

War against Terrorism: New Challenges to Military Personnel Selection

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Introduction

The global war against terrorism increases drastically psycho–emotional stress on military personnel, demands tougher standards for their moral and psychological qualities, and raises the price of human errors [15-17]. In this situation it becomes more and more evident that development of principles and methods of personnel selection lags behind the quickly changing conditions of modern military service. In this paper a conceptual project for professional selection of military personnel is presented that is addressing a number of the most pressing problems of updating selection methods in accordance with the demands of the time. The project is being developed by “Jupiter–Z R&D” Center together with other institutes from Saint Petersburg (Russia).

Professional selection yesterday & today

In recent years professional psychological selection (PPS) has encountered the following challenges [5, 18, 19]:

- Deterioration of individual psychological characteristics of young people caused to a large extent by deterioration of the socio-economic situation;
- Toughening of requirements to individual psychological characteristics of military personnel;
- Increasing economic losses caused by attrition of military personnel due to professional unsuitability.
- Increasing cost of human errors, including those leading to life- and health-threatening accidents.

The system for evaluation of professional suitability of military personnel (in place since 1985) uses four categories of professional suitability (with some variations for different types of military units):

- 1st — priority acceptance;
- 2nd — unconditional acceptance;
- 3rd — conditional acceptance;
- 4th — rejection.

Analysis of PPS data for cadets of higher military schools obtained in recent years shows that drop-outs among the cadets of the 1st category of PPS amounted to about 2% (every 47th cadet) during the 1st-2nd years, about 5% (every 20th) during the 2nd year, and more than 15% (every 6th) during the 3rd year. Ninety percent of the best students belonged to the first two categories of PPS and 70% of the cadets of the 3rd category were unable to cope with the school's program.

At the end of 1980s – beginning of 1990s a sharp increase in the number of young people taking drugs, having behavioral problems and living in dysfunctional families was registered. Combined with negative socio-economic trends of the time this led to drastic reduction in the IQ and in the level of frustration tolerance of recruits (fig. 1) [18, 19].

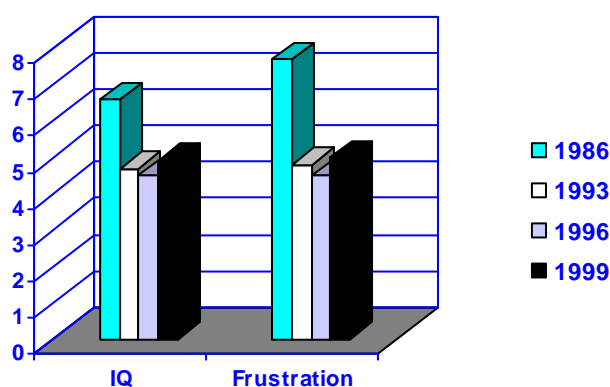


Fig. 1. IQ and frustration tolerance of recruits at 1986, 1993, 1996 and 1999 years.

Deterioration of individual psychological characteristics of young people was also characteristic for those seeking admission to higher military schools. Thus, during 1998 – 1999 only 10 – 13% of applicants were classified as belonging to the 1st category of PPS and as many as 45 – 50% were classified as belonging to the 3rd and the 4th categories.

Recently some positive trends have also appeared. Thus, if in 1992 – 1997 military schools had serious problems with recruitment, last year a considerable number of schools received 10 and more applications per vacancy and had good opportunities for selection of suitable applicants.

