Analysis of the States Experienced by Users during Transformations in the Master Kit Program

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Abstract. The article deals with the semantic spaces of mental states in the process of mental activity. Changes in the semantic spaces of mental states after study in the Master Kit program are established. The results show that the study period itself has a functional structure and is expressed in transition states with different semantic kernels.

Keywords. Semantic spaces, mental states, semantic kernel, characterological features of experienced states, orientation and relevance of feelings.

The construction of subjective semantic spaces as a method of research and as a model for representing categorical structures is widespread in the fields of memory psychology (semantic models of long-term memory), the psychology of thinking, and decision theory. The study of subjective semantic spaces refers to the research of what L.S. Vygotsky called the "internal or semantic structure of consciousness" [1].

The semantic space of the mental state is as follows:

– lexical field with a kernel formed from the largest number of repeated values;
– semantic layers that have smaller numbers of the same statements and a lower density;
– the periphery, characterized by a single definition.

Lexical layers constitute the "perceived space" of a state and form typical functional multilevel semantic spaces that are differentiated by:

1. Scale of consciousness (connotation–denotation);
2. Integration of features into factor-categories;
3. Depth;
4. Dimensions, etc.

Each group of states, selected on the basis of certain classifying features (time duration, leading component, complexity, energy factor, etc.), is characterized by the specificity of semantic spaces [2].

A wide variety of a subject's mental states are associated with the lexical layers of linguistic consciousness. Linguistic consciousness is a link that mediates the influence of various factors of a subject's life; it is a "conscious foundation" through which any impact on that person is refracted, causing the emergence of diverse states. As the complexity of mental states increases, quantitative and qualitative changes occur in psychological components and their ratio in semantic spaces [3].

The purpose of the study: to obtain clear, systematic descriptions of mental states experienced by a person, as well establish the different natures of mental aspects and the possibility of creating a gradation scale of certain states as manifested in different types of transformations. Phenomenological research is focused on the disclosure of the structure of a feeling associated with an object, situation, event, or aspect of human life.

The object of the study: mental states of subjects undergoing transformation in the Master Kit program.

The subject of the study: characterological features of the experienced states of the user in the process of transformation.

Hypothesis: each described mental state has a structural organization and is included in semantic fields of different levels.

Tasks: To establish individual aspects of the experienced states; to reveal their phenomenology and to give descriptive characteristics.

The plan of the study:

(1) Carry out phenomenological analysis of users' mental states within 1 week; users introspectively described each state according to a specialized questionnaire.

(2) The required number for qualitative analysis was 10 people.

(3) The duration was 1 week, with 1 record every day.

(4) At the end of the phenomenological analysis, the data was created and interpreted. This article was written.

(5) The duration of the study from the start was 1 month.

Methods:

1. Interviews (L. M. Popov).
2. Individual Master Kit user profiles.

The study involved 28 people providing a total of 175 responses. 78% of the subjects were women and 22% were men. The age ratio was 45% from 30 to 40 years, 50% from 20 to 30, and 5% from 40 to 50 years. Most subjects (70%) used the Master Kit program for more than one year.

Based on the received data, semantic analysis of the differentials of techniques was carried out. Several generalized variables were established: "physiological state", "emotional state", "mental state", "orientation of experience", and "relevance of experience". Each of these parameters had its own semantic kernel, including the descriptive characteristics of the subjects.

Thus, the "physiological state" was semantically associated in some subjects with nervous tension, a feeling of internal trembling, burning throughout the body

(*burning throughout the body, nervous tension in the chest area, inability to breathe, severe fatigue, trembling in the knee*). Respondents mostly associated their emotional states with physiological ones, which in principle explains the psychophysiological relationship. Almost all subjects determined the location of the tested states with a certain "area" in the body (Figure 1).

Phrase/word	Quantity	Frequency, %
Area	31	5.07
Chest	29	4.74
Feeling	25	4.08
in the chest area	19	3.10 / 6.21
Unrest	18	2.94
Tension	12	1.96
bodily sensations	12	1.96 / 3.92

Figure 1. The semantic kernels of the experienced states and their physiological sensations

It is important to note that the described states after transformation had qualitatively different characteristics. Before transformation, the majority of subjects described their states mainly through bodily kinesthetic sensations; the states after transformation were described with more emotional and psychological aspects (*lightness, calm, happy state, cool state, elation*).

