducing multi-criteria to a single criterion, etc., without stopping at such trifles as scientific correctness. For example, the fact that the verbal statements of the respondents are passed through a double evaluation filter, on the one hand, and the researcher himself in the process of their interpretation, on the other, falls out of the field of view of such sociologists. The interviewer has a developed, conceptualized idea of the problem under study and inevitably turns into a "prompter", asking questions that his interlocutor had never thought of, drawing his attention to details that he had not realized before. The more a sociologist tries to be a neutral instrument of truth, the more subtly he inspires answers that are assigned the status of primary data and on the basis of which all subsequent meaningful conclusions are based. In fact, the measuring apparatus of modern sociology, designed to ensure the complete objectivity of primary data, is often very far from the goal. By turning survey materials using numerical measuring scales into

a system of formalized social facts, sociologists, in fact, replace the real object with an artificial structure. The resulting results look clear and definite, and the illusion is created that the “number” captures everything. However, this is nothing more than an illusion: numerical measuring scales are alien and incongruous to the whole essence of the social world, it does not fit into rigid, unambiguous, discrete numerical constructions in any way.

The orientation towards numerical measurement and all the procedures based on it for subsequent formalized analysis rest, as has been shown, on an overly simplified view of a person and his social environment. The success of formalized sociological procedures and the results obtained with their help, their deliberate accuracy and rigor, therefore turn out to be illusory, because the instrumental apparatus is adjusted in such a way that only those social facts that correspond to the chosen thematic concept are considered. In fact, the entire empirical basis of sociological research based on the principles of natural sciences is formed (or rather, set) by the initial theoretical attitude, which is reflected in the measuring apparatus used and confirmed by empirical evidence, which it itself creates. All facts that are not adjusted to numerical measuring constructions and which, therefore, are not provided for by the initial theoretical concepts are discarded as irrelevant. Thus, a vicious circle is formed, condemning any sociological research based on such a template to inevitable success.

### The concept of the humanitarian dimension of social processes

The idea of moving away from the rigid orientation towards numerical measuring scales in the research of social processes is gradually gaining citizenship rights. It is based on the understanding of the need to expand the meaning of the concept of “measurement” by including qualitative methods along with quantitative ones. If the quantitative definition of an object is a measurement, then the qualitative definition is recognition, classification. In the process of recognition, the object belongs to some class. This class assignment is an analogue of assigning the value of a measured property to some segment of the scale during quantitative measurement. Simply put, numerical scaling is proposed to be considered as a special case of classification. The class system plays the same role in qualitative methods as scale divisions in quantitative ones. The measurement method, as it has been shown, is a reflection and an inevitable consequence of the initial theoretical ideas about the essence of the problem under study, its subject, object, etc. Measurements carried out outside the context of a developed theoretical system that formulates the essential dependencies of objects turn out to be, as a rule, completely meaningless. Developed theoretical concepts are a necessary prerequisite for the most meaningful measurements, since only the first ones indicate both the subject and the method of measurement itself. Therefore, the same measurement operation from the point of view of different theoretical approaches may indicate completely different aspects of the phenomenon under study.

Based on the above, the following definition can be proposed. Measurement is a set of theoretical and methodological, methodological and instrumental actions through which the qualitative certainty of the measured phenomenon or its individual properties is established. The measurement result is recorded both in the form of a verbal expression and in the form of a sign (which includes numbers).

It is necessary to note two features of the proposed definition of the concept of “measurement”:

- 1) It is based on the fundamental fact that quantity is only one of the qualities and that all measurement results, including quantitative ones, are essentially qualitative;
- 2) Focusing on qualitative measurement methods can only be fruitful if it is carried out within the framework of relevant theoretical concepts.

The most constructive and close position in solving the problem under consideration is laid down in the concept of the humanitarian dimension, set out in the works of S.V. Chesnokov.<sup>11</sup> The main provisions of this theory are as follows.

Social processes are primarily relationships between people, and verbal interaction (dialogue) between them is the most important and, in fact, the only source of information about the social world. Therefore, it is necessary to study (measure) the semantics of the language structures that arise in this case. Hence the first fundamental idea of the theory of the humanitarian dimension: the means of measuring the processes of the social world is natural language, and the result of measurement is speech (sign) messages, each of which has the semantic meaning that is established by the researcher at the time of dialogue with the respondent (during an oral survey) and during quality control of filling out the questionnaire (during the questionnaire). “To measure” in the humanitarian sense means “to name”, “to give a name”.

G. Hesse,<sup>12</sup> was very perceptive when he wrote: “The word is a touchstone, the most sensitive scales for spiritual values, which an ordinary scientist is in a hurry to christen fantasies. He uses this learned word whenever it is necessary to measure and describe life phenomena for which the available material devices are too crude, and the speaker’s desire and abilities are insufficient. After all, the naturalist... does not know that it is for volatile, mobile values, which he calls fantasies, that old, very subtle methods of measurement and expression exist outside the natural sciences, and that Thomas Aquinas and Mozart, each in their own language, did nothing else but weigh these so-called fantasies with the greatest precision.”

The whole verbal construction acts as a result of the humanitarian dimension. At the same time, numbers can also play the role of a sign in cases where they convey the meaning of the respondent’s answer, i.e. they are used like ordinary words.