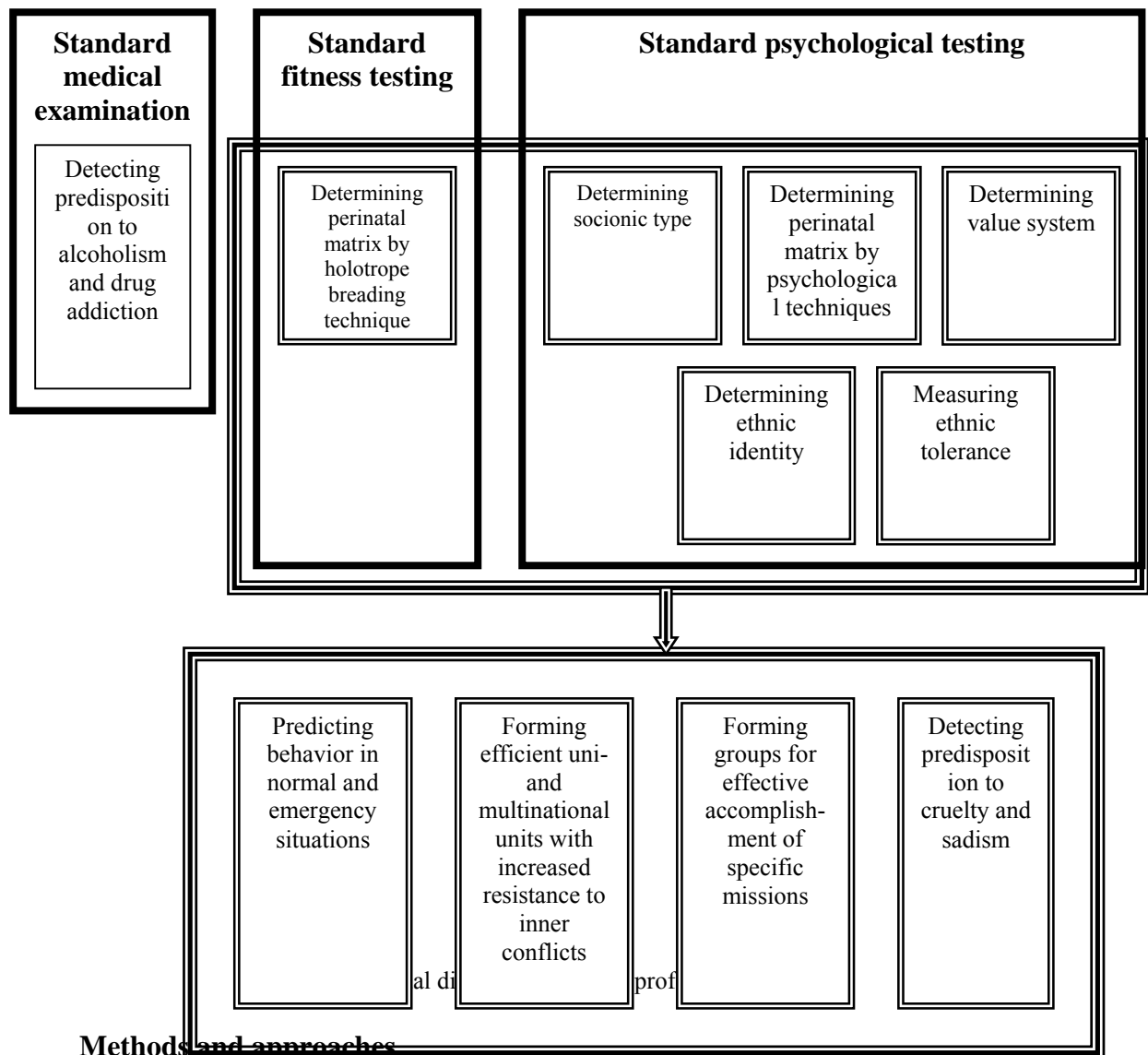
Modern methods of PPS allow predicting progress in academic and military training of cadets of higher military schools and saving taxpayers' money by eliminating unsuitable applicants at the very beginning. Analysis of economic efficiency of PPS shows that each dollar invested in PPS saves 300 dollars in costs of failed training of military personnel.

Modern methods of PPS make sufficiently accurate but often not detailed enough predictions. At present 30 – 35% of 1st- and 2nd-year cadets have serious adaptation problems and need psychological and even medical correction. Ninety percent of such cadets were classified as belonging to the third category of PPS.

