

The Meaning-Based Assessment of Personality Tendencies

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Abstract

The paper presents a new approach to the assessment of personality traits based on the theory and methodology of meaning. Meaning consists of contents and processes involved in the psychological domains of cognition, emotions, personality, behavior and physiology. On the basis of a large body of empirical data, it is defined as a referent-centered pattern of meaning values, whereby the referent is the carrier of meaning and the meaning values are the assigned meanings. Meaning assessment is done in terms of five sets of meaning variables characterizing the contents, relations, structure and mode of expression of the meaning. Any communication or statement can be analyzed in terms of the five sets of meaning variables. The meaning variables characterizing the meaning communications of an individual in response to the stimuli used in the Meaning Test constitute the individual's meaning profile. The correspondences between the individuals' meaning profiles and the scores on standard personality questionnaires enable defining the meaning profiles of the personality traits. Each trait corresponds to a unique pattern of meaning variables. Matching the meaning profiles of the individual and of the specific trait provides the individual's score of the trait even without administering the actual trait questionnaire to the individual. The methodologies of defining the meaning profiles are done on a computer program (Kreitler-meaningsystem.tau.ac.il). The following are the main advantages of the meaning-based trait scores: they are valid; they are correlated significantly with the scores based on standard questionnaires; they are not based on self-report; they provide cheap and easily applied means of scoring; they include a lot of information about the trait beyond the score itself; they provide insight into the manner in which the trait functions; they enable comparing traits, and they provide means for identifying traits and differentiating between traits and other personality tendencies. Future research will focus on improving the precision and range of application of the methodology.

Keywords

Meaning, Personality Traits, Assessment, Self-Report, Meaning Test, Meaning Profile, Meaning Variables, Meaning Value, Referent, Meaning Unit, Meaning System, Meaning Dimensions, Types of Relation, Forms of Relation, Forms of Expression, Referent Shifts, Conflicts

1. Introduction

Advantages and disadvantages of self-report measures. Personality tendencies include a great variety of constructs. The major ones are personality traits, but there are several additional ones that do not go under this venerable title, such as personality tendencies, types, concepts, constructs and defenses. However, they all share the preferred form of assessment which is self-report questionnaires.

The advantages of the self-report questionnaires are evident, widely known and generally appreciated. These tools are easily available, are cheap and are familiar to the researchers and the subjects. They are simple for administration, can easily be administered digitally and coded automatically with minimal involvement of the experimenter in the process of administration, coding and interpretation of the results. Moreover, they may be used in regard to behaviors that are not normally open to external observation.

But there is also a catch in this enticing presentation. It refers to the outcome of the whole process. The status of the information provided by the self-report questionnaires is unclear. There is a growing body of findings that shed doubt on the accuracy and quality of the information provided by self-report measures about the actual state of things, in regard to behavior and other psychological processes, such as emotions or cognitive acts. Factors that have been identified as reducing the construct validity of self-report measures in a great variety of domains include lack of understanding of the assessed issues, missing information about these issues, lack of desire or interest to report accurately, failing memory and lack of motivation in memory recall (Baranowsky, 1988), social desirability, fear of reprisal if the truth is stated, a tendency to match the report with ones' attitudes (Barr, 2007), and replacing facts with behavioral intentions (Lee, 1993) or wishes. In some cases, such as health behaviors (Kreitler, 2022c), the quality of the information is too low to support the construction of theories or devising intervention projects (Kormos & Gifford, 2014).

The conclusion is that the dominant assessment method of assessing personality tendencies by self-report measures is insufficient, especially since it does not provide reliable information about the actual manifestations of the assessed constructs. The list of the different shortcomings of the self-report measures inspires the attempt to examine additional options for assessing personality. In view of the dominant role of personality traits in the arena of the manifestations

of personality, personality traits were chosen as the focal theme of this paper (Fajkowska & Kreitler, 2018).

Personality traits as the goal of the assessment of personality. Personality traits offer a good location for dealing with assessment methods because of their central position in regard to personality specifically and psychology in general. There is a broad range of psychological manifestations that appear in the definitions of personality traits. The recurrent components are behavior tendencies, and habitual patterns of thought or cognition and of emotional responses (Funder, 2010; Kassin, 2003; Mischel, Shoda, & Smith, 2004). These variables are also emphasized in the APA dictionary of psychology (American Psychological Association, 2015), which defines a personality trait as a relatively stable, consistent, and enduring internal characteristic that is inferred from a pattern of behaviors, attitudes, feelings, and habits in the individual.

In view of the definitions of personality traits, proposing a new method of assessment requires determining what could be the nature of traits if they are not behaviors or emotions or attitudes but are somehow related to all of these. The answer that is proposed in the present paper relates personality traits to the sphere of meaning. This answer includes an innovative theoretical approach and serves as the basis for a new method of assessment of personality that is not based on self-report. In addition, this method of assessment has further advantages that are not shared by many other methods of assessment (see Advantages of Meaning-based Scoring of Personality Traits).

