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MEANING: ITS NATURE, FUNCTIONS AND FUNCTIONING

Abstract. The Kreitler meaning system is a theory and methodology for the conceptualization, assessment and applications of meaning. Meaning is defined as a pattern of cognitive contents focused on a referent. The constructs of the system are: referent, meaning value, meaning unit and meaning variables describing its contents and structure. Its properties are: operational activation, complexity, development, regressiveness, self-embeddedness, selectivity, and dynamism. The meaning test and the meaning profile enable assessment. Meaning manifestations in cognition, personality, emotions, and consciousness are described.

Keywords: meaning, referent, assessment, meaning profile, consciousness.

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Definition 1. Meaning is one of the most controversial constructs due to the multitude of definitions that have become attached to it in the course of its long history (Speaks 2021). It is also one of the busiest constructs, fulfilling major roles in most domains of human functioning including daily life. The theory of meaning has been developed on the basis of empirical studies with a great number of subjects guided by the following four assumptions: (a) *Meaning is communicable.* Although some meanings may be hereditary or constructed by individuals, most meanings have been learned from others. (b) *Meaning includes a part that is interpersonally shared and another part which is more personal and subjective.* The interpersonally shared meanings are widely shared and serve interpersonal communication, whereas the personal part is more private and serves the expression of one's inner world. (c) *Meaning may be expressed through verbal and non-verbal means,* that is, both in spoken or written words as well as through other means, such as movements, sounds, drawings and images. (d) *Meaning is a complex multi-dimensional or multi-layered construct.* This assumption is based on the evidence that meaning develops by being applied in different domains, absorbing components from different sources, serving many different goals and applications (Kreitler 2014).

The described assumptions have enabled carrying out many empirical studies which resulted in collecting responses of several thousands of subjects differing in gender, age (2 to over 90 years), 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.

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On the basis of the empirical data and theoretical considerations, meaning was defined as a *referent-centered pattern of meaning values*. The referent represents the input, the carrier of meaning, which may be a word, an object, a situation, an event, or even a whole period, and meaning values are cognitive contents assigned to the referent for the purpose of expressing or communicating its meaning. For example, if the referent is ‘Car’, responses such as ‘serves for travelling’ or ‘moves on roads’ or ‘is an indispensable tool’ are three different meaning values. The referent and the meaning value together form a meaning unit, e.g. Car—serves for travelling (Kreitler *et al.* 1990).

Characterizing meaning in terms of six sets of meaning variables. A full description of a meaning unit requires specifying its contents, structural features and expressive mode, in terms of the following sets of variables: (a) *Meaning Dimensions*, which characterize the specific contents of the meaning values which is communicated about the referent, for example the referent’s Sensory Qualities (e.g., Sky—blue), experienced Feelings and Emotions (e.g. Child—loves his parents), Actions by the referent (e.g. Computer—stores information), Locational Qualities (e.g. Russia—in Europe); (b) *Types of Relation*, which characterize the directness of the relation between the referent and the meaning value, for example attributive (e.g. Winter—cold), comparative (e.g. Summer—warmer than spring), exemplifying instance (e.g. Country—France) or metaphoric (e.g. Love—like a flower in full blossom); (c) *Forms of Relation*, which characterize the relation between the referent and the meaning value in terms of its validity (positive or negative; e.g. Sour—is not a color), quantification (absolute, partial; Success—sometimes limited), and status (factual, desired or desirable); e.g. Happiness—should be maintained, Wealth—I wish I had it); (d) *Referent Shifts*, which characterize the relation between the referent and the original or previous input, for example the referent may be identical to the input or the previous referent, it may be its opposite, or a part of it, or even apparently unrelated to it (e.g. when the presented input was ‘Europe’ and the response was “I love St. Peterburg”, the referent in the response was a part of the input); (e) *Forms of Expression*, which characterize the forms of expression of the meaning units (e.g. verbal, denotation, graphic); (f) *Meta-Meaning*, variables which characterize the attitude toward the meaning communication that has been expressed by the respondent (e.g. it is incomplete, it is a quotation, it is meant ironically) (Kreitler 2014; for the full list of variables see the website <https://kreitlermeaningsystem.tau.ac.il>).

The six sets of variables constitute the system of meaning. The list of variables includes as special cases many of the definitions of meaning proposed by other investigators, although it was not designed or constructed with a collocational goal. For example, the operational definition of meaning is based on the meaning variable of ‘manner of occurrence and operation’; the denotational definition is based on the meaning dimension range of inclusion and the exemplifying-denotative type of relation;

the affective definition is based on the meaning dimension of feelings and emotions.

Each meaning variable represents a specific set of contents and processes. For example, the meaning dimension Locational Qualities represents different kinds of contents relevant in regard to sites, places, locations and spaces, e.g. geographical locations, rooms and pockets, as well as the processes applied for generating the kinds of relevant contents, e.g. finding an address, arranging items in specific spaces. The comparative type of relation represents comparisons and analogies of different kinds (e.g. car *X* resembles car *Y*) as well as the processes applied in creating comparisons. However, in addition to the represented contents, each meaning variable represents also the processes applied for generating the specific kind of contents characteristic for the meaning variable (see (i) in the properties of the meaning system below).

