

PERSONALITY DEVELOPMENT OF FIRST-YEAR MARITIME SCHOOL STUDENTS AS A BOOSTER OF THEIR EMOTIONAL AND FUNCTIONAL CAPACITY

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Abstract

This qualitative research aims to investigate and compare the emotional capacity and operational activity of first-year students at Riga and Liepāja Maritime School. Our objective is to evaluate and compare the personalities of these students as a positive factor in their long-term health. This research's theoretical and methodological basis includes D. Fiske's and S. Maddi's theoretical investigations on activation, E. Erikson's theory of psychosocial development, and A. Vorobjov's ontogenetic periodization model for forming personality's selective activity. We employed the following methods: monitoring, surveys, unstructured interviews, and qualitative analysis. The study results suggest that the respondents in the experimental group display optimism, determination, and psycho-emotional maturity appropriate for their age. Additionally, they show motivation to pursue a career as a sailor. What makes this research novel and important is that it has not been done in Latvia before. The research findings provide valuable insights into the emotional capacity and operational activity of first-year students at Riga and Liepāja Maritime School, shedding light on their personalities and potential impact on long-term health outcomes.

Keywords: *first-year maritime students, personality activation, activity, self-feeling, mood, personalization*

1. INTRODUCTION

The issue of studying and solving psychological problems of those employed in the field of waterborne transport, maritime transport in particular, has always been relevant, especially in relation to sailors on ships at sea. Nowadays, such problems have become even more complex because of many changes. This is a decrease in comfort and the possibility of relaxation on ships while at sea; the increasing number of fully connected IT ships being put into operation, as their further technological development may provoke ship owners to save on labor by reducing the size of the ship's crew, thereby creating anxiety among seafarers about their employment in the future. Planetary climate processes have recently given rise to previously uncharacteristic local hydrometeorological changes that complicate navigation in certain areas of the world's oceans. Another serious psychotraumatic factor that adversely affected the content of a personality is the pandemic caused by the COVID-19 virus. It resulted in the untimely turnover of crews and the isolation of sailors due to the ban on the ship to go ashore while in port, and in the long term, all the aforementioned is likely to stimulate neurotic changes, even those of the psychotic variety. Problems of human psychology on waterborne transport (especially maritime transport) go beyond generally accepted model of human interaction with the environment, because being in uncomfortable and dangerous conditions of maritime navigation in the professional activity of a seafarer is in itself a psychologically traumatic factor. Automation, robotization, virtualization of shipping processes and maintenance of ship systems during sea passage imposes an additional psychological burden on the mental elements of the sailor's personality structure. In the modern era it means that a new paradigm of cargo transportation is being shaped, namely, the physical crew is being replaced by a virtual one, although, in our opinion, the old paradigm in the form of a machine-human-result system on waterborne and other modes of transport will be in demand for many years to come. Unfortunately, there is almost a complete worldwide absence of psychological support for the process of learning maritime affairs, which we see as a significant drawback, well, perhaps with the exception of the education system of military sailors, as well as in the formation of crews of, for example, submarines, especially nuclear-powered ships and warships of distant ocean zone. Studies of the mentioned issues have not been carried out in Latvia. In this regard, there was an interest and need to

obtain this kind of information and knowledge. The study involved first-year students of maritime schools of the Republic of Latvia ($n=190$) aged 16 to 17 years. The results of another nine participants were considered invalid due to incorrectly completed questionnaires.

The study proposes a paradigm consisting of two elements: 1) a first-year student at a maritime school at the beginning of the first year of studies; 2) a first-year student at a maritime school at the end of the first year of studies. The study was conducted in October 2022 (one month after the start of the first year) and in May 2023 (completion of the first year). The questionnaires were filled out in groups, in classrooms, during daylight hours from 10 a.m. to 2 p.m., in the presence of the author of the study. Before filling out the questionnaires, the purpose of the specific study was explained and the procedure of filling out specific questionnaires was described in the form of a group unstructured interview.

Purpose of the study: to study the content of the process of adaptation of first-year students of maritime educational institutions to a new, radically changed environment of their main pastime.

Object of the study: the usual functional reserve of the personality of first-year students.

Subject of the study: averaged qualitative characteristics of bodily awareness (biological component) and psychofunctional state (emotional and affective component).