Also, note that the feeling of comfort in the respondents mostly dominated the average 10-point scale before transformation — 5 points (18.3%), 6 points (12%), and 8 points (20.6 %). The feeling of comfort changed to good after transformation — 8 points (16%), 9 points (23.4%), and 10 points (30.9%). This is partly due to the fact that the peak states experienced by users before transformation were high activation states, and, accordingly, after training, with the help of regulating their own states, there was a transition to states of reduced activation. So, one person, in a state of mobilization and anxiety, during transformation experienced several transitional states (euphoria, anger, and sadness); afterward, he moved to states of calm, fatigue, and relaxation.

Users' general emotional states were described mainly as calm, joyful, and included such words as *positive* and *calmness* with a high frequency of occurrence (Figure 2).

Phrase/word	Quantity	Frequency, %
calm	19	4.13
joy	17	3.70
calmness	16	3.48
relaxed, calm	10	2.17 / 4.35
affectability	9	1.96
positive	9	1.96
joy, calmness	9	1.96 / 3.91
state	9	1.96

Figure 2. Semantic kernels of the emotional states prevailing in recent years

The emotional and physiological aspects were clearly expressed when answering the question of obstructive settings, which indicates that the majority of respondents connected negative mindset with a strong attachment to emotions and discomfort in the body. This is probably due to the fact that an experienced emotion sets the tone of the passing state and the person unconsciously gives this state a certain "discomfort zone" for its further evaluation and change, both through the program and self-regulating methods (Figure 3).

Phrase/word	Quantity	Frequency, %
Emotion	13	1.21
negation, discomfort	11	1.02 / 2.05
Fear	10	0.93
Discomfort	9	0.84
Unpleasant	8	0.74
Rage	7	0.65
Negation	7	0.65

Feeling	7	0.65

Figure 3. Semantic kernels of obstructive mindsets

It is also notable that the semantic kernels of the obstructive mindsets are associated with the "orientation of the feeling"; in this case, it is the motivational aspect (Figure 4).

Phrase/word	Quantity	Frequency, %
result	5	0.47
to manage	5	0.47
to want	5	0.47
opportunity	4	0.37

Figure 4. The semantic kernels of the obstructive mindsets with the motivational aspect

Semantic analysis of the brightest emotional state at the time of transformation was most strongly associated with physiological states, and less so with psychological and emotional states. This suggests that the subjects first assess their states through kinesthetic sensations, and only later determine them as specific emotions and relationships (Fig 5).

Phrase/word	Quantity	Frequency, %
nervous tension	35	3.63 / 7.26
image	29	3.01
tension	27	2.80
nervous	26	2.70
euphoria	19	1.97
lightness	16	1.66
feeling	15	1.56
unpleasant	13	1.35 / 5.39
guilt	12	1.24

feeling	11	1.14
transformation	11	1.14

Figure 1. Semantic cores of bright emotional states

It was also established that the semantic kernel of the strongest emotional state has the "relevance of experience" through images and mental representations — this can be seen through the subjects' definitions of words (Figure 6).

Phrase/word	Quantity	Frequency, %
repeated image	3	0.31 / 0.62
saw the image	3	0.31 / 0.62
bright pictures	2	0.21 / 0.41
bright pictures of achievement	2	0.21 / 0.62
bright mindsets	2	0.21 / 0.41
mindsets, bright pictures	2	0.21 / 0.62
image, bright mindsets	2	0.21 / 0.62
image, mindsets, bright pictures	2	0.21 / 0.83
Picture	2	0.21

Figure 6. Semantic kernels of bright emotional state (images)

The semantic kernels of many respondents' states after transformation were described as positive and comfortable, reflecting more psychological aspects. This is because after transformation, changes in psychological state are most pronounced. So, a person may feel fatigued after transformation, but at the same time may be in a state of euphoria, which would be the most important for the respondent (Figure 7).

Phrase/word	Quantity	Frequency, %
Comfort	59	10.77
Lightness	27	4.93

Calmness	26	4.74
State	20	3.65
Joy	15	2.74
Euphoria	9	1.64
in a comfortable elevated state	7	1.28 / 3.83
comfortable, calm	7	1.28 / 2.55

