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THE SCIENTIFIC BASIS OF FINDING PSYCHOLOGICAL STRESS

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Abstract: *IF RATIONALLY, LOGICALLY AND COGNITIVELY, THE VAST MAJORITY OF PEOPLE WHO COMMIT ACTS OF AN ANTISOCIAL NATURE CAN ADOPT A MANIFESTATION OF PLENARY WILL, IN DEFENSE AGAINST ACCUSATIONS, IN TERMS OF EMOTIONAL FEELINGS AND PSYCHOPHYSIOLOGICAL REACTIONS, VOLUNTARY SELF-CONTROL REMAINS WITHOUT EFFECT. MORE PERSONS.*
THE PSYCHOLOGICAL STRESS TO WHICH A PERSON IS SUBJECTED WHEN ASKED QUESTIONS RELATED TO THE ANTISOCIAL ACT, CAUSES THE BODY TO RELEASE HORMONES AND A CHAIN OF CHEMICAL REACTIONS, WHICH RESULT IN PHYSIOLOGICAL CHANGES IN RESPIRATORY RHYTHM, TENSION , PULSE AND RED, CONCOMITANT WITH THE EMOTIONAL STATES CORRELATED WITH THE DENIAL OF THE TRUTH AND THE STATE OF FEAR FELT BY THE OFFENDER TOWARDS THE POSSIBILITY OF FINDING OUT THE TRUTH.
JUDICIAL METHODS AND TECHNIQUES, NEW AND AT THE SAME TIME OLD, EXPLOIT PRECISELY THIS WELL-FOUNDED SCIENTIFIC POSSIBILITY TO REGISTER CHANGES IN THE BODY OF THE VERIFIED SUBJECT, COMPARED TO A CERTAIN STIMULUS, WITH A CERTAIN INTENSITY.

Keywords: *PSYCHOLOGICAL STRESS, EMOTIONS, MANIFESTATIONS, POLYGRAPH, SIMULATED BEHAVIOR*

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PSYCHOPHYSIOLOGICAL INDICATORS FOR DETECTING INSINCERITY

The millennial empirical observation highlighted the known fact, consisting in the fact that whenever the truth is hidden by telling a lie, this fact is accompanied by a whole procession of inner feelings and the embarrassing feeling of guilt. "Have we not in the endeavor to conceal the truth sometimes felt a sudden increase in the heartbeat, blood rising in the cheek, an uncontrollable urge to swallow, or other such phenomena resulting from the fear of the possibility of the lie being discovered? and we have not met with many occasions in which we have been able to detect the lies of other persons by various manifestations such as redness, contraction of the lips, narrowing of the eyes, avoidance of

looking at the "right eye", a special monotony of the voice, a "Forced laughter", a counter-question of "who, me?"(JE. Reid, FE Inbau, 1966, p.14)

Particularly frequently, such manifestations are found in the field of forensic psychology, concretely reflected in the work of criminal prosecution, listening to the accused and criminals. In the vast majority of cases, they, taking advantage of the lack of decisive evidence and weaving reasoning with plausibility issues, frustrate the finding of the truth and the just settlement of cases.

If in a rational, logical-cognitive plan (that of the dialogue between the investigator and the offender), the manifestation of the latter's will to defend himself against the accusations takes place in full, unhindered, sometimes even giving him victory, not the same thing. is possible in the realm of emotional feelings and psychophysiological reactions, where voluntary self-control usually remains ineffective.[1].

"The person who committed a crime during the hearing is in a state of strong emotional arousal, especially when there is a real danger of making known facts that he wants to hide.

A strong emotional reaction involves changes in blood pressure, in the strength and speed of the heart, in respiration (change of rhythm), in the epidermogalvanic reaction. These changes can be recorded on special devices, then analyzing the deviations occurred "(M. Golu, A. Dicu, 1972, p.190).

THE PSYCHOPHYSIOLOGICAL MECHANISM OF THE PRODUCTION OF EMOTIONAL STATES

In committing a criminal act (theft, robbery, embezzlement, murder, etc.) the subject (offender) participates with all his might, mobilizing for his criminal success his entire volitional and cognitive-affective potential.

The implementation of the decision to commit the act provided by the criminal law is preceded by a series of processes of analysis and synthesis and by a struggle between reasons, the deliberation and the executory acts deeply involving the entire personality of the individual. This means that the criminal act does not remain as a random, peripheral acquisition of the offender's consciousness, but to be integrated in it in the form of a stable information structure with specific content and emotional-emotional load, with a well-differentiated motivational role. The assimilation of the deed takes place at the moment of its commission, in the process of perception and direct action with the objects and phenomena from the (criminal) environment and of the sedimentation of their meanings in the adaptive experience in relation to the criminal situation.

Psychologically, the objects, objects or phenomena perceived by the offender during the commission of the crime (tools or burglary tools, weapons, victim, witnesses, the spatio-temporal context of the crime, etc.), depending on their physical and chemical properties (intensity, form , size, color, spatial disposition, resistance of the victim) or their effects (screaming in pain, shouting, the sound of gunfire, etc.) determine positive or negative feelings and emotional reactions of the subject.

Subordinate to the informational characteristics of the deed, the components of the corresponding affective experience are associated, integrating as a component of the individual or categorical image about the criminal deed, according to the psychological principle according to which the stabilization and organization of the image system involves the stabilization and organization of their affective substrate. .

The polygraph techniques, indirectly approaching the plane of the subject's consciousness, seek to highlight whether he reproduces faithfully and sincerely "what he knows", ie the content elements

[1]Hence a wide range of concerns towards the indirect detection of aspects of insincerity, starting with Abrahamsen Kent-Rosanoff, Jung, Rosca (latency time); AR Lucia Mira y Lopez (disorders in the motor experience curve); I. Molnar (questionnaire of the general tendency to be insincere), and ending with psychopharmaceutical substances (House-Claude-Hererra) or electroshock (Corletti and Bini) (Tiberiu Bogdan, 1956, pp. 180-190)

of the "subjective reality" he carries in the plane of his consciousness (elements of time and in any case related to the deed, the mode of operation and the circumstances that triggered the criminal behavior).

Emotional states arise from the moment the suspect is invited to give factual relations and, in general, know the following dynamics in manifestation:

A. The initial state of awareness of the danger (in the case of a culprit) of being identified and exposed introduces the human body, as a self-regulatory system, in a state of increased vigilance (alarm) (CT Morgan, 1956, p.337). This initial state has a diffuse, general, global character, with involuntary triggering and realization, preparing (through the mechanisms of psychophysiological self-regulation) the organism for counteracting the danger. In the case of an innocent person, as a rule, the emotional states are weakly highlighted, having in general, a stenic, positive character, motivated by curiosity and interest for the purpose of calling the investigator. They are also achieved through involuntary psychophysiological mechanisms, reflexes and have a general diffuse character, being poorly highlighted.

B. Once the suspect's questioning begins, the awareness of the informational message of the questions addressed to him realizes in his cognitive plane the involuntary updating of the objectively affective informational moments that accompanied the commission of the deed, by triggering the functional reactions of intentional and latent memory. Due to the surprise factor and the unforeseen element of the questions, the representations about the fact appear suddenly, untimely, surprising the analysis and decision compartment unprepared, in deficit of data and logical subassemblies in the face of the imminent danger of unmasking. At the same time, the affective characteristics, the emotional states and the feelings that accompanied the representations about the deed flood the plane of consciousness, dominating