Properties of the meaning system. The following properties characterize the functioning of the system of meaning, explaining the impact of meaning and its interaction with other systems in the organism:

- (a) meaning is an *operational-active* system, i.e. it is designed to be operational and functional and its major properties are revealed when it is activated;
- (b) meaning is a *complex* system, i.e. it has many different aspects and levels;
- (c) meaning is an *open* system, i.e. it interacts with other systems in the organism and in the environment;
- (d) meaning is a *developing* system, i.e. it develops, becomes richer and more comprehensive;
- (e) meaning is a *regressive* system, i.e. its components can be defined in terms of other components in the system;
- (f) meaning is a *regressive* system, i.e. its components can be defined in terms of other components in the system;
- (g) meaning is a *selective* system, i.e. when it becomes manifest structurally and functionally it is under the impact of selective principles or constraints, i.e. under given circumstances or in specific contexts only certain meaning variables are activated;
- (h) meaning is a *dynamic* system, i.e. it undergoes structural-organizational changes which may have functional implications;
- (i) meaning is applicable in different modes, i.e. it may be used as a static descriptive system for analyzing the contents and structure of different expressions or presentations of meanings, such as narratives, paintings, rituals, or records of behavior, in any medium whatsoever, or it may be used in the dynamic mode as processes involved in the generation of different kinds of contents and meanings (Kreitler 2014).

Assesment of meaning. For the purpose of assessing meaning, the material is first redefined in terms of meaning units, each of which consists of a referent and a meaning value. Then, each meaning unit is characterized in terms of the sets of meaning variables of the meaning system, i.e. it is coded on one meaning dimension, one type of relation, one form of relation, one referent shift, one form of expression, and one meta meaning if available. For example, when the referent is ‘Bicycle’ and the meaning value is ‘has wheels’, 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 meaning profile representing the frequencies with which each meaning variable has been applied in that meaning statement.

In order to learn about the characteristic tendencies of an individual to use certain meaning variables it is necessary to assess the meaning statements of the individual in response to specific standard 11 pretested stimuli (e.g. ‘street’, ‘bicycle’, ‘life’, ‘to create’) which constitute the Meaning Test. There are three parallel sets of the test for adults and three different sets for children (2–10 years of age). The standard instructions ask the subjects to communicate the interpersonally shared and personal meanings of these stimuli to someone who does not know the meanings, using any means of expression they find adequate. Coding the meanings produced in this manner yields the *subject’s meaning profile* which summarizes the frequency with which the subject used each of the meaning variables across all stimulus words in the test. Similar principles apply in regard to the meaning profiles of specific constructs or groups, defined in terms of demographic characteristics (e.g. age, gender, cultural background), attitudes and beliefs (e.g. different political ideologies, religion), health states, behaviors, or responses to questionnaires.

Interpreting the meaning profile consists in noting the frequency with which each of the meaning variables has been used by the subject in responding to the meaning test. The used variables constitute the tools which the subject applies for making sense, identifying and handling the stimuli in one’s external and internal environment. A meaning variable that has been used with a relatively high frequency is also used a lot in different tasks and domains, while one that has been used infrequently is barely used. Thus, if the meaning dimension ‘temporal qualities’ is used often in one’s meaning profile, this indicates that the individual is able to estimate time durations accurately, to come on time and finish commitment on time. Similarly, subjects who in the Meaning Test use frequently a meaning dimension like ‘locational qualities’ more readily notice perceptual cues relevant for location, show better recall of items referring to location, reach faster solutions to problems like Mazes that involve locational aspects, and have more associations referring to places than with those who use it infrequently (Kreitler 2014). Again, if metaphors are used infrequently in one’s meaning profile it is likely that the individual would not use, identify, understand or create metaphors in

whatever context they show up.

The manifestations of meaning in the domain of cognition. Several examples presented earlier showed that each meaning variable represents a sets of specific contents and processes relevant in regard to a particular domain, such as space, time, or emotions. However, performance on a cognitive task requires regularly the involvement of several meaning variables rather than one or two dominant ones. For example, good performance on the task of mazes requires, in addition to the meaning dimension locational qualities, also the involvement of other meaning variables, such as the meaning dimensions of ‘structure’ and ‘range of inclusion’, and the types of relation ‘similarity’ and ‘difference’. Patterns of meaning variables that correspond to specific cognitive acts are called “Meaning Profiles of Cognitive Tasks”. The meaning profile of a task consists of the meaning variables that differ significantly between the meaning profiles of individuals who perform well on that task those who perform poorly on that task. Some of the meaning variables are related to the task positively and some may be related to it negatively. The former contribute to the performance of the task when they are strong, the latter—when they are weak. Specific meaning profiles of tasks were identified, for example, for creativity, art evaluation, curiosity, cognitive conservation, problem solving, posing questions, planning, learning to read, and learning mathematics (Kreitler 2022a: Ch. 10).

