Subconscious Semantic Response Measurement (SSRM Tek) Methodology
As a Cost Effective Screening Approach in Aviation Personnel Contractors and the Public.

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Abstract
SSRM Tek is based on the mathematical analysis of the event-related reactions tested in reply to a presentation of consciously unrecognizable test stimuli to the subject being tested.

Test stimuli are specially picked and grouped as a semantically meaningful word, short phrases and/or image. Then by disguising the stimuli, it makes the presentation of the words consciously unrecognizable. Such an approach allows to overcome censorship of the conscious mind and to determine which test stimuli are personally significant for the subject tested, and to carry out the diagnostics of the motivational realm of the individual being tested.

SSRM Tek uncover subjects with increased risk of distortion of the motivational and emotional realm, which can be manifested by adverse behavioral reactions (criminal, asocial behavior, terrorist activities, propensity for drugs, alcohol and psychoactive substances, suicide attempts and tendencies).

No previous knowledge of any kind of the subject is required for effective testing. The subject tested can not prepare for the testing and can not affect either the testing procedure or test results. The test administrator can not affect or alter test results.

Introduction
Many scientists from around the world for over one hundred years have successfully studied the subconscious mind. **SSRM Tek (Subconscious Semantic Response Measurement) is the first to accomplish it in a non-scientific, user friendly environment enabling users with little or no scientific knowledge to administer and analyze the results.**

Psycho semantic analysis, using **SSRM Tek**, was developed by tapping into the knowledge of hundreds of scientists from around the world. This body of knowledge was studied during the development of this very sophisticated technology

Background
The concept of Psycho Semantic Analysis has been discussed amongst scientists for over five decades. In 1953 Jacques Marie Émile Lacan published "Fonction et champ de la parole et du langage en psychanalyse" where he argued that speech and, more generally, language were central to psychoanalytic practice and to any theoretical conclusions that might be extrapolated from it. This is where Psycho Semantic Analysis took its roots.

For the last 35 years scientists speaking different languages published a variety of papers in the area of the subconscious mind. Their results showed that it is possible to obtain responses to subconsciously-presented visual or auditory stimuli measuring the cutaneo galvanic reflex, respiratory reaction, reaction of blockade of an alpha-rhythm in electroencephalography, plethysmography or visual-motor reaction etc.

Within the concept of the human psyche, the subconscious mind could be considered as "information", yet it is unknown where this information is stored.
The general informational categories for humans are books, songs, movies, pictures, and other information obtained from their surroundings. The features of this information are that it exists in the way our human psyche perceived it, and does not change itself.

On the other hand, the features of the subconscious mind as an informational category are developmental and exist in a constantly changing state.

The psyche is not a continuum but a multivariate, non-stationary, non-linear, dynamic self-organizing oscillatory process.

The substratum of this process and its carrier is the human brain. Parameters of the human brain have become gradually accessible to measurements but provide little help to study the psyche.

- How do you measure the process that develops simultaneously in many dimensions and not only in existential coordinates, but rather in psycho semantic ones which are very difficult to imagine?
- How do you measure a process, which is non-stationary on all parameters considering that during each moment of measurement it has new, sometimes opposite parameters?
- How do you measure a process whose reactions to the same test measurement are not simply non-linear – they cannot be described by any functional relation - but are represented as stochastic and even sporadic function?
- How do you measure a process for which all parameters are dynamically changing in an unpredictable fashion?
- How do you measure a process for which all the above described unique features are also constantly changing in complex variances in addition to the constant progression of information and its processing?
- At last, what do you do, if the multivariate, non-stationary, nonlinear, dynamic self-organizing process of the psyche also changes depending on a multitude of solar, lunar, daily, hormonal cycles and basic instincts?

The answer is that there are no absolute measures or methods of measurement of the multivariate, non-stationary, nonlinear, dynamic self-organizing process of the psyche.

The only one unique way of measuring the psyche is the dynamic method of psycho probing which, for various groups of the population, allows one to statistically uncover significant spheres of importance to the human psyche.

With the development of the psycho probing method, it is now possible to dynamically measure responses of the subconscious mind.

The computer psycho-semantic analysis method, based on psycho probing, can be applied successfully in all areas where the object of research is the human psyche.

The SSRM Tek Premise

SSRM Tek is based on the universal principles of human behavior and scientific experimentation. Humans are the product of information of their surrounding environment. Any traits, influences, abilities, etc are described and experienced through words, pictures, sound etc.
Information is categorized and prioritized by emotions throughout one’s life. The major content of the human’s informational being is not accessible to his/her conscious mind. *It belongs to the subconscious mind.*

**Basis of Scientific Experiment**

*SSRM Tek* was developed using the universal principles of scientific experimentation. Each experiment consists of:

- Control, Probe/Stimuli, Reper (Reference point) and Registered response

Each person is his own control, since every person’s psyche is different. It is important to understand that every individual test is a complete scientific experiment since it contains all the above-mentioned components.

**Control**

SSRM Tek’s controls are stimuli that have no meaning to the subject. They are in the form of a row of randomly-chosen 15 numbers that flash across the screen at a fraction of a second, registering through the retina into the brain. This control is then masked by a different row of randomly-chosen 15 numbers. The first row, the control, is seen subconsciously. The second row, the masker, is seen consciously.

**Probe**

The probe is semantically meaningful stimuli in the form of a word that moves across the screen at a fraction of a second, registering through the retina into the brain. This probe/word is then masked by a row of randomly-chosen 15 numbers. The probe/word is seen subconsciously and the masker row of numbers is seen consciously.

**Reper** (Reference point)

Reper is a different kind of control. It is a measurement developed to gauge defense reaction (the subject’s reaction to the “punishment” they receive during the test). This reaction is then measured to know how the subject’s subconscious mind responds defensively.