The definition of traits in terms of meaning. Traits are defined as *patterns of meaning assignment tendencies*. This definition of traits was suggested first in the book entitled *The Cognitive Foundations of Personality Traits* (Kreitler & Kreitler, 1990) and later elaborated theoretically and applied methodologically in further studies and publications (e.g., Kreitler & Kreitler, 1992, 1993, 1997; Kreitler, 2003, 2005, 2018, 2019). Traits were assumed to be related to meaning because meaning is a major construct with multiple verbal and nonverbal manifestations, involved in many psychological domains, such as cognition, emotions, and attitudes. For example, an emotion such as fear is evoked when the meaning of the situation is grasped as dangerous or threatening; an attitude like “war should be avoided” is based on the meaning of war which demonstrates its negative character; and a cognitive act like a decision of where to go for a vacation requires considering the meanings of vacation and of the different places (Kreitler, 2022a, 2022b).

There are several reasons for assuming that personality traits are related to meaning. One reason is that the two constructs share several basic manifestations, such as cognitions and information. Another consideration is that meaning is an important factor that is involved in evoking or shaping several of the manifestations of personality traits, mainly emotions, behaviors and attitudes. A third consideration is that the functioning of traits is often flexibly attuned to changing contexts which requires considering the meanings of the contexts. Finally, an important finding that supported the following studies about the mean-

ing-based approach to traits was that the set of meaning assignment tendencies corresponding to each trait is a unique pattern.

2. Meaning and Its Assessment

What is meaning? The background assumptions. Meaning has been defined in so many different ways in various disciplines that it is necessary to redefine it in the present context so that it can be applied theoretically and methodically in the framework of psychology. The suggested definition of meaning is the result of a large empirical investigation based on the following assumptions. First, meaning is communicable because most of the meanings we know and use have been learned from others. Second, meaning includes a part that is interpersonally shared and another part which is more personal and private. Third, meaning may be expressed both verbally and through non-verbal means. Fourth, meaning is a complex multi-dimensional construct because it develops slowly absorbing components from different sources.

These assumptions have enabled shaping the methods for collecting and coding data in regard to meaning, which has led to a new methodology for its assessment. The data consisted of responses of several thousands of subjects differing in age (2 to over 90 years), gender, education and cultural background who were requested to communicate the interpersonally-shared and personal meanings of a great variety of verbal and non-verbal stimuli, using any means of expression they considered adequate.

The definition of meaning. On the basis of the empirical data and theoretical considerations, the meaning was defined as *a referent-centered pattern of meaning values*. In this definition, the referent is the input, the carrier of meaning, which can be anything, such as a word, an object, a situation, an event, or even a whole period, whereas meaning values are cognitive contents assigned to the referent for the purpose of expressing or communicating its meaning. For example, if the referent is “Table”, responses such as “made of wood” or “stands in a room” or “a piece of furniture” are three different meaning values. The referent and the meaning value together form a meaning unit (e.g., Table—a piece of furniture) (Kreitler & Kreitler, 1990). The presented definition shows that meaning consists of cognitive contents structured in a specific manner and fulfilling a specific function.

The sets of meaning variables. The meaning system. The assessment of meaning is based on characterizing the meaning values in terms of the following five kinds of meaning variables, which describe the contents, the structural features and expressive mode of the meaning. 1) **Meaning Dimensions**, which characterize the contents of the meaning values from the viewpoint of the specific information communicated about the referent, such as the referent’s Sensory Qualities (e.g., Snow—white), Feelings and Emotions it experiences (e.g., Mother—loves her child) or evokes (e.g., Darkness—fear), Range of Inclusion (e.g., Body—the head, arms, and torso); 2) **Types of Relation**, which character-

ize the immediacy of the relation between the referent and the cognitive contents, for example, attributive (e.g., Summer—warm), comparative (e.g., Spring—warmer than winter), exemplifying instance (e.g., Country—Britain); 3) **Forms of Relation**, which characterize the formal regulation of the relation between the referent and the cognitive contents, in terms of its validity (positive or negative; e.g., Yoga—is not a religion), quantification (absolute, partial; e.g., Apple—sometimes red), and status (factual, desired or desirable; e.g., Law—should be obeyed, Happiness—I wish I had more); 4) **Referent Shifts**, which characterize the relation between the referent and the original or former input, for example, the referent may be identical to the input or the previous referent, it may be its opposite (e.g., Day—night is for sleeping), or a part of it (e.g., Day—morning is a nice time), or even apparently unrelated to it; 5) **Forms of Expression**, which characterize the forms of expression of the meaning units (e.g., verbal, denotation, graphic) and its directness (e.g., actual gesture or verbal description of gesture) (Kreitler, 2014, 2015, 2022a, 2022b; Kreitler & Kreitler, 1990).

There is a separate set of meta-meaning variables, which characterize the attitude of the respondent toward the meaning of the communication (e.g., it is incomplete, it is a quotation, it is a metaphor), but it is not included in the assessment of meaning (see **Table 1** for the full list of meaning variables a-e).

Together the five sets of variables constitute the system of meaning. The list of variables is comprehensive in the sense that it includes many of the variables proposed by other investigators for the assessment of meaning, definitions of meaning, and different kinds of meaning in the framework of various disciplines. These serve as support for the theoretical validity of the meaning system.