Meaning profiles of tasks provide information not only in regard to the set of cognitive processes that are required for specific tasks, but also enable examining the degree of similarity between tasks, as for example in the case of the meaning profile of curiosity that was found to correspond to over 10 different tasks assessing curiosity (Kreitler, Kreitler 1994).

An important application of the meaning profiles of tasks is to assess the level of performance of the task by an individual. Comparing the meaning profile of the individual with the meaning profile of the task shows the degree of similarity between the two profiles. When the similarity is high, it is likely that the individual will do well in performing the task. This information is important when one is interested to select for a specific task, individuals likely to perform well on the task. Beyond the particular goal of selecting individuals for a specific task, comparing the two profiles indicates which meaning variables defining the meaning profile of the task are missing or weak in the individual’s meaning profile. These meaning variables may be chosen for training so as to improve the individual’s performance on the specific task, if such improvement is required or desired.

The different applications of the meaning profiles of cognitive tasks indicate that the meaning profile of a task may be considered as unravelling the cognitive infrastructure of the cognitive act.

The manifestations of meaning in the domains of personality and emotions.

The same methodological paradigm that has been applied in regard to cognition was used also in regard to other domains. The paradigm consisted of administering to the same subjects the meaning test and a standard measure of a personality trait. The meaning variables that differentiated significantly between the high and low scorers on the personality measure were defined as the meaning profile of that personality trait. Over 350 personality traits were correlated each with a specific set of meaning variables (Kreitler, Kreitler 1990). For example, extraversion was correlated positively with the external meaning dimension ‘sensory qualities’ and negatively with internal sensations, which is confirmed by many studies indicating that extraverts focus on external stimuli but overlook internal physical experiences, as manifested in their higher pain tolerance and weak tendency for psychosomatic complaints (Kreitler, Kreitler 1990). The findings show that each personality trait corresponds to a unique pattern of meaning variables that is characterized by specific qualities in terms of number of variables, proportion of representation of the different sets of meaning variables, proportion of meaning variables related to the trait positively and negatively, etc. (Kreitler, Kreitler 1990; Kreitler 2022a: Ch. 10). Applying a similar research paradigm showed the involvement of the meaning system in other personality relevant domains, such as defense mechanisms, values, attitudes and psychopathological tendencies (Kreitler 2014), as well as emotions, such as anxiety, fear or anger, and other constructs such as the self and the meaningfulness of life (Kreitler 2003; Kreitler 2022a: Ch. 12).

There are several advantages to examining the meaning profiles of personality traits and other personality dispositions. For example, they provide insights into the dynamics of the assessed dispositions, guidelines for validating the assessed constructs, means for comparing the contents of personality traits regardless of their labels, and mainly a tool for assessing several hundreds of personality traits by means of only the meaning test, which shortens testing and improves reliability.

The manifestations of meaning in the domain of consciousness. The above presentations showed that identifying the meaning variables constituting the meaning profile of a certain act or personality disposition provided information of great theoretical and practical value concerning the act or the disposition. The general implication of these findings is that the involvement of meaning in different domains of functioning is mediated by cognition because meaning is a major factor which determines the functioning of cognition. Meaning could be considered as the infrastructure of cognition. When meaning changes the functioning of cognition changes. This conclusion is of paramount importance in regard to consciousness. Regardless of the many definitions and controversies related to consciousness there is agreement, tacit or explicit, that consciousness is related to constructs such as awareness, perception, knowledge, thought, experience and feelings—all of which are in one way or another aspects of cognition. Hence, insofar as consciousness is considered as a function of cognition, the

content and structure of cognition are a major factor determining consciousness. The perceived objects, the performed cognitive tasks, and the evoked experiences depend on the availability of the relevant meaning variables in cognition. The availability of the relevant meaning variables depends on the state of the system of meaning.

The state of the meaning system is defined in terms of the kind and number of meaning variables that are in a focal position and salient at the time, namely, they have an organizational primacy and a functional advantage for elicitation and involvement in cognitive activities, relative to the other meaning variables are in the background in different states of inactivation. The meaning system may undergo changes due to external or internal factors, which result in focalizing in cognition different specific sets of meaning variables, such as those responsible for concrete or abstract thinking, those supporting the generation of subjective bizarre imagery or creative thinking. The changes may last for longer or shorter periods of time, may be minimally noticeable or be attended by dramatic experiential effects, may stay focused on cognition or may involve also the sense of self, emotions and behavior. Hence, they may involve merely fluctuations in consciousness, or transformations that are often called alternate states of consciousness (Kreitler 1999; Kreitler 2022b: Ch. 10).

Some general conclusions. The starting point was the assumption that meaning is a factor that is involved in all domains of science and life. Our studies showed the different forms in which meaning is involved in cognition, personality, emotions and consciousness. The results seemed to suggest that human beings are the victims of meaning. However, on the other hand, meaning appears that meaning is a tool that enables human beings to shape their reality for the world in which they live and function. Hence, meaning is both constrictive and expanding, restrictive and liberating, depending on the assigned meaning.

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