Highlighting Intra-Psychic Conflicts Using Altered States of Consciousness (ASC)

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Abstract

The rational, subconscious and unconscious intra-psychic conflicts manifested causing, by psychosomatic conditioning, undesired psycho-emotional and somatic manifestations can be highlighted using altered states of consciousness (ASC). Using hypnosis to induce altered states of consciousness (ASC) to the experimental group (N = 18, M = 21.1 years, SD = 2.41), at dummy response type investigation, we found that the signal transmission via adrenal-somatic axis up to manifestations is processed in a longer time than the signal transmission from the Ideo-Motor Reflex centers of the two cerebral hemispheres at effectors muscles which decode the transmitted signal. Under these conditions, the measured response time differences using polygraph and pressure sensors for Ideo-Motor Reflex signal, are given by the complexity of intra-psychic processing of related facets of specific aspects of the Self.

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1. Introduction

The term personality has its origins in the Latin word "persona", meaning "mask". Ancient theater actors used masks not to hide their identity, but to represent, to characterize the character.

Contemporary, some authors define (Opre et al, 2002) [1] personality (even if as a working hypothesis) by referring to those characteristics of a person that justify the consistency of his behavioral patterns.

The personality unity, instability, and increased duplication are based on a core element, fundamental as the core of personality, represented by the Self, with all its aspects: Mine, Self, Myself.

The psychosocial stage (from the eighth decade so far) marks a rediscovery of the Self as an organizer of knowledge and as regulator of conduct, all on an affective-emotional basis. Zlate (1999) [2] developed a

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synthetic model – integrative-of personality comprising: real Self or real personality, self-representation or the self-assessed personality, ideal the Self, the perceived Self, the designed Self and the manifested Self.

After Golu (2002) [3], the Self includes three interrelated and mutually integrated components, so called Self’s facets:

1. The physical (somatic) Self - the valued image of the body's internal environment and physical constitution, emotional experiences related to them.
2. The psychological Self - the image of self psychical internal organization, the internal emotional experiences related to it, the motivation - the need of self-realization, of self-improvement.
3. Social Self – the image of their place and role in society, the internal social values internalized and integrated system, the social reasons, the status reasons, social emotions, social integration will.

Intra-psychic conflict refers to a conflict between different levels of the psyche: conscious, subconscious and unconscious when they show different facets of ego (self somatic, ego). An attitude, behaviour or a rational cognition is the result of the disjunction between action and inner conviction regarding the content of certain facets of the Self.

1.1. The polygraph technique

Mitrofan, Butoi, Zdrenghea, (1992) [4] show that the polygraph technique detects the emotion indirectly by detecting the general trigger reactions, involving both central and peripheral physiological mechanisms. These reactions can be identified because they are transmitted by the autonomic nervous system, which deals with the subconscious vital activity (Anitei et al., 2009) [5]. It is considered that the onset of the emotional-somatic reactions accompanies the subject’s response to the "concerns" issue, and these reactions are shown in the polygraph records of the physiological parameters.

2. Objectives

Highlighting the intra-psychic conflicts that refer to the Self’s facets, using induced hypnosis, by measuring the emotional reactivity with the help of the polygraph and of the pressure sensor for the SIM ideo-motor reflex signal.

3. Hypotheses

When responding questions about the Self’s facets statistically significant differences were registered by the polygraph’s sensors in ASC (altered state of consciousness) opposed to OSC (ordinary state of consciousness).

4. Method

4.1. Participants

To test the general hypothesis the pair-groups experimental design was used, using only the experimental group. The group consisted of a number of 18 students of the Faculty of Psychology and Educational Sciences, University of Bucharest, aged between 18 and 25 years old, 3 boys and 15 girls, (m= 21.1 years, SD = 2.41 ).