Figure 7. The semantic kernels of states after the transformation

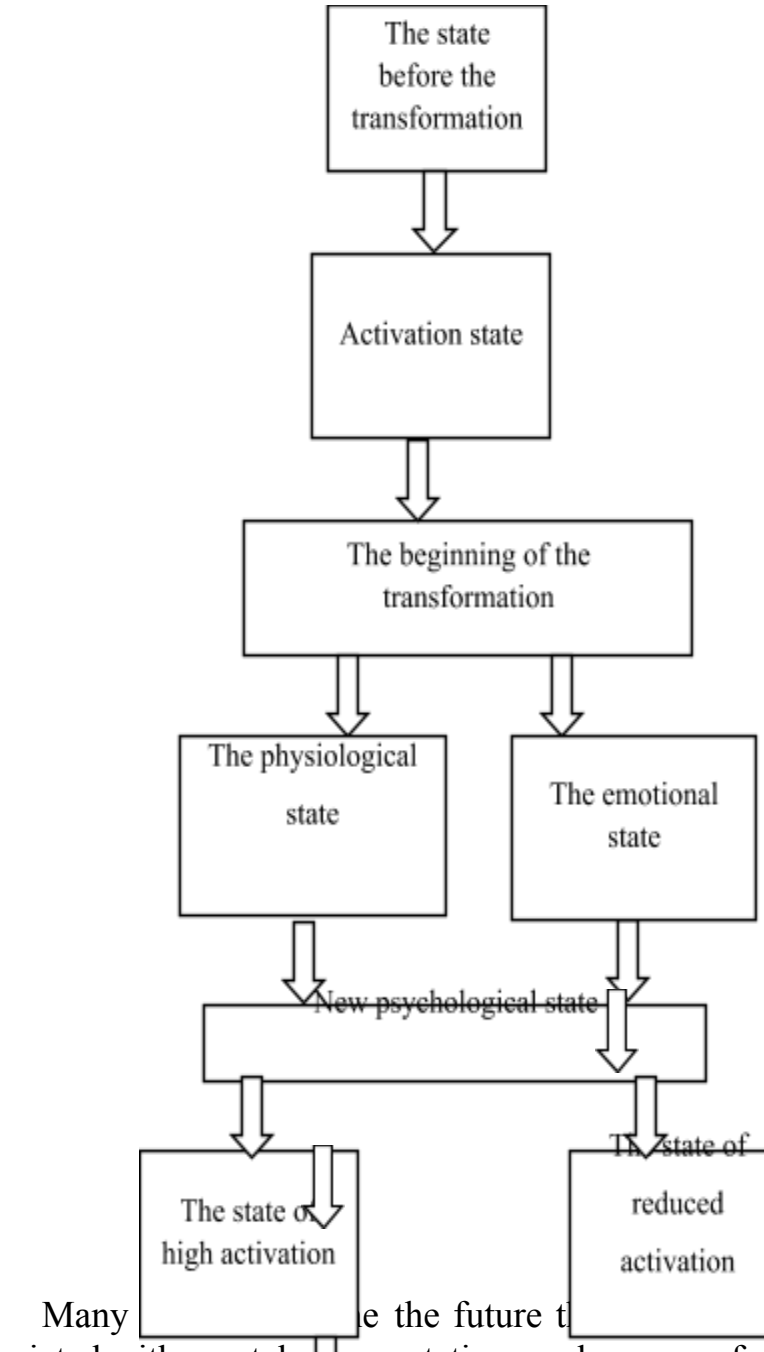
Semantic analysis also showed a strong connection between a feeling of incompleteness of transformation and the subjects' physiological states. This is quite indicative of the subjects' transition at the time of transformation through a certain chain of experienced states; each experienced state has its own relevance and reflection (Figure 8).

Phrase/word	Quantity	Frequency, %
Feeling	19	3.23
incompleteness	12	2.04
tension	11	1.87
setting	9	1.53
feeling	8	1.36
like conciseness, tension	7	1.19 / 3.57
incompleteness below the solar plexus	7	1.19 / 4.76
conciseness, tension	7	1.19 / 2.38

Figure 8. Semantic kernels of the feeling of incompleteness

At this stage, it can be assumed that the period of transformation has its own structural and functional organization for a person. So, before the transformation, a person is already in a certain "pre" state, which activates the transitional mental state as a kind of readiness for the transformation. Then, the user assesses his physiological and emotional state, which during the transformation period is transformed into a new mental state, setting the tone for the whole transformation. After transitioning back to the state, depending on the task being trained, this state will have an actual focus

"here and now", expressed in motivation, or a mental state of reduced activation, after which the subject feels relaxation and comfort.



Many e the future t m of psycho-emotional states associated with mental r presentations and a sense of comfort (Fig. 9).

	Quantity	Frequency, %

joy	16	1.44
feel	11	0.99
calm	9	0.81
feeling	8	0.72
content	7	0.63
happiness	7	0.63
feeling	7	0.63
lightness	6	0.54
pleasant	6	0.54

Figure 9. Semantic kernels of the image of the future

It can be said that in the consciousness and self-consciousness of the personality, an image of the future is presented in the form of a system of internal reflection means: representations, images, and concepts, among which an important role is played by a person's idea about himself on the continuum. This is the "Future Me", which is included in the structure of the "I-concept" and is represented by three coordinates: personality traits, abilities, and motives. These coordinates, represented in the mind as an internal form of action, define external methods of activity. The mind also presents goals, objectives, and ways to achieve them. The transformation of tasks into a goal is the ideal image of the goal and an image of the possible as a prototype of the real.