Project's Objective

The project is aimed at development and implementation of a new concept for professional selection of military personnel that would take into account recent achievements in psychology and psychophysiology. It is to make available means for selection and formation of military forces capable to operate reliably under unpredictable conditions of the war against terrorism. The new approach will provide methods for determining the qualities

of candidates that are necessary to form units with maximum operational efficiency for accomplishing particular missions. The concept that is being developed does not substitute for, but complements in a natural way the existing methods of selection that proved their efficacy over the years. Schematic representation of the proposed concept is shown on fig. 2.



Methods and approaches

To predict subject's behavior under conditions of military service, to prevent possible conflicts, to form efficient units we use approaches and methods developed in socionics [2, 3, 21]. The main ideas of socionics are a development of Carl Jung's concept about existence of stable psychological types. Socionics studies not only psychological types, but also intertype relationships.

Sixteen socionics personality types are obtained by classifying people using four independent factors: introversion – extraversion, logic – emotion (inclination to logical analysis or to emotional reactions), intuition – sensory perception/processing/reactions, rationality – irrationality. The set consisting of 16 types is called the socion. It is shown theoretically that there exists a group of 15 mutually orthogonal cross-sections of the socion, including Jung’s four basic dichotomies. Based on experimental results and theoretical inferences, 15 semantic axes were singled out that correspond to 15 dichotomies of the socion. Every pole of any of these features is some general characteristic of people belonging to this group of types. These features can be used both for diagnostics of the type and for its description: extraverts – introverts, statics – dynamics, questims – declatims, positivists – negativists, intuitives – sensorics, logicians – ethicians, tacticians – strategists, constructivists – emotivists, irrationalists – rationalists, compliant – obstinate, careless – prudent, individualists – collectivists, subjectivists – objectivists, sober – resolute, democrats – aristocrats [21].

Socionic types are based on information metabolism (IM), which is the process of perception and processing of information [2, 3, 10]. IM is described by eight elements characterizing information-, energy-, space-, and time relationships (Table).

Table

Elements of information metabolism

№	Name	Description
1.	Subjective logic (SL)	Individual logic, individual explanations, descriptions, concepts, theories; individual picture of the world, individual outlook.
2.	Objective logic (OL)	Logic of the objective world, objective circumstances, facts, real links between events.
3.	Subjective intuition (SI)	Inner harmony, inner state, mood, sense of time, evaluation of events and of people’s conduct, morality.
4.	Objective intuition (OI)	Sequence of events from beginning to end, schedule, potential possibilities, program of behavior, style and rhythm of life.
5.	Subjective sensory IM (SS)	Individual inner sensations: gustatory, tactile, sexual; general state, state of health.
6.	Objective sensory IM (OS)	Form, action, movement, act, appearance, gestures and facial expressions, will.
7.	Subjective ethics (SE)	Individual attitude to people, individual emotions.
8.	Objective ethics (OE)	External relations, relations between people and attitudes of people to oneself.

The functional model [9] allows analyzing characteristics of every type. The functions reflect zones of confidence, ignoring, creativity, norms, self-appraisal, problem solving, dependence, fears of a person. Graphic representation of the model is called Kalinauskas’s wheel (fig. 3).

Names of the types in socionics reflect the first two leading functions: the principle of existence (the zone of confidence) and creativity. The type with objective intuition as the first function and subjective logic as the second is called intuitive logical extravert (ILE). Socionics considers also the following types: sensory ethical introvert (SEI), ethical sensory extravert (ESE), logical intuitive introvert (LII), logical sensory introvert (LSI), ethical intuitive extravert (EIE), intuitive ethical introvert (IEI), sensory logical extravert (SLE), sensory ethical extravert (SEE), intuitive logical introvert (ILI), logical intuitive extravert

(LIE), ethical sensory introvert (ESI), ethical intuitive introvert (EII), logical sensory extravert (LSE), sensory logical introvert (SLI) and intuitive ethical extravert (IEE).