**Registered Response**

The subject is asked to push a button each time they see a row of numbers. The combined visual and motor reaction to the controls, probe and reper are measured by the response time between a stimuli and the subject pushing the button.

Rigid requirements are placed on the respondent ensuring that they are unable to alter the test results in any way. The speed at which they react is measured using a sophisticated mathematical analysis. The relationship between the control, probe and reper is analyzed by measuring deviations between the three components.

The program consisted of the following procedure: words or short phrases prepared in advance were quickly flashed on the computer monitor screen, but instead of words, the subjects being tested saw a row of 15 random numbers that the program overlaid over the words/stimuli. Subjects being tested pressed a special button at the occurrence of each stimulus on the monitor screen. The program registered the time of reaction as the time from the moment the stimulus was presented until the moment the button was pressed. Subjects being tested did not realize that they were answering questions, but the brain, nevertheless, registered the information that was hidden behind the row of random numbers and reacted to it irrespective of the will and desire of the subjects being tested. It was clear that subjects being tested could not prepare in advance for such a procedure and could not control their reactions. In fact, the subconscious mind of the subject being tested reacted without participation of the person’s conscious mind. This exact phenomenon allowed us to obtain accurate, not falsified, answers. Subjects being tested
perceived the procedure as a game in which all depended on the subject’s dexterity and attentiveness, not suspecting that hidden behind the row of random numbers were words and/or short phrases.

Thus the psycho-semantic methods appeared indirectly, presented to the examinee in the form of a "verbal game," appealing only to the linguistic competence. These methods actually opened the subjective content of language symbols that were embodied in the structural formation work of categorical principles (psychologically real motives and goals of the subject).

Method of validation
Validation of psycho probing is not a simple procedure because current knowledge is based mostly by observation. Currently, in dealing on the observational level, it is difficult to choose the subject both for control and known deviations. For example, with a group of pedophiles or those who are suicidal, until someone actually acts on their deviation and they are caught – or survive, it is impossible to know whether or not they actually are a pedophile or suicidal. These patients are usually under medical treatment and therefore it is difficult to evaluate them since they are in different stages of their deviation. Whereas, SSRM Tek allows one to test for these deviations before they are ever manifested.

Following are four methods that SSRM Tek’s developers used to validate their results.

1. Scientists compared information received from SSRM Tek with information obtained with the help of other investigative sources. For example, they used information obtained from the subject, his/her relatives and co-workers, and other accepted tests. Major experiments were conducted by law enforcement officials in the Krasnodar region, one of the largest in Russia, and in Moscow. Officials verified information obtained through SSRM Tek with results of lie detector tests and general investigations. (“Law Enforcement” and “Criminal Cases” reports)

2. Experimentally, the scientists included known information, such as the subject’s family name, into the semantic base creating a significant subconscious response to only that name. A person’s family name is an integral part of his identity and has unquestionable significance to the subject. Therefore it can be tested. (I.V. Smirnov, E. Beznosyuk, A. Suravlyev, “Psychotechnologies”, 416 pages –M.: Progress Publisher 1995 ISBN 5-01-004582-6)

A related, documented, but not published test procedure substituted another row of randomly-chosen numbers for the word in the probe section of the test. In this experiment, 0.3% of false positives have been observed in the "recent experiences" part of the test and 0% false positives in the "traits and tendencies section.

3. The scientists also compared the SSRM Tek information with other information obtained during diagnostic or treatment procedures accompanied with dissolution of the consciousness. Narco psychotherapy, amital caffeine disinhibition and initial stages of narcossis were used to diminish the subject’s conscious protective mechanisms, thereby obtaining information not normally available. (I.V. Smirnov, A.V. Moskvm, I.K. Nexdanov, Psychosemantic Correction method in clinic “Medicsinskaya Kartoteka” 5,2000)

4. Another validation method utilized was the analysis of the therapeutic effectiveness of the treatment. Scientists uncovered areas of concerns that required treatment, such as suicidal tendencies or depression. Post treatment, patients were retested with SSRM Tek, which indicated that these tendencies no longer existed. A revealing study was conducted at the Moscow Medical Academy. (Medical Ailments – Suicide report)

A scientific study was also undertaken at Aeroflot Airlines that tested its pilots, treated them then re-tested them to evaluate the treatment. (Airline Industry – Aeroflot report)
SSRM Tek. is being validated (Table 1, Fig. 1) every day by many users in the Russian Federation, many of which have been using it since 1998.

Table 1 Results of screening test of various populations using SSRM Tek

Those users include medical organizations including individual psychiatrists and psychologists, Aeroflot Airlines, law enforcement agencies, the military, private industry, and financial institutions. Fig.1 SSRM Tek. test.

<table>
<thead>
<tr>
<th>Population studied</th>
<th>Total # tested</th>
<th># tested at risk</th>
<th>Multiple topics</th>
<th>Alcohol</th>
<th>Suicide</th>
<th>Illicit drugs</th>
<th>Criminal</th>
</tr>
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<tbody>
<tr>
<td>Army Recruits</td>
<td>514</td>
<td>70</td>
<td>28</td>
<td>10</td>
<td>14</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Students (ages 11-17)</td>
<td>52</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Law enforcement HR</td>
<td>212</td>
<td>39</td>
<td>39</td>
<td></td>
<td></td>
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<tr>
<td>Prison guards</td>
<td>320</td>
<td>186</td>
<td>134</td>
<td>52</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Aviation personal</td>
<td>37</td>
<td>19</td>
<td>8</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>PTSD military person</td>
<td>33</td>
<td>30</td>
<td>33</td>
<td>24</td>
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<td>Hospital patients</td>
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<td>5</td>
<td></td>
<td></td>
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