4.2. Apparatus and instruments

To highlight the ideo-motor reflex response we used the polygraph or the so-called "lie detector" is an instrument that measures physiological reactions, equipped with two channels to measure the thoracic and
abdominal respiration, an electrodermal response measuring channel and one for blood pressure and heart rate measuring channel. The FSR pressure sensor is coupled with an automatic system signal acquisition.

4.3. The working procedure

Through this procedure we aimed to obtain data which show the influence of induced hypnosis on emotional reactivity. These data were highlighted in the physiological parameters records using the polygraph machine when an altered state of consciousness (ASC) is induced, maintained and deepened in the students from the experimental group, and it is then measured using the Stanford Hypnotic Susceptibility Scale, form C. Students answered to questions that evoke the many facets of self. Ideo-motor reflex response data were also recorded to reveal a way for assessing the state of intra-psychic conflict.

4.4. Experimental design

We used a pretest-posttest matched-pairs experimental design. The independent variable was the applied psychotherapeutic technique - induced hypnosis. The dependent variables describe the somatic and psycho-emotional states of the subjects and consist of the following: electro-dermal response amplitude, time to return, EDA resistance value, heart rate, blood pressure, respiratory rate - all measured with the polygraph and the response time measured with the pressure sensor.

5. Results

For the polygraph obtained data none of the dependent variables has the values normally distributed. In applying Wicoxon nonparametric tests statistically significant differences were confirmed for both sides of the Self. So, for the somatic Self statistically significant differences of the responses given in ASC to those given in OSC for the dependent variables: time to return (Z = -7.48 p = 0.000 <0.001), EDA resistance value (Z = - 8.23 p = 0.000 <0.001), blood pressure (Z = -4.99 p = 0.000 <0.001) and respiratory rate (Z = -3.55 p = 0.000 <0.001). No statistically significant results were found for the dependent variables electro-dermal response amplitude (Z = -1.41 p = 0.159> 0.05) and heart rate (Z = -1.61 p = 0.1> 0.05).

For the psychological Self statistically significant differences, of the responses given in OSC opposed to those given in ASC, were registered for the dependent variables: time to return (Z = -6.94 p = 0.000 <0.001), EDA resistance value (Z = -7.32 p = 0.000 <0.001), heart rate (Z = -2.61 p = 0.009 <0.01), blood pressure (Z = -4.25 p = 0.000 <0.001) and respiratory rate (Z = -3.85 p = 0.000 <0.001). Statistically significant results for the dependent variable amplitude electro-dermal response (Z = - 0.14 p = 0.89> 0.05) were not revealed.

6. Discussions

The subjects in the experimental group were in an induced hypnotic trance while being in the ASC. The previous statement is strengthened by the fact that the response time (time to return) of the autonomic nervous system (ANS) is longer than in OSC. In the ordinary state of consciousness (OSC) a rational binary answer (RA) was given, and at subconscious level information processing took place; this was manifested as a subconscious answer (SA) and also it was manifested at the level of the physical body, level where different parameters were registered (fig.1a).

The possible relations between the rational, subconscious and unconscious answers (UA) can be grouped as follows: RA=SA=UA showing an absence of inner conflict, and RA≠SA=UA, RA=SA≠UA and RA≠SA≠UA showing that an inner conflict exists and that it is situated at different psychic depths (Fig. 1b).
To this response types we can associate specific response times as follows: $t_0$ specific for RA, $t_1$ specific for SA, $t_2$ specific for UA and $t_3$ specific for AIDM (ASC response time using SIDM).

When a question is asked in OSC, a type dummy verbal response is registered (RA) at $t_0$ time, and the polygraph sensors register the subconscious response (SR) processed at $t_1$ time, resulting that $t_1 > t_0$.

Fig. 1. (a) Example-differentiations of parameter values recorded with polygraph equipment that have meaning that there is a intra-psychic conflict between the subconscious (SA) and unconscious (UA) levels relating to the physical (somatic) Self. (b) Example of the graphical differentiation of the intensity (size) of the intra-psychic conflict regarding the physical (somatic) Self as a response to the question "Do you feel good about your body image?" (Electro-dermal activity parameter)

After the subject was put into a cataleptic ASC, verified with the Stanford hypnotic susceptibility scale, and the question corresponding to the desired Self facet is put, the polygraph records show the relationship between $t_2$, $t_1$ and $t_0$.