Assessment of meaning. Any meaning material may be considered as a meaning statement which can be assessed, regardless of its origin, its purpose, its intent, its communicator, its receiver and its mode of presentation. A meaning statement may be a story, a letter, an abstract construct, a film, a game, etc. Meaning assessment consists in analyzing meanings in terms of the meaning variables that constitute the meaning system. The process of meaning assessment consists in first formulating the material in the form of meaning units, each of which consists of a referent and a meaning value. Then each unit is characterized in terms of the meaning variable: it is coded on one meaning dimension, one type of relation, one form of relation, one referent shift and one form of expression. For example, when the referent is “Airplane” and the meaning value is “has a motor”, the coding on meaning dimensions is Range of Inclusion, on Types of Relation—attributive, on Forms of Relation—positive, on Referent Shifts—identical to input, and on Forms of Expression—verbal. Summing the codings in each set of meaning variables across all meaning units in the given meaning statement yields a profile representing the frequencies with which each meaning variable has been applied in that meaning statement. The overall summary of frequencies of meaning variables in the given statement of meaning is called the meaning profile of that statement.

Table 1. Major variables of the meaning system: The meaning variables.

| <u>MEANING DIMENSIONS</u> | | <u>FORMS OF RELATION</u> | |
|--------------------------------------|---|----------------------------|--|
| Dim. 1 | Contextual Allocation | FR 1 | Propositional (1a: Positive; 1b: Negative) |
| Dim. 2 | Range of Inclusion (2a: Sub-classes; 2b: Parts) | FR 2 | Partial (2a: Positive; 2b: Negative) |
| Dim. 3 | Function, Purpose and Role | FR 3 | Universal (3a: Positive; 3b: Negative) |
| Dim. 4 | Actions and Potentialities for Actions (4a: by referent; 4b: to referent) | FR 4 | Conjunctive (4a: Positive; 4b: Negative) |
| Dim. 5 | Manner of Occurrence and Operation | FR 5 | Disjunctive (5a: Positive; 5b: Negative) |
| Dim. 6 | Antecedents and Causes | FR 6 | Normative (6a: Positive; 6b: Negative) |
| Dim. 7 | Consequences and Results | FR 7 | Questioning (7a: Positive; 7b: Negative) |
| Dim. 8 | Domain of Application (8a: as subject; 8b: as object) | FR 8 | Desired, wished (8a: Positive; 8b: Negative) |
| Dim. 9 | Material | | <u>SHIFTS IN REFERENT^b</u> |
| Dim. 10 | Structure | SR 1 | Identical |
| Dim. 11 | State and Possible change in it | SR 2 | Opposite |
| Dim. 12 | Weight and Mass | SR 3 | Partial |
| Dim. 13 | Size and Dimensionality | SR 4 | Modified by addition |
| Dim. 14 | Quantity and Mass | SR 5 | Previous meaning value |
| Dim. 15 | Locational Qualities | SR 6 | Association |
| Dim. 16 | Temporal Qualities | SR 7 | Unrelated |
| Dim. 17 | Possessions (17a) and Belongingness (17b) | SR 8 | Verbal label |
| Dim. 18 | Development | SR 9 | Grammatical variation |
| Dim. 19 | Sensory Qualities ^c (19a: of referent; 19b: by referent) | SR 10 | Previous meaning values combined |
| Dim. 20 | Feelings and Emotions (20a: evoked by referent; 20b: felt by referent) | SR 11 | Superordinate |
| Dim. 21 | Judgments and Evaluations (21a: about referent; 21b: by referent) | SR 12 | Synonym (12a: in original language; 12b: translated in another language; 12c: label in another medium; 12d a different formulation for the same referent on the same level) |
| Dim. 22 | Cognitive Qualities (22a: evoked by referent; 22b: of referent) | SR 13 | Replacement by implicit meaning value |
| <u>TYPES OF RELATION^a</u> | | <u>FORMS OF EXPRESSION</u> | |
| TR 1 | Attributive (1a: Qualities to substance; 1b: Actions to agent) | FE 1 | Verbal (1a: Actual enactment; 1b: Verbally described; 1c: Using available materials) |
| TR 2 | Comparative (2a: Similarity; 2b: Difference; 2c: Complementariness; 2d: Relationality) | FE 2 | Graphic (2a: Actual enactment; 2b: Verbally described; 2c: Using available materials) |
| TR 3 | Exemplifying-Illustrative (3a: Exemplifying instance; 3b: Exemplifying situation; 3c: Exemplifying scene) | FE 3 | Motoric (3a: Actual enactment; 3b: Verbally described; 3c: Using available materials) |

Continued

| | | | |
|------|---|------|--|
| TR 4 | Metaphoric-Symbolic (4a: Interpretation; 4b: Metaphor; 4c: Symbol) | FE4 | Sounds and Tones (4a: Actual enactment; 4b: Verbally described; 4c: Using available materials) |
| | | FE 5 | Sensory (5a: Actual enactment; 5b: Verbally described; 5c: Using available materials) |
| | | FE6 | Denotative (6a: Actual enactment; 6b: Verbally described; 6c: Using available materials) |
| | | FE 7 | Visual media (7a: Actual production; 7b Verbally described; 7c: Using available materials) |

Note. Dim. = Meaning dimension; TR = Types of relation; FR = Forms of relation; FE = Forms of expression; SR = Shifts of referent. ^a Modes of meaning: Lexical mode: TR1 + TR2; Personal mode: TR3 + TR4; ^b Close SR: 1 + 3 + 9 + 12 Medium SR: 2 + 4 + 5 + 10 Distant SR: 6 + 7 + 8 + 11 + 13; ^c This meaning dimension includes a listing of subcategories of the different senses/sensations: [for special purposes they may also be grouped into “external sensations” and “internal sensations”] e.g., color, form, taste, sound, smell, pain, humidity and various internal sensations.