The analysis showed that most subjects described their daily state as "calm" or "normal", while describing the state of high activation with words such as "affectability" and "joy" (Figure 10).

Phrase/word	Quantity	Frequency, %
calm	44	6.67
normal	14	2.12
joyful	14	2.12 / 4.24
excitable	10	1.52 / 6.06
usually calm	9	1.36 / 2.73

excitable	8	1.21
calm, balanced	8	1.21 / 2.42
usually calm or joyful	7	1.06 / 4.24
joyful or excitable	7	1.06 / 3.18
joyful	7	1.06

Figure 10. The semantic kernels of everyday states

These resulting states of "calm", "joy", and "affectability" can be called the typical mental states of a user in everyday life. They are a holistic situational manifestation of the individual at a certain period of time.

It is interesting that many users responded positively to the question about the desired state to which they would like to change. This was associated semantically with "self-esteem", a "sense of confidence", and "fear" (Figure 11).

Phrase/word	Quantity	Frequency, %
desires to change	9	0.99 / 1.98
to experience the state	9	0.99 / 1.98
self-esteem	8	0.88
feeling	8	0.88
confident	7	0.77
joy	6	0.66
want to feel	6	0.66 / 1.32
fear	5	0.55
lightness	4	0.44
calmness	4	0.44
happiness	4	0.44

Figure 11. The semantic kernels of desired states

It should be assumed that the "desired state" of a user is semantically a few multi-level cores. Probably this is due to the fact that the image of the desired mental state has several transitional forms, including the resulting state of self-confidence, self-esteem, etc. In other words, in order for a person to be able to experience certain desired states, he or she must pass through the boundary forms of states.

Approximately 80% of the subjects were in a situation where they did not manage to express their emotions properly. They semantically associated this situation with work and children (Figure 12).

Phrase/word	Quantity	Frequency, %
work	8	1.43
child	8	1.43
emotion	7	1.25
situation	4	0.71
problem	3	0.53
restrain	3	0.53
unrest	2	0.36
mask	2	0.36 / 0.71
express	2	0.36
regret	2	0.36
gentle	2	0.36
society	2	0.36
behavior	2	0.36
hard	2	0.36

Figure 12. Semantic kernels of images with non-congruent reactions

Note that the manifestation of such reactions in people occurred in particular situations and they have their own emotional colors, but these states were not congruent with the external manifestation. In other words, the subjects unconsciously

suppressed the manifestation of emotions at the psychophysiological level. There was a certain deterrent factor or setting that influenced the mental activity of a person in this type of situation (fear of losing a job, fear of management, the opinions of other people, inadequate behavior).

Semantic analysis of the states of "apathy", "sadness", "grief", "pain", and "anger" and the states of "joy", "calmness", and "euphoria" showed that for most subjects, these states have a common generalization and are semantically derived from each other. Each experienced mental state is the beginning of the formation of the next one. Thus, the primary basic states are "sadness" and "calmness". These then form "sadness" as a negative state or "joy" as a positive one, which later results in "pain", "anger", or "euphoria", with the state of "apathy" as a kind of transitional state.

Qualitative definitions of these mental states by the subjects allowed establishing the fact that they have similar semantic fields. The semantic field of each state has a kernel (the value which is the closest to the value-stimulus). As was established, "grayness" and "boredom" are "basic" synonyms between the states of "sadness" and "grief" (Figure 13).

Note that the states of "sadness" and "grief" are different in their development, though the state of "sadness" has a focus at the moment and is accompanied by short-term rapid emotional downturns; the state of "grief" has a more prolonged nature and develops more smoothly. The semantic field of each of these states consists of several near-kernel zones, whose density values decrease from the center (kernel) to the edge (periphery) of the semantic space.