The study provides answers to the two questions asked:

1. What are the qualitative properties that characterize the adaptation of a student at a maritime educational institution in the first year of study as successful?
2. What are those psychophysiological properties of the content of the personality of a first-year student at a maritime educational institution that contribute to maintaining the usual level of activation and even improving the functional reserves of their body?

The following tasks arise from the purpose of the study:

- 1) to read and analyze the literature on this issue,
- 2) to assess the emotional, affective sphere and functional state of first-year students at the time of the study, as well as describe the likely environment for their further professional development.

During the research, the following methods were used: monitoring, survey, group unstructured interview, qualitative analysis. The methodological basis of the study is the activation theory by D. Fiske and S. Maddi (Fiske & Maddi, 1961), the ego-psychological concept of E. Erikson (Erikson, 1963) in the form of a dynamic model of personality proposed by him, as well as the model of periodization of the formation of selective activation of personality in ontogenesis by A. Vorobjovs (Vorobjovs, 2002).

2. MATERIALS AND METHODS

2.1. Theoretical Basis

In everyday life, a person tries to maintain their usual and characteristic level of activation. Activation is a term that refers to the manifestation of energy, excitement and dynamism in the body as a changing system and helps explain its influence on the behavior of the individual. This system is inherently stimulating and its functional orientation in the psychosomatic aspect can be called influence. When assessing influence by the stimulus-reactive factor, it is characterized by three criteria: intensity, significance, diversity. The level of activation is an indirect function of influence, namely, a stimulator of an individual's activity (Fiske & Maddi, 1961).

Activation of the body is a stimulus-reactive component of human psychophysiology and allows it to monitor received signals from the outside, which helps ensure the preservation of both physiological and mental balance. Activation is the guiding mode of the personal genesis of a particular person, the desire for personalization, stimulating not only the provision of innate needs, acquired motivations, and affective components, such as emotions, feelings, but also thereby forming a personal attitude to specific stimuli of the subject-object series. We assume that this tendency towards the need for personalization

is significant in the choice of a seafarer's profession and is a dominant personality trait in the process of learning to sail.

The main question follows from the above: "Is the constant need for personalization and activation an indispensable condition for the successful adaptation of first-year students to the new environment of their life and the preservation of proper psychosomatic health?" Simply put, does the basic formation of a seafarer's personality begin already at the initial stage of professional development? In this regard, we assume that the freshman does not live in isolation from society. On the contrary, they live in a family, a hostel or rent an apartment, communicate, show interest to the events in the country and the world, and lead a healthy lifestyle. Hence, social contacts stimulate cheerfulness, health and contribute to the feeling of satisfaction regarding the fact that after enrolling they have the opportunity to master the profession of a sailor, and begin to specialize and transform their personality.

Our assumption is based on the view of A. Petrovsky, who sees personality development as the result of the process of integration into the respective reference social group through interpersonal relationships in it. According to A. Petrovsky, the reference group significantly influences the development of personality (Vorobjovs, 2002) and is the most important inter- and intra-individual characteristic of a student's personality in the integrative aspect of the adaptation process.

A. Petrovsky believes that such a significant characteristic of a person as authoritativeness develops in a system of inter-individual relations... and in the form of a personal trait acts as a group trait, and the group as a personal trait, i.e. it is an inter-individual attribution of personality. However, in the internal space of the subject's personality, this is a complex of symptoms of mental qualities of a particular individual. In one case - self-will, cruelty, high self-esteem, intolerance to criticism, etc., and in the other - integrity, high intelligence, goodwill, reasonable demands, etc., i.e. it is an intra-individual attribution of personality (Petrovskij, 1984).

In the context of our study, the reference group for a first-year student is the study group of the Maritime School, as well as various other formal and informal groups of adolescents based on the nature of group activity, which can be differentiated by such a criterion as the degree of asociality or prosociality of group activity. In this regard, we believe that the content of a first-year student's personality is subject to restructuring precisely through these groups, and the usual level of activation of the body acquires new dynamism. This ultimately leads to more or less successful adaptation at the final stage of the first year of study at the maritime school with sensitization process running at the background. However, regression of behavior, in the result of which the student may fail to adapt and may be expelled, is also possible in these transformative conditions of the new living environment. We base such conclusions on the views of other authors.