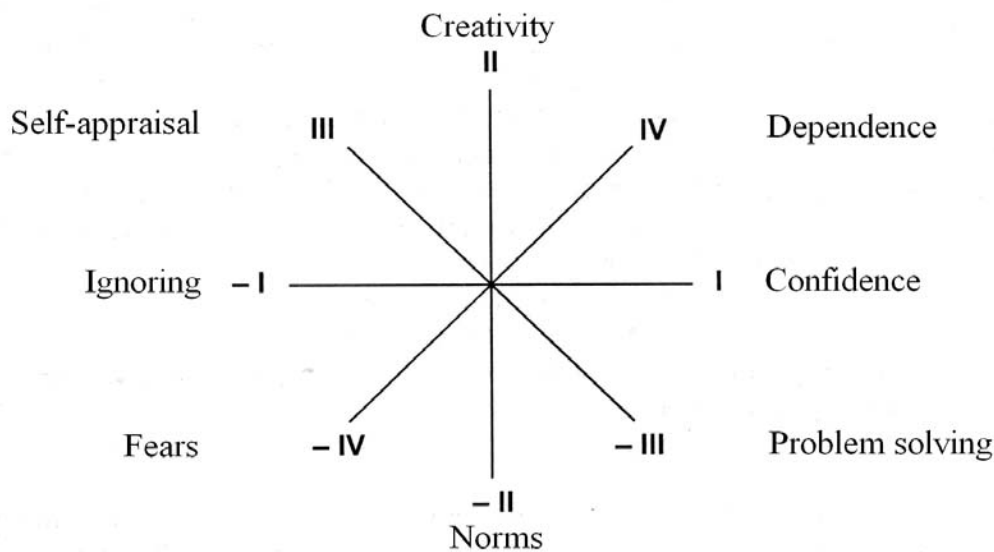


Fig.3. Functional model of information metabolism

Knowing the IM type, it is possible to predict behavior of a person in various situations and his relations with people, as well as functioning of groups of people. For example, for ILE it is difficult to remain within social norms, to function under conditions of strict discipline (his function opposite to creativity, that is the zone of norms, is objective logic). However, in an emergency situation he will take on the leadership and act resolutely and coolly. This quality seems to be connected with his first strong function, objective intuition, which generates the effect of time slowing, and with strong support to his self-appraisal function (objective ethics, “I want to be loved and highly valued”). It is this self-appraisal function that makes him a weak manager or commanding officer, because these social positions make his third function constantly suffer. SEE and SLE are born leaders and commanders: the former of the higher rank, the latter of the lower. It should be taken into account, though, that SEE has objective intuition in the zone of fears, and if the situation is fully controlled and predictable, there will be nothing to do for a person with this type of IM. So SEE will have a tendency to create situations of stress, conflict, catastrophe, which will give him or her opportunities to take decisions determining further course of events.

Socionics allows predicting relationships among people on the basis of structural description of personality. Different people have the same elements on different levels, so that, for example, the zone of fears of one person can be in the creativity zone of another, which will cause tension in their interpersonal relations.

Socionics can predict points of conflict – not only the place and the time, but also conditions leading to their arising. For any group of people it is possible to make up a matrix of interpersonal relations, each square of which will reflect relations between the types of particular people. On the basis of this matrix conclusions about problems that are likely to arise in the course of accomplishing various missions can be made.

A special object of socionics is a small group consisting of four people (tank's crew, artillery team etc.). Theoretically 35 types of small groups are obtained differing from one another by the spectrum of interpersonal relations. Observations show that the group will have specific qualities depending on the spectrum of those relations [21].

If the socion is split according to two features "aristocrats – democrats" and "objectivists – subjectivists," four groups of the "Quadra" type will be obtained. Members of "Quadra" have the same way of social intercourse and the same world outlook. There is also the third common trait concerning looking for completeness of the outer or of the inner situation. Concurrence of these three traits produces a certain synergism, initial background understanding. There is an abundance of energy in the group, people have different abilities, and they support and complement one another. The group has high working capacity. "Quadrads" consist of: 1. ILE, SEI, ESE, LII; 2. LSI, EIE, IEI, SLE; 3. SEE, ILI, LIE, ESI; 4. EII, LSE, SLI, IEE.

The features "logicians – ethicists" and "the sensory – the intuitive" split the socion into 4 groups named "Club". The types in the group are so different that together they can address a problem in its entirety. The group is good for a brain storm. Each has his own view on the problem, so the discussion can be very productive. However, the group is ill fit for physical labor and joint implementation of projects, because they have different ways of social intercourse, also different values, creativity functions, styles of work.