As you can see, quantitative measurements, the result of which is expressed in a number, are a special case of humanitarian measurements, are included in them. And the whole humanitarian approach does not exclude natural science, but correlates with it as a whole with a part. In addition, there is also a specificity in orientation settings between them: if the natural science approach is oriented from the outside world to a person, then the humanitarian approach is oriented from person to person and to the outside world. This is the basis for another fundamental idea of the humanitarian dimension, which defines the rules for establishing the meaning of statements: people always tell the truth, which is determined by their worldview and, most importantly, the state of their spiritual, moral, emotional and psychological mood at a given time under given circumstances. Thus, any search for the true meaning in the transmitted messages, especially attempts to find numbers behind the words of natural language, turn out to be meaningless.

The consequence of this attitude is a rethinking of the role and significance of measuring scales in sociology. The main type of measurement is declared nominal: “In my free time, I prefer to meet with friends or watch TV” - a typical result of a nominal measurement.



In the theory of humanitarian measurement, the rating of measurement procedures is elevated to the rank of a principle.

Despite all the evidence, simplicity and transparency of the humanitarian dimension, it entails very radical consequences, abruptly changing not only the orientation of activities for the development of methods of mathematical analysis of sociological information, but also has a very significant impact on the entire approach to research in the social sphere. It forces scientists to focus their attention on the content of the studied phenomena, on the search and development of an adequate methodological and instrumental apparatus for a specific object.

As for the measuring device of humanitarian measurement itself, it includes all four known types of measuring scales. However, their subordination is significant (mirrored!) it differs from the traditional one. If in the traditional concept scales are ordered as their ability to meet the requirements of more diverse operations with numbers increases, then the criterion for their ordering in the humanitarian concept of measurement is the level of measuring capabilities of the scale, determined by the volume of that set of phenomena, properties and processes of the social world that is available to it, i.e. the level of sensitivity of the scale to phenomena included in the subject of sociological research. At the same time, any more “strong” scale includes the possibilities of a more “weak” one. With such subordination, the types of scales are arranged in descending order: from the “strongest” -nominal, to the “weakest” -scale of relations.

The concept of “scale” in the theory of humanitarian measurement is also becoming more meaningful: a scale is a certain set of values of any property of the measured objects.

The choice of one or another type of scale in the development of sociological tools is a highly creative matter, requiring high professionalism and inherently close to art. There are no pre-correct recipes like these: “A five-term scale is better than a three-term scale,” etc. There are many theoretical and empirical rules that help the sociologist to cut off obviously unacceptable options, but the final choice of the type and structure of the scale is always made by himself. How he does it is a subject beyond the scope of this topic.

To summarize, we emphasize that when carefully considering the specifics of the sociological dimension, a complex of extremely important problems of obtaining knowledge as such is realized. It is revealed, in particular, that the processes underlying the acquisition of sociological knowledge are much more fundamental than those that occur in the natural sciences.

The world that is directly given and obvious to a person, in which he has lived and will always live, which his eyes contemplate, his hands feel, is made up of qualities: color, smell, sounds, elasticity, etc., this world cannot be reproduced without significantly distorting the meaning and impoverishing the content only through rational logical operations and constructions and/or using quantitative measuring scales. We face this literally at every step, in any, even the simplest situations. In order, for example, to perceive and feel this particular color, a person must see it. No amount of precise and detailed quantitative characteristics of its physical properties can give an adequate idea of it for a person who is blind from birth. Attempts by followers of natural science concepts to overcome this feature of the social world inevitably lead them to divide it into two parts: an illusory world obeying strict quantitative or non-strict, but empirically computable statistical laws, and a world that really surrounds us and which is full of charm and charm of uncertainty and mystery. And it

is this world of colors and sounds, of other people, that continues to be real to us.

Researchers of social processes should get rid of a peculiar complex of inferiority caused, as it seems to them, by the annoying circumstance that they have to use nominal “weak” scales rather than convenient metric standards. As follows from the above, it is the nominal scales that are the main and main tool of sociological cognition. Instead of expecting from mathematicians and engineers some perfect measuring structures, which, as long-term experience shows, in practice turn out to be nothing more than fleeting sensations or hypothetical abstractions, sociologists should vigorously engage in improving their own measuring arsenal. There are extremely many problems here. For example, the dependence of the content of sociological knowledge on the form of the questions asked to respondents and the methods of interpretation of the answers received. Sociologists have known for a long time that such a problem exists, but it has not been studied enough.

Researchers should clearly understand that the social dimension is primarily a meaningful, rather than a mechanical or mathematical procedure, combining first of all qualitative and only then quantitative analysis. They should firmly know that there are no universal measuring standards for determining the intensity of the manifestation of the properties of social processes, and that every social measurement begins with determining its ultimate goal. The fact is that a sociologist, changing the goal, does not have the right to use those tools and measurement results that were carried out for other purposes. Numerical fetishism, mathematized measuring constructs inevitably distort and replace the actual goals of studying social processes with their incomplete, deformed representation: if mathematical accuracy is ensured by strict compliance with the requirements of formal logical transformations, then the accuracy of sociological research materials, like any humanitarian science, is the correspondence of the received meaningful conclusions to the actual state of affairs.

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## Conflicts of interest

The author has no conflicts of interest to declare that are relevant to the content of this article.

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