For example, S. Maddi sees personality as a sum of motives and traits, to which it is essential to maintain its characteristic level of activation. If the level of activation is lower than normal, the individual begins to use their energy resources. However, if the level of activation is higher than usual, then the individual begins to reduce vigor. The fact is that the usual level of activation is formed during the initial stage of ontogenesis and is a functional component of the socialization of the individual. That is, if a high level of activation was initially formed, a person will strive to be active, intense, and reflective of stimuli. If the level of activation is low, the person will distance oneself from activity and self-stimulation, that is, they will be neutral towards them. A highly activated person seeks contacts in the social environment, while a low activated person avoids them whenever possible. Hence, a model of personal stability is proposed, which is essentially a system of worldview, views and attitudes towards the environment and society. Thanks to this stability, the internal tension of an individual under stressful conditions is a secondary indicator, since their relationships with the people around them will be primary. It is important for a person to have confidence that all their actions, undertakings, and works will benefit their own experience, motivation and society as a whole. A highly activated and motivated person will remain productive and will look for a way out of any situation, even despite anxiety and danger (Maddi, 2005).

On the other hand, E. Erikson's position regarding the ego of a young person in relationships with others is based on the assumption that exclusion from the group at this age will provoke them to search for a 'significant other' who will encourage them and not push them away. This means that a person in search

experiences existential anxiety and uncertainty, and therefore often relies on those who are the first to relay their sympathy (Erikson, 1964). And “[...] the acquired ego identity allows a person to model their life perspective, choosing a future path in it” (Erikson, 1963). E. Erikson believes that Ego is the basic category of human behavior and functioning. It is an autonomous psychological phenomenon of the personality structure that promotes social adaptation and stimulates combinations of elements of the ego identity content (positive or negative). Thus, the foundation is laid for the construction of a sailor’s ego identity, which will stimulate the student’s orientation towards a social group - to become one of the seamen.

According to A. Vorobjov’s model on the periodization of selective activation and the formation of the content of the personality in ontogenesis, the stage of the life cycle at the age of 15-17, 18 is a period of accentuation of already acquired character traits, skills, as well as testing the performance of the content of one’s personality in different behavioral models and life situations. This age period is important for the metapersonal formation and restructuring of the content of the personality of the future sailor. In addition, during this period, three principles of activation are alternately emphasized: hedonism, relaxation and reduction. These principles are only able to maintain tone when taken together, albeit in different combinations. Therefore, A. Vorobjovs called this age period “the period of accentuation” (Vorobjovs, 2002). A. Vorobjovs believes that it is at this age either an optimistic model of the fullness of life and activity is formed and emphasized, or a pessimistic one with a feeling of emptiness and foreseeing insurmountable obstacles in the future. The latter model is neurotic, since the person is always in a state of cognitive dissonance “I want but I cannot”. This state constantly causes frustration and stimulates a low threshold of mental satiety. From the results of the study, it is clear that the first model is relevant for the experimental group.

2.2. Data and methods

We applied a similar approach. To determine the functional state of students' personality, we used an express method in the form of a questionnaire. The point is that the individual is asked to subjectively determine the state of their body using the C. Osgood’s semantic differential scale with 30 pairs of words of opposite meanings denoting: 1) well-being (feeling of health, strength, degree of fatigue, 2) activity (functional speed, situational elasticity), 3) mood (stability of emotional tone). It was required to complete the questionnaire at the beginning of the first year and at the end of the first year. The score on each scale is calculated as an arithmetic mean, where the average score is 4. The score above 4 indicates a favorable state of the individual, and the score below 4 indicates an unfavorable state. The optimal range is 5.0 – 5.5 points. For example, in the process of adapting this technique, the values were as follows: well-being – 5.4; activity – 5.9; mood – 5.1. (edited by Karelin, 1999).

In our case, the results show a favorable state in the experimental group, namely: well-being - 5.6 (at the initial stage of study - 5.6; at the final stage of the first year - 5.5), activity - 4.9 (at the initial stage of study - 4.9; at the final stage first year – 4.8), mood – 5.8 (at the initial stage of study – 5.7; at the final stage of the first year – 5.8). Let's analyze each of the results obtained.