The Meaning Test. Stimuli and instructions. In order to get information about the characteristic tendencies of an individual to use certain meaning variables, it is advisable to assess the meaning communications of the individual in response to specific pretested stimuli, preferably the Meaning Test.

The 11 standard stimuli used for this purpose constitute the Meaning Test. The stimuli are street, bicycle, life, to create, feeling, to take, to kill, friendship, art, sea (ocean), and telephone. There are three parallel sets of these stimuli for adults and three different sets for children (2 - 10 years of age). The stimuli used in the Meaning Test have been selected after lengthy empirical testing as those that together provide the possibility of using all the meaning variables in the meaning system. The standard instructions ask the subjects to communicate the general (interpersonally-shared) and personal (subjective) meanings of these stimuli to someone who does not know the meanings, using any means of expression they consider adequate. Responses can be given orally or in written form in a face-to-face interviewing session or digitally, in any language or non-verbal form without any limitation. Responses that are sung or danced can be recorded, as well as drawings or films or photographs.

The individual's meaning profile. Coding the meanings produced in response to the stimuli of the Meaning Test in terms of the meaning variables yields the *individual's meaning profile*. It presents a summary of the frequency with which the subject used each of the meaning variables in all five sets of the variables described above, across all 11 stimulus words in the test (for further details of the coding procedure see “*Constructing the meaning profile of a personality trait when none is available*”).

Changing raw scores to proportions. In order to get a veridical conception of the relative strength of the meaning variables in the individual's meaning profile, the raw scores are turned into proportions of the total number of responses in the meaning profile. Thus, for example, if the number of responses representing

Locational qualities is 5, the relative strength may be assumed to be high when the total number of responses is 10, but it is low when the total number of responses is 100.

The meaning profiles of groups. Similar principles applied in regard to an individual's meaning profile are also relevant in regard to constructing the meaning profiles of groups. In this context, a group is defined, for example, in terms of demographic characteristics (e.g., age, gender, cultural background, ethnic origin, profession, education), attitudes and beliefs (e.g., different political ideologies, religion), health states, behaviors, or responses to questionnaires). The meaning profile of a group represents the means of the frequencies of responses in the different meaning variables of members of the group who have responded to the Meaning Test. The meaning profile of a group may be of interest in order to characterize it as such or in order to compare it with the meaning profiles of other groups.

Similarly, the overall summary of frequencies of meaning variables may apply to any construct whose meaning was assessed. It is then called the meaning profile of that specific construct and may be compared to the summaries of other constructs.

The information provided by meaning variables. Meaning variables represent cognitive contents and processes of different kinds. Thus, the meaning dimensions represent contents referring, for example to sensory qualities, time, place, structure, size and dimensions, quantity, actions; the types of relation represent relations based, for example, on comparisons or metaphors; forms of relation represent relations, such as conjunction, disjunction, normative or desired; referent shifts represent relations between the referent used by the respondent and the presented input, for example, identical or opposite.

Thus, if the meaning dimension Locational Qualities appears in an individual's meaning profile with high frequency, this indicates that the individual notices locations readily, remembers locations easily, considers locations in problem solving, and scores high on a test of mazes. Similarly, if the meaning variable of metaphors has a high frequency in the meaning profile of an individual, that individual is likely to perceive metaphors, reason in terms of metaphors, understand them in the contexts of art, and solve problems by means of metaphors and so on. However, when a specific meaning variable appears in the individual's meaning profile with low frequency, it is likely that the individual will find it difficult to function with the processes represented by that meaning variable.

Each meaning variable represents a range of contents and processes. These are manifested in some cases in a static manner, as descriptive of presented texts or communications, and in other cases in a dynamic form, as descriptive of processes and functional applications. Thus, the meaning dimension of Structure may be applied for the description of the structure of a given input, such as a narrative or piece of music, while in other cases it may be applied as a process that is designed to reflect the manner in which a certain idea in a specific form has been structured.

There are no limitations in regard to the domains in which the manifestations of the meaning variable may appear, which can include cognition, emotions, behavior, personality traits and even physiology. Thus, a meaning variable such as Temporal Qualities may affect solving problems concerning time, planning in terms of time, controlling one's emotions temporally, and attending to physical stress responses showing up in specific time intervals.

Each meaning variable that is included in the meaning profile of an individual provides a lot of information. However, the meaning profile includes a great number of meaning variables which implies that the amount of provided information may be thereby increased. The increase is not merely quantitative but also qualitative because the information provided by the different meaning variables undergoes integration and specification in the setting of the multiple varied manifestations of different meaning variables. Thus, the interactions and other relations between the different meaning variables in the profile suggest which combinations of contents are possible and likely as well as which replacements are likely in problem solving, emotional manifestations, conflict resolutions and behavioral intentions.