In the group "Square" (ILE, SEI, SLI, IEE; LSE, EII, ESE, LII; LIE, ESI, LSI, EIE; SLE, IEI, ILI, SEE) spontaneous relaxation of its members takes place. The group is ideal for alleviating tensions, for psychological relief.

In the group "Ring of Social Control" (example: ILE, LSI, SEE, EII) strongly deformed tense space is generated, in which people are incapable of any joint activity. More or less prolonged staying in such group causes strong neurotization.

In the "Health Group" (ILE, IEE, IEI, ILI; SEE, SLE, SEI, SLI; EII, ESI, EIE, ESE; LSE, LIE, LII, LSI) a kind of mutual energy feeding takes place. After 1.5 – 2 hours of interaction all members of the group feel better and demonstrate normalization of such objective characteristics as blood pressure, pulse rate, and breathing parameters.

In the "Bouquet" group (ILE, IEE, SLE, SEE; ESI, EII, LII, LSI; LSE, LIE, ESE, EIE; LIL, SLI, SEI, IEI) people with a set of certain diseases are gathered, who initiate mutual deterioration of health: something like resonance at weak places occurs.

Thus, by determining socionic types it is possible to select candidates with a potential for leadership (SEE, SLE), capable to operate efficiently under conditions of strict discipline and hierarchy (LSI, LSE), with an ability to show their best in emergency situations (ILE). Small groups (artillery teams, plane and tank crews) should have the structure of interpersonal relations of "Quadra" or at least of "Health Group", but not of "Square", "Club", "Bouquet", "Ring of Social Control". The matrix of interpersonal relations allows prediction and timely prevention of conflicts in any unit. People with relations of the "Conflict" type should not be put in a position of direct subordination.

Units for specially important and dangerous missions should include at least one or two people who reveal their best qualities in emergency situations, though in normal situations they may be not very successful. To confirm the ability of a candidate to operate effectively in emergencies we use a "proof-reading test" with increasing speed of stimuli presentation and simultaneous registration of a number of physiological parameters.

At present we are analyzing data obtained in the course of more than 10-year application of socionic typology and theory of intertype relations for selection of personnel and psychological diagnostics of servicemen operating under special conditions.

Discussion & conclusions

A distinguishing feature of the concept for military professional selection we are developing is testing of the most important psychological and psychophysiological functions of candidates. Some of these functions are formed in genotype's frameworks, the foundations of others are laid during phenotype formation and some evolve in the course of structural adaptation. Knowledge of deeper human structures allows not only to predict reliably human behavior in various situations and under various condition, but also to develop effective individual educational programs.

Traditional methods for personnel selection may involve evaluation of more than three hundred psychological characteristics [11]. For their evaluation most characteristics require at least several stimuli. In spite of complexity of testing, to get a coherent projection of the candidate's behavior in various situations is often rather difficult.

We operate with a stable psychological formation with specific internal links that is called psychological type. A set of standard behavioral programs, which are activated in various situations, is inherent to each psychological type. So, if we know the psychological type of a person, we can reliably predict his behavior. To diagnose the type, determining of a rather small number of features is sufficient, making it possible to incorporate the stimuli for the diagnostics of the type into standard psychological tests used for the selection of military personnel. It must be emphasized that applying the techniques of socionics allows not only to select people for accomplishing specific missions, but also to form effective units with strengthened resistance to internal conflicts.

Modern military operations and actions of the near future will be characterized by ever increasing involvement of multinational military personnel. It means that taking into account candidates' patterns of behavior and world-outlooks determined by their ethnic identity acquires paramount importance. We address this problem incorporating into standard psychological tests subtests developed by ethno-psychologists.

The concept for the professional selection of military personnel we are developing incorporates in a natural way new tests into the tests that are currently used, thus allowing, without making the testing excessively complex, to select the best candidates, to organize effectively their training, and to form military units best suited for meeting challenges of the present situation that is becoming more and more complex.

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