The first indicator - well-being - was stated as 5.6. This indicates that the participants of the experimental group were characterized by favorable subjective satisfaction with their body, health, and a high degree of resistance to destructive climatic and everyday factors of the microenvironment was characteristic at the microbiological level. It means that the individual adapted and integrated into the living environment during the first year of studies, because they managed to achieve a state of homeostasis. The ability to achieve a state of homeostasis in everyday life is acquired in the process of long-term practical activity, and upon achieving a certain level of professionalism, it is also needed in one’s personal life. In general, awareness of the means and ways to achieve homeostasis is unknown to freshmen due to insufficient practice and little life experience, but they achieve psychological balance intuitively due to the genetic predisposition of their body and the degree of habitual comfort being in a new environment. This is especially true for non-resident, visiting students. In general, a freshman is able to motivate oneself only if they manage to balance their life with the general connections of the real world, and based on this, one can consider the adaptation of a freshman as successful or not. During the study, we did not identify fixation on psychogenic, somatic or other negative factors among first-year students. There were rather

regular complaints about vegetative crises, nostalgic memories of home, relatives and friends. After a few months of training, such complaints disappeared or stopped altogether.

The indicator of the second parameter – activity – turned out to be at the level of 4.9. It is known that activity correlates not only with well-being, but also with the academic performance of a particular student, and the usual level of activation of the body contributes to the functional readiness of the individual. That is, the characteristic level of activation of a particular person is expressed in the form of a stable personality trait - a tendency to personalize its needs. Having enrolled in a maritime educational institution, students find themselves in a situation where the intensity of daily stimuli increases, which in itself should not be something dangerous or pathogenic. The only problem is that most of the stimuli may be previously unknown to them, i.e., there are no acquired reactions and developed algorithms for influencing them. All this together generates situational, and for some students, constant stress, which certainly leads to a change in the dynamics of biochemical processes in the body, and affects the physiology and content of the personality structure.

Activation of the organism is a neuropsychological concept, the localization of which in the subcortex of the human brain contributes to the development of an individual homeostatic position in the range of psychological norm, where the norm is above the minimum, but below the maximum (Fiske & Maddi, 1961). A person usually tries to keep their activation level within their usual range. The range of human activities is selective and relevant depending on the time of day and season. The longer one stays in new conditions for oneself, the stronger the structure of incentives for activating one's personality - habits - becomes.

Based on the universal description of the function of a student at a maritime educational institution, he or she is characterized as expressive, active, and only in case of difficulty in adapting to new conditions there can be changes in their usual level of activation. The need to change the usual level of activation of one's body must be supported by the connection of the volitional component of the psycho-emotional system of the individual. You also need motivation to change something in yourself in general. The inability or unwillingness to change the content of one's personality can cause psychosomatic complications, which often leads to dissatisfaction with new living conditions, decreased academic performance, and withdrawal into oneself, fencing off from the group. Sometimes the opposite takes place and there are pseudo-activity and hyper-involvement in the group with the subsequent selection of any model of deviant behavior, such as addiction, lies, absenteeism, manifestation of excessive instrumental aggression, etc. Such students can be recognized by their vulgar behavior, violations of the rules of wearing a uniform, excessive excitability, increased fatigue or chronic fatigue, rapid breathing rhythm and other signs. When meeting with the parents of such first-year students, attention is focused on changes in the emotional and especially behavioral components of the personality structure, i.e., changes in the habits and behavior of their child become obvious to parents, for example, students began to smoke or the expression of behavioral patterns changed, etc.

The third parameter of the survey is mood, the result of which is 5.8 points. The indicator is high and indicates a very stable structure of Ego-identity: cheerfulness, an optimistic view of the future and faith in it, a current perception of the micro- and macroenvironment, a critical attitude towards surrounding situational stimuli. However, the longer these stimuli affect an individual, the less effective they become (Fiske, Maddi; 1961) and one gets used to them.