For example, when the issue is enhancing control, the frequencies of the meaning variables in one's meaning profile may suggest controlling by actions, or by emotions, or by possessions, depending largely though not exclusively on the frequencies of the respective meaning variables. Another example refers to the chances of evoking and resolving conflicts. The meaning variables with high frequencies in the profile are more likely to define conflict domains than those with low frequencies. The likelihood and structure of the conflicts are also affected by the forms of relation, e.g., they may be lowered by a high frequency of conjunction, or increased by a high frequency of disjunction, and are often shaped by gaps such as between the desirable and the normative forms of relation.

3. Meaning-Based Assessment of Personality Traits

Scoring of personality traits in terms of meaning variables. The basic procedure. Scoring personality traits in terms of meaning variables is based on the finding that each personality trait corresponds to a unique pattern of meaning variables. Namely, each personality trait corresponds to a unique meaning profile. The scoring methodology consists in comparing the meaning profile of the individual with the meaning profile of the specific personality trait. The comparison is made in terms of the number of meaning variables in the positive or negative relations shared by the two meaning profiles. In operational terms, the question leading to assigning a score on the personality trait to an individual is the following: What is the correspondence between the individual's meaning profile and the meaning profile of the specific personality trait.

The criteria for scoring. The criteria for comparing the meaning profile of the individual with the meaning profile of the personality trait are based at

present on five levels of scores. Each level is defined by the degree of shared meaning variables in the same direction (i.e., positive or negative) by the two meaning profiles. The first level is defined by sharing 0% - 20% of the meaning variables in the two meaning profiles, the second level by sharing of 21% - 40% of the meaning variables, the third level by sharing of 41% - 60% of the meaning variables, the fourth level by sharing of 61% - 80% of the meaning variables, and the fifth level by sharing of 80% - 100% of the meaning variables in the two meaning profiles.

The requirements for the scoring: The availability of the individual's meaning profile. It needs to be emphasized that assigning a score on the personality trait to the individual does not require administering to the individual the personality questionnaire of the trait. There are only two things that are necessary for the scoring. These are the individual's meaning profile and the meaning profile of the specific personality trait.

The individual's meaning profile is based on the administration of the meaning test to the individual at some point in the past and the coding of the responses in the test so that there exists a meaning profile of the individual. The meaning profile can represent responses to the meaning test at some point in the past, regardless of how long ago, as long as it is based on a test provided in one's adult years. The same meaning profile of the individual may be used for scoring any number of different personality traits.

The meaning profile of the personality trait can be retrieved from available stored materials, based on previous studies (see next paragraph). The same meaning profile of the personality trait can be applied in regard to any number of individual meaning profiles.

The meaning profile of the personality trait. There are three possibilities regarding the availability of the meaning profile of a personality trait. One possibility is that the meaning profile already exists because it has been defined on the basis of previous studies and needs only to be retrieved from an adequate computer file. This possibility is the most desired one and the easiest one. It applies at present to over 300 personality traits and tendencies that have been examined in the past.

A second possibility is similar to the first mentioned one. It consists in applying meaning profiles of traits based on previous studies, but checking their adequacy by at least one new study. Checking adequacy may be advised or necessary in case there is a reason to assume that the available meaning profile is based on information that differs from the relevant or required one, for example, in terms of culture or time.

A third possibility applies when there is no information about the meaning profile of the personality trait or tendency in which one is interested. In that case, it is necessary to do the empirical work required for defining the meaning profile of the personality trait.

Constructing the meaning profile of a personality trait when none is available. The procedure consists of several steps.

Step 1: Administering the Meaning Test and a valid standard questionnaire for the assessment of the personality trait in which one is interested in a sample of individuals representing the standard population in terms of age, gender, occupation and other relevant characteristics.

Step 2: Analyzing the responses to the meaning test of each individual in the sample in terms of the meaning system. This is done in the following manner: the response to each input is partitioned into units which consist of one referent and one meaning value. For example, a response like “House—a building for people” represents two separate meaning units: “House—a building” and “A building—for people”. These units are characterized in terms of the five sets of meaning variables, namely, each unit is assigned one meaning dimension, one type of relation, one form of relation, one referent shift and one mode of expression. The analysis of each unit is independent of the other units. The analysis is done by a computer program which includes precise instructions for analyzing the responses, with examples and tutorials (Kreitler, 2020).

When all the units have been analyzed, the different responses in each variable of each of the five kinds of meaning variables are summed. For example, in regard to meaning dimensions the summed responses are in regard to each of the meaning dimensions separately. When no responses for any variable are available, the sum equals zero. The summaries are done separately for each of the five sets of meaning variables. The totals for each of the sets are identical. The total of the responses is used for turning the frequencies of the responses in the variables into proportions out of the total. Thus, the specific number of the response of a specific kind is evaluated in terms of the sum total of the responses of all units in the framework of the meaning profile. The result of the described analysis is the meaning profile of a single individual.

Step 3: The meaning profiles of the different individuals in the sample are combined into a group’s meaning profile by computing the means of all the meaning variables in the meaning profiles of all the individuals in the sample. Thus, in the group’s meaning profile the score for a meaning variable such as metaphors represents the mean of the responses referring to metaphor in all the meaning profiles of the individuals in the sample.