In the altered state of consciousness (ASC) the information processing was made at an unconscious level and the appropriate answer was obviously manifested at the same psychical level (UA). In accordance with our findings, we have built the table 1.

Table 1. The relation between the response times in OSC and ASC

| Action         | Consciousness state | Response type| response time | Relation between the response times |
|----------------|--------------------|--------------|---------------|-------------------------------------|
| Questioning    | OSC                | RA/ $t_0$    | SA/ $t_1$     | $t_1 > t_0$                         |
|                | ASC                | UA/ $t_2$    |               | $t_2 > t_1 > t_0$                    |
|                | OSC/SIDM           | AIDM/ $t_3$  |               | $t_0 < t_3 < t_1$                    |

We can observe that a longer time is required ($t_1 > t_3$) for the signals transmission through the adrenal axis (path 1) to take form in somatic manifestations (heart rate, blood pressure, temperature, sweat activity), than it is required for the signal to be transmitted from iedo-motor reflex centers of the two cerebral hemispheres (path 2) to the effectors muscles.

In these circumstances the question is: is the response time difference given only by the route followed by the signal (path 1 or path 2), or also by the complexity of intra-psychic processing, regarding the subject of the investigation (a specific aspect of Self facets) appropriate to the state of the subject at the time of the inquiry. Another aspect of the problem regarding the response time is that of the depth of the intra-psychic level that undergoes the processing caused by the specific Self facet investigated at the moment. We assume that UA is given by the intra-psychic unconscious level and that the answer required a certain amount of time to pass between the moment of the question and the polygraph registration of the somatic parameters. Considering the
issues raised, it can be assumed that the response time is directly related, perhaps even directly proportional to the intensity of internal conflict, of the psychosomatic conditionings (Fig. 1b).

The question is: the time necessary to an inner process to physical manifest itself, represents the time required for intra-psycho processing of the data at an unconscious level and the transmission of the information resulting as an algorithm for the autonomic nervous system (which in return processes the data and shows a response that can be registered with the polygraph) or this time interval is required for the information processing although it is contradictory to the level of the intra-psyche instances at which the investigation takes place.

The objective of this study was to show that these intra-psyche conflicts can be highlighted in altered states of consciousness using a pressure sensor (FRS-Force Sensitive Sensor) showing the ideo-motor reflex signal (SIDM). In Table 2 we can see how this becomes possible.

Table 2. Highlighting the intra-psyche conflict (the psychosomatic conditioning) through comparing the answers to the questions regarding the facets of the Self, in ordinary state of consciousness (OSC) and in an altered state of consciousness (ASC) using the ideo-motor reflex signal (SIDM) for a single subject

| Self facets       | Somatic Self | Psychological Self |
|-------------------|--------------|--------------------|
| Question          | 1 2 3 4 5    | 6 7 8 9            |
| Answer OSC        | NO NO NO NO  | YES NO NO NO NO    |
| Answer ASC        | YES NO YES YES | YES YES YES NO    |
| Intra psychic conflict | YES NO YES YES NO | YES YES YES NO |

By comparing the binary answers recorded in the ordinary state of consciousness (SOC), when four of the subjects connected to the polygraph gave rational answers verbalizing the response option (RA) and the answers recorded in an altered state of consciousness (ASC) with the ideo-motor reflex signal (SIDM) the presence of intra-psyche conflicts, of psychosomatic conditioning, can be well noticed. Although this is a highlight with the character of a pilot experiment, requiring further research in this direction, the study highlights the link between rational beliefs and those non-rational one implements at an unconscious/subconscious level that can influence psycho-emotional balance and even health.

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