In our opinion, this particular circumstance is very significant and, as an additional bonus, predetermines a good mood and psychological resistance to the daily routine. It means, the longer a person is exposed to the influence of a new living environment, the higher the dynamics of socio-psychological adaptation are. In order to maintain one's usual level of activation of the organism, one changes the tools of social cognition to adapt to changes in the external environment more often. To a greater extent, this applies to individuals with developed adaptability and the need for personalization. Diametrically opposite intensity of activation and behavior is observed in people with signs of depressive symptoms in the form of passivity, hypoactive mood, pessimism, which is typical for an individual with a poorly developed ability to adapt and a less accentuated need for personalization. The content of one's personality changes throughout ontogenesis, and at a young age, this process has such impressive dynamics that it often forms a large gap between the usual and current level of activation, often provoking sessions of bad

mood. Behavioral models of psychotic and/or asocial content run counter to Christian values that fuel the need for personalization such as social recognition, love for loved ones and neighbors, respect in society, etc.

Abstracting from the conceptual provisions of D. Fiske, S. Maddi, E. Erikson and A. Vorobjovs, we can conclude that a person is constantly trying to reconcile the usual level of activation with the current one, thereby developing new personal qualities. We believe that this fully applies to the first-year students of maritime educational institutions involved in the study, because despite their young age, a person living in a humanistic paradigm develops positive qualities in themselves (with rare exceptions) constantly, and not fragmentarily.

Based on the information and conceptual provisions identified during the research on the desire to maintain the usual level of activation and the need for personalization, the content of the personality of a first-year student at a maritime educational institution is characterized as specific, not yet fully formed. This process under the influence of a situation of social well-being should be completed effectively, which will stimulate the formation of new qualities necessary for successful psychosocial adaptation and academic performance in the process of learning maritime affairs with subsequent professionalization, such as adaptation on different ships, with unfamiliar and ethnically changing crews, contrasting weather conditions and so on.

3. RESULTS

During the study, the following answer to question No. 1: "What qualitative properties characterize the adaptation of a student at a maritime educational institution in the first year of study as successful?" was established and proposed, namely, freshmen express a need for personalization, which is characterized by:

- in the structure of consciousness - emotional flexibility, the ability to empathize, developed imagination, good memory, good stability of attention even in stressful situations;
- in the structure of self-awareness - in the scheme of proportions of self-identity (the actual present, there is also an orientation towards the future, the concept of the body is not ignored), the self-concept is dominated by the support of loved ones, tolerance, the need to actualize dispositions;
- in the structure of the unconscious – attitudes are flexible and sociophilic, fears and phobias are not expressed strongly. The intra-individual and inter-individual substructure of personality dominates in activity and communication, while the meta-individual substructure is realized rarely.

Thus, according to some authors, successful adaptation in a closed space of a group of people who are on a ship without the opportunity to go out for more than two weeks (usually 4 or 6 months or more) helps reduce damage associated with the human factor and issues of providing psychological self-help for seafarers. Some features of such groups are:

1. Great importance of interpersonal relationships. Modern ships have a small number of crews, where the significance of each emotional contact in close interaction becomes more important. A slight tension in communication at the beginning of a voyage can lead to conflicts later;
2. Modification of information flow. Today the problem often lies in the reluctance to communicate outside of the work shift (the phenomenon of 'forced communication') and the predominance of independent Internet surfing or watching movies in your cabin;
3. Difficulties for women living together in a male crew. In very large crews (for example, on icebreakers) where there are entire families and many women, this problem does not reach a problematic level. In small crews, the presence of one or more representatives of the fair sex creates a competitive, aggressive environment, which leads to disruptions in professional interaction and breakdowns among individual team members;
4. Different flow of social time among those who are at sea and those who remained on the shore... . Isolation from family increases - loss of social roles;

5. Influence on circadian rhythms. Sailors work shifts... . Accordingly, the sleep and wakefulness patterns shift;
6. Influence on sexuality. At the beginning of the voyage, libido increases. Then, there is adaptation to the absence of habitual sexual behavior - compensatory masturbation, search for sexual contacts (on a ship, in a port) or lack of possibility of sexual activity. After that, libido decreases via a negative feedback mechanism;
7. Sensory deprivation. Reduced information flow from various senses - the ship has its own narrow range of smells and sounds, a small number of emotionally significant events;
8. Dividing the crew into subgroups. Almost inevitably, the entire team gets divided into small groups and individuals. The formation of such groups depends on the level of position, nationality, and psychotypes of people;
9. Constant feeling of increased danger to life. Such understanding exists on subthreshold level even when the marine specialist is resting after a shift.