Step 4: The fourth step is devoted to identifying the meaning profile of the personality trait. This is done in the following manner: the meaning variables in the group’s meaning profile are correlated with the score of the personality trait on the questionnaire. The meaning variables that are correlated significantly with the score of the trait are considered potential components of the meaning profile of the trait. Before they can be identified as actual components of the meaning profile of the trait, it is necessary to apply the Bonferroni criterion in view of the large number of variables involved in the computations. Alternately, the correlations can be replaced by t-tests comparing the means in the meaning variables above and below the mean of the trait’s score. Again, the candidates for the meaning profile of the trait are considered as those meaning variables whose comparisons yield significant results, considering the Bonfer-

roni criterion.

Notes about possible variations: Using several questionnaires or scales for the same trait. In order to increase the validity and reliability of the identified meaning profile of a personality trait, it is advisable to use more than one questionnaire of the personality trait if available. In that case, each of the traits assessed by the different questionnaires of the same personality trait is correlated with the meaning variables of the individuals in the sample. In each set of correlations, the significant correlations are selected, considering the Bonferroni criterion. The results in the different sets of correlations are compared. The meaning profile of the personality trait is eventually defined in terms of the meaning variables that are correlated significantly and in the same directions (positive or negative) in all the sets. This procedure was applied for the meaning profile of extroversion (Kreitler & Kreitler, 1990) and anxiety (Kreitler, 2017; Kreitler & Kreitler, 1985).

Notes about possible variations: Using evaluations or observations when no questionnaires are available. In some cases, there is no valid standard questionnaire for assessing the personality trait or tendency in which one may be interested. Such cases may appear in regard to behaviors that represent multiple tendencies or the effects of different characteristics developed in specific environments, such as managerial behavior in another culture. In cases of this kind, it is possible to circumvent temporarily the absence of a standard questionnaire for assessing the personality trait or tendency and replace it with evaluations of observers or others who are well acquainted with the behavior in question. The means of the evaluations may be used to represent the personality tendency if they prove to have reliability.

Summary of the procedure of the meaning-based scoring of a personality trait. There are two prerequisite conditions in order to determine the score of a specific individual on a specific personality trait. One is the meaning profile of the individual or the individuals whose scores on the particular personality trait are to be determined. The other is the meaning profile of the personality trait whose scores for the particular individuals are to be determined.

As mentioned above, the meaning profiles of the individual or individuals whose scores on the trait are to be determined may be available and retrieved from stored files. The same meaning profile of an individual may be applied to determining many different personality traits or other tendencies. If the meaning profile is not already available, it is necessary to administer to the individual the Meaning Test and analyze the responses so as to obtain the individual's meaning profile. This meaning profile can then be stored for future recurrent applications.

The meaning profile of the personality trait can be retrieved from the file in which it is stored. As noted above, if it is not available it needs to be identified on the basis of one or more new studies. It can then be stored for application on future occasions.

When the meaning profile of the individual and the meaning profile of the

personality trait is available, the last step that needs to be performed is comparing the two profiles with the intent of determining the number of shared meaning variables, whereby shared means that the same variables appear and in the same direction, namely, positive or negative. The numbers of shared meaning variables are evaluated in terms of percentages, which are compared to the criteria presented in **Table 2**, and converted to scores of the personality trait. The whole procedure of profile comparisons is computerized, but can also be done manually.

Validating the meaning-based scores of personality traits. The major method of validating the meaning-based scores of personality traits is based on correlating the scores of the personality traits assigned independently on the basis of the corresponding meaning profiles of the individuals and on the basis of a standard personality questionnaire. Examples of results refer to sets of inventories and to single traits. For example, the correlations between the meaning-based and questionnaire-based scores for the 16 personality factors of Cattell's 16 Personality Factors test were in the range of .66 - .94, all significant, with a mean of .74 (Kreitler & Kreitler, 1990); for the 18 scales of the California Personality Inventory (CPI) the correlations were in the range of .27 - .79, with a mean of .50 (all significant, except in the case of one scale Re) (ibid, pp. 298-299); for the four scales of the Myers-Briggs, the correlations were in the range of .69 - .80, with a mean of .76 (all significant) (ibid, pp. 298-299). For validation studies of other personality traits see Kreitler and Kreitler (1990, 1997) and Kreitler (2002, 2008, 2013); Kreitler (2022b, Chapter 15).

Different examination checks were done concerning possible variables that could affect the relations between meaning variables and personality traits, such as preferences for certain meaning variables or attitudes. However, these studies did not provide any significant results (Kreitler & Kreitler, 1990).

4. Advantages of Meaning-Based Scoring of Personality Traits

1) **Trait assessment—broader and at a reduced cost.** One salient advantage of the meaning-based scoring is that it enables using the same meaning profiles

Table 2. The criteria for scoring a personality trait on the basis of meaning variables shared by the individual's meaning profile and the meaning profile of the personality trait.

| Percentage of shared meaning variables | Trait's score in verbal terms | Trait's score in numerical terms |
|--|-------------------------------|------------------------------------|
| 0% - 20% | Very low | Mean $-2\frac{1}{2}$ SD to -3 SD |
| 21% - 40% | Low | Mean $-1\frac{1}{2}$ SD to -2 SD |
| 41% - 60% | Moderate | Mean $\pm\frac{1}{2}$ SD |
| 61% - 80% | High | Mean $+1\frac{1}{2}$ SD to $+2$ SD |
| 81% - 100% | Very high | Mean $+2\frac{1}{2}$ SD to $+3$ SD |

corresponding to personality traits for assigning scores of a large actually unlimited number of personality traits, provided that their meaning profiles are defined, and to an infinite number of individuals, provided that their meaning profiles are available.