Phrase/word	Quantity	Frequency, %
Negative thought	4	0.89
gray	4	0.89
state	4	0.89
rain	3	0.67
loneliness	3	0.67
want to cry	3	0.67 / 1.34
no desire to do anything	2	0.45 / 1.78
boredom	2	0.45
depression	2	0.45

Figure 13. Semantic kernels of the sadness state

Phrase/word	Quantity	Frequency, %
rain	5	1.14
problem	4	0.91
gray	3	0.68
regret	3	0.68
boredom	3	0.68
apathy	2	0.46
everything is grey	2	0.46 / 0.91

Figure 14. Semantic kernels of the grief state

The "sadness" and "grief" states were interpreted by the subjects mainly through images and representations, when the state of "joy" was described more through kinesthetic sensations. This is partly due to the fact that a person tries to perceive negative states as an observer, while positive states are perceived more directly. It also shows that positive states have a clearer semantic boundary between each other than do negative ones. In other words, a person can more easily distinguish between the states of "joy" and "euphoria" than between the states of "sadness" and "grief".

Phrase/word	Quantity	Frequency, %
lightness	11	2.06
sun	8	1.50
happiness	6	1.13
warm	6	1.13
mood	5	0.94
pleasant	4	0.75
smile	4	0.75
flower	4	0.75
emotional	4	0.75
love	3	0.56

fun	2	0.38

Figure 15. Semantic kernels of the grief state

Conclusions. The analysis helped to identify both the categories of mental states experienced before transformation and their psychosemantic changes after transformation in the Master Kit program. Probably the process of transformation creates a certain change in the conscious basis of states through the subjective system of values that forms the semantic space.

It was also revealed that each mental state is a complex experienced mental phenomenon that consists of both mental representations of the image, certain psycho-physiological states, and semantic fields (Figure 16).

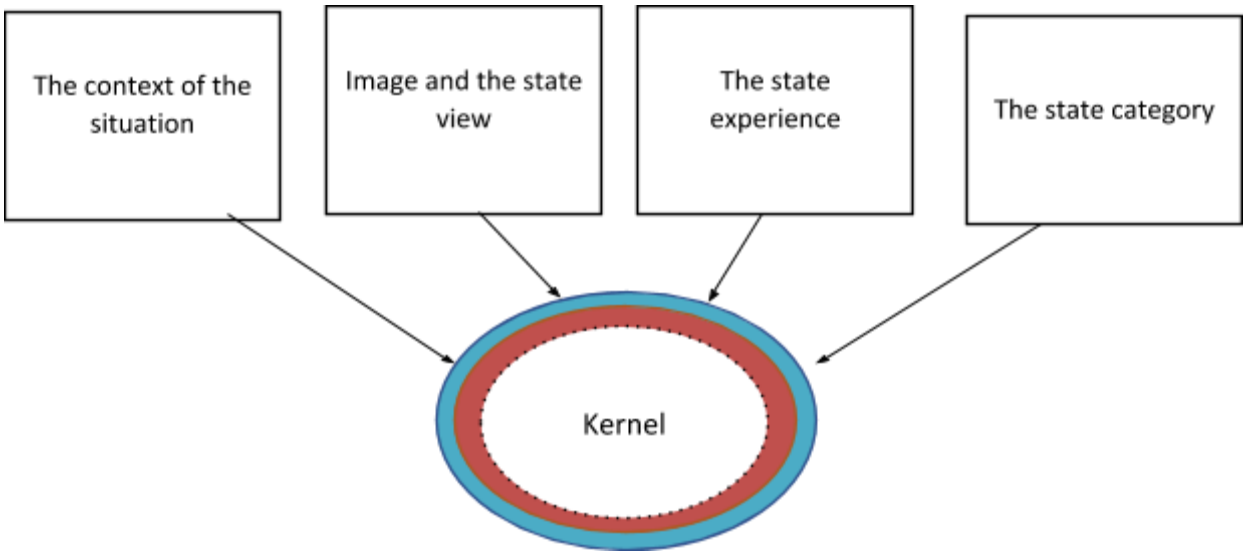


Figure 16. Scheme of the semantic images of mental states

Each mental state is subjectively experienced for each person, and each state has its own semantic kernel, but the context of the situation, images, and feelings can be of a general character. In the semantic field of positive and negative states, there is something in common: the kernel of the semantic space expression represented by synonyms.

It is worth saying that each of the components of the mental state structure has an impact on the experienced state and its change. Consequently, several circumstances (reasons) can cause and affect mental states, in particular the "situation". Mental states develop in the process of human interaction with life situations [4].

Thus, the states are situational, which means that each particular state depends on the spatial conditions of its manifestation. And, as was noted, in the process of a user's transformation, there is a transformation of the perception of the state itself. In

other words, during transformation in the Master Kit program, semantic fields around the kernel change: they become more conscious and the image of the mental state changes as well. Surely, in this case, the program acts as a self-regulating tool for a person, allowing him to change both the context of the situation associated with the experienced state and the image of this state, so that that person more consciously assesses his mental state and his subjective feeling becomes dissociated within the context.

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