A considerable number of sailors die at sea due to mental problems. According to the WHO (World Health Organization), seafarers rank second on the list of workers most susceptible to suicide. Moreover, not a single country has accurate data, people simply disappear and one can only assume that at least 50% of such tragedies are caused by the decision of the person themselves (Sazonov, 2022).

Based on all of the above, we offer an answer to research question No. 2: “What are those psychophysiological properties of the content of the personality of a first-year student at a maritime educational institution that contribute to maintaining the usual level of activation and even improving the functional reserves of his body?” These properties are reflected in the table by elements:

Elements	Positive properties of elements of personality
Mood (critical attitude towards oneself as a subject, positive experiences)	- positive emotional background and context - spirituality, integrity and openness to the world - tolerance towards the society and others - feeling of peace - satisfaction - desire to improve
Activity (focus on achieving a favorable results for oneself and society, the desire for certain actions in a specific situation, self-respect among fellow citizens, self-development/self-education, achievement of subjectively significant goals)	- mental tone is high and positive - increasing the number of socially significant contacts - desire to act for the benefit of society - the desire for creativity in one's activities - family and love for its members is primary - ability to self-realize - pragmatic use of time
Self-awareness (a system of knowledge about oneself as an object, congruence of the real self and ideal self, the choice of positive social roles is constant)	- feeling of financial independence - adequate self-esteem and self-respect - high individual moral standards - personal identity is inherent - activities/hobbies are adequate to abilities, and desires

	- feeling the need to help people - the scale of values is consistent and acceptable socially
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CONCLUSIONS

According to the materials and results of the study, one of the main principles of successful adaptation is the principle of social adequacy and integration into a new transformative environment. It requires not only a mandatory match of the content of the life situation and material resources (the social component of ontogenesis), but also a living environment conducive to favorable biological development of personality (biological component of ontogenesis).

In response to question No. 1 posed in the study: “What are the qualitative characteristics of successful adaptation of a maritime school student in the first year of study?” the following was established - freshmen express a need for personalization, which is characterized by:

- in the structure of consciousness - emotional flexibility, the ability to empathize, developed imagination, good memory, good stability of attention even in stressful situations;
- in the structure of self-awareness - in the scheme of proportions of self-identity (the actual present, there is also an orientation towards the future, the concept of the body is not ignored), the self-concept is dominated by the support of loved ones, tolerance, the need to actualize dispositions;
- in the structure of the unconscious – attitudes are flexible and sociophilic, fears and phobias are not strongly expressed.

The intra-individual and inter-individual substructure of personality dominates in activity and communication, while the meta-individual substructure is rarely realized.

In response to question No. 2 posed for the study: “What are the psychophysiological properties of the content of the personality of a first-year maritime student who are able to maintain the usual level of activation and even improve the functional reserves of his body?”, the following was established:

1. Self-awareness - a system of knowledge about oneself as an object, congruence of the real self and the ideal self, an adequate social self with a constant selection of positive social roles. Activity - purposefulness in achieving a favorable result for oneself and society, the desire for certain actions in a specific situation, self-respect among fellow citizens, self-development/self-education, achievement of subjectively significant goals. Mood - critical attitude towards oneself as a subject, positive experiences.
2. When assessing the lifestyle and social behavior patterns of first-year students during the period of accentuation, all principles of managing the individual's activity are equally relevant: hedonism, relaxation, reduction, as well as the principle of dialectical conglomeration (Vorobjovs, 2002). In the first year, the nominal functional state of students' personality is within the normal range, which qualifies as a favorable level in the experimental group, namely: well-being – 5.6, activity – 4.9, mood – 5.8. This indicates that first-year students are in a compensated state and are ready to adapt successfully.

Answering the main question of this study: “Is the constant need for personalization and activation an indispensable condition for the successful adaptation of first-year students to their new environment and maintaining proper psychosomatic health?” the answer is “Yes, of course, because the need for personalization stimulates the restructuring of the freshman's personality, actualizes integration processes in the new environment, as well as the need for motivation and activity to achieve results. The need to change the structure of psychological activation is stimulated, which causes physiological activation in the form of a chain reaction, increasing the dynamism and energy level of the body both situationally and in the long term. This need largely changes the usual level of activation, directing the personality to reduce tension and even improve the functional reserves of the body.”

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