This description implies that the same reservoir of responses by individuals can be used repeatedly for scoring personality traits, including those whose meaning profiles have been identified originally in that file as well as those that may have been identified in later stages and inserted into that same file. Moreover, individuals may get scores on an endless number of personality traits, without having ever responded to the personality questionnaires designed to assess these traits.

This enables a very broad usage of the meaning files of the group and of the individual. It means that the procedure of scoring personality traits becomes increasingly easier, faster and cheaper, as its basis becomes broader and increasingly comprehensive in terms of functions and recurrent uses. Hence, the suggested meaning-based methodology reduces the costs of administering, coding and scoring of personality traits.

2) *Reduced load for the individual respondent.* From the point of view of the individual subject, meaning-based scoring is highly efficient and beneficial because it saves the individual the trouble of responding to a great number of personality inventories, which may become with time a boring and oppressive task.

Limiting the load of responding to questionnaires is likely to increase the reliability and probably also the validity of the scores of personality traits that will be freed of responses based on boredom, irritation and sometimes even inattention, which can hardly be avoided when individuals try to respond to a great number of questionnaires administered to them.

3) *The information provided by the meaning-based score is NOT based on self-reports.*

This is a big advantage of the meaning-based score because it may be expected to be free of memory and presentation biases, ranging from social desirability to limited self-awareness. Mainly, the information is not shaped in any way by what the individuals would like to present about themselves or what they believe to be true about themselves.

4) *The information provided by the meaning-based score can be readily compared with that presented by the originally assessed personality trait.* This becomes evident through the significant correlations between the meaning-based and questionnaire-scored personality traits. Hence, it seems that the meaning-based score provides the same information as the original score devoid of the weaknesses and faults of the latter.

5) *The meaning-based score provides a lot of information that is not provided by the original questionnaire score.* This information is provided by the meaning variables included in the meaning profile of the personality trait. For example, the meaning profile of extroversion in the NEO-PI (Kreitler, 2013),

shows emphasis on concrete aspects of external “objective” reality (i.e., size, quantity, material, actions, possessions and belongingness) but low on aspects of inner life (i.e., inner sensations, feelings, beliefs and evaluations, fantasy and metaphors). Notably, it includes high scores on the sensory qualities of external objects but low scores on internal sensations. The latter may be responsible for the high threshold for pain observed in extroverts and for their salient sensation seeking for experiences because few and weak experiences are insufficient (see [Kreitler & Kreitler, 1990](#)).

Another example concerns openness to experience. The meaning profile of this trait presents a highly rich and differentiated pattern characterized by emphasis both on external reality - it includes the meaning variables of size, and material, as well as the humanly-relevant aspects of temporal and locational qualities and mainly in regard to who or what is involved in the situation; as well as on internal reality (i.e., sensations, emotions, cognitions), coupled with a de-emphasis on judgments and evaluations, and supported by a variety of forms of relation, types of relation and referent shifts.

Thus, the provided information is rich and precise, highlighting the characteristic tendencies of each personality trait, emphasizing its uniqueness and the specific features that define it.

6) *The contribution of meaning-based scores to trait validation: Validation-by-meaning.* The conventional procedure for validation of trait scores consists of testing correlates of the trait that seem likely on the basis of theoretical and methodological considerations. This methodology may be further extended by the suggested validation-by-meaning. It consists in examining the manifestations of traits in domains defined by the meaning variables in the meaning profile corresponding to the trait. For example, the fact that the meaning profile of neuroticism includes low scores on the meaning dimensions of Temporal Qualities and Actions suggests the need to examine the validity of precisely these correlates in order to increase understanding of this personality trait ([Kreitler, 2013](#)). Validating-by-meaning is likely to contribute to turning trait validation into a more broad-ranging, comprehensive, theoretically-based and systematic procedure.

7) *Meaning-based scores provide insight into the dynamics of the trait's functioning.* The patterns of meaning variables corresponding to a trait provide insight into the unique underlying dynamics of the trait, describing the manner in which the trait functions. For example, the meaning profile of conscientiousness includes a relatively low number of meaning dimensions and a high number of variables representing types of relationships and forms of relation ([Kreitler, 2013](#)). This may suggest that the high scorers focus on formal ways of thinking and understanding issues, such as conjunctive, disjunctive, and normative, considering the results, causes, functions and judgments and evaluations while disregarding more concrete and exemplifying aspects of situations. Social desirability offers another example. One often wonders whether the high scorers are interested primarily in evoking affection or good evaluation. Examining the

meaning profile of social desirability shows that it includes the meaning variable of judgments and evaluations but not that of feelings and emotions, which indicates clearly that the target is evaluation rather than affection (Kreitler & Kreitler, 1990: pp. 257-260).

8) *Meaning-based scores improve the comparison of personality traits, enabling identifying the nature of similarity between traits.* Comparison of traits is often made by correlating the scores of the traits. The correlation coefficient is undoubtedly informative concerning the similarity of the traits but a comparison of the traits may be extended by comparing the meaning variables shared by the meaning profiles of the compared traits. Thus, for example, the correlation coefficients between the two following pairs of traits are identical: cleanliness and punctuality ($r = .56$) and cleanliness and authoritarianism ($r = .56$) (Kreitler & Kreitler, 1990, Study 9, Study 13). However, examining the meaning profiles of the correlated traits shows that the two pairs of traits include different shared meaning variables: cleanliness and punctuality share the meaning dimensions state, quantity and size, whereas cleanliness and authoritarianism share the meaning dimensions of judgments and evaluations, cognitive qualities and structure, and the type of relation metaphors. Examining the relevant meaning profiles sheds light on the specific similarities and differences between the compared traits.

By the same token, analyzing the meaning profiles of factors based on factor analyses of traits indicates which of the trait scores that were applied in the analysis is represented to advantage or too lowly in the factors resulting from the factor analysis (Kreitler & Kreitler, 1990, Study 2).

9) *Meaning-based scores improve the comparison of personality traits, enabling the assessment of the degree of similarity between traits.* The number of shared meaning variables between the compared traits may also serve as a measure of the degree of similarity between the traits; for example, extroversion and agreeableness were found to be more similar to each other than neuroticism and openness to experience (Kreitler, 2008). Additional studies showed that the similarity between meaning profiles of traits might serve as an efficient and reliable tool for predicting the interaction between traits (Kreitler & Kreitler, 1990).

10) *The meaning-based approach enables identifying traits and differentiating between them and other tendencies.* Identifying traits is one of the most intriguing applications of the meaning-based approach to traits. It consists in analyzing the meaning profiles of traits in terms of the following formal criteria which were defined on the basis of 300 meaning profiles of different standard personality traits.

The formal standard properties of meaning profiles corresponding to traits:

- a) Number of meaning variables in the meaning profile of the trait (13.8 ± 6.5);
- b) Number of different kinds of sets of meaning variables in the meaning profile of the trait (4 - 5);
- c) Proportion of different kinds of meaning variables in the meaning profile of

the personality trait. The proportions should conform to the following criteria: meaning dimensions: 54.75%; types of relation 25.75%, forms of relation 5.90%, referent shifts 12.57%;

d) Relative proportion of negatively correlated meaning variables in the meaning profile of the traits: .38;

e) Proportion of meaning dimensions and types of relations in the meaning profile of the personality trait that represents general rather than specific variables .44 (e.g., TR 1 a + b, and Dim. 4a + b are general while TR 1a, TR 1b, Dim. 4a, Dim. 4b are specific; see notes a-c in **Table 1** for examples of general meaning variables).

The number of deviations between the standard criteria presented above and the characteristics of the meaning profile of the specific assessed personality tendency or personality trait allows conclusions about the degree of similarity between the meaning profile of the specific assessed personality trait and the classical trait construct. The number of deviations of the meaning profile of the assessed tendency or trait from the standard criteria is counted. For example, if the meaning profile of the assessed tendency or trait includes only 5 meaning variables, this is considered as a deviation from criterion 1; when it includes only two kinds of meaning variables, this is considered as a deviation from criterion 2.

The following three levels of similarity were defined: when the number of deviations is 0 - 1 the tendency or trait is considered as trait identical, when the number of deviations is 2 - 3 the tendency or trait is considered as trait similar, and when the number of deviations is 4 - 5 the tendency or trait is considered as trait dissimilar. For example, neuroticism and narcissism were found to be trait identical, alexithymia and trait anxiety were found to be trait similar, and the MMPI scale was found to be trait dissimilar (Kreitler & Kreitler, 1990).

5. Future Directions of Research

The described procedure for assessing traits by meaning-based scores has been applied in regard to attitudes, defense mechanisms, value orientations, traits and other personality tendencies in several domains of psychology. Most of the results have been presented in two volumes about meaning (Kreitler, 2022a, 2022b), which describe the findings of studies concerning cognition, personality and emotions (Kreitler, 2022a, Chapters 10-12), and education, health, social behaviors and communication (Kreitler, 2022b, Chapters 3-6). These studies chart one important venue for future research which could deal with analyzing the different meaning profiles of the examined tendencies in order to identify their characteristics and possibly suggest a new taxonomy of the basic psychological constructs and manifestations of personality.

Another venue of future research is to expand the study of meaning-based assessment of traits and similar personality tendencies, considering essential characteristics that could affect the structure and contents of meaning profiles, such as gender, age, education, religion, profession, family life and cultural

background.

The third venue of future research is expected to focus on improving the precision of the meaning-based scores so that they would become closer to the actual scores provided by the standard questionnaires and inventories assessing personality traits but still leave leeway for additional information beyond the information limited by self-reports.

It is expected that with an increase in the availability and precision of the meaning-based scores of personality traits and tendencies, meaning profiles would become a tool that would be considered regularly as a possible source of enrichment of the information provided by the standard questionnaires and inventories in the growing arena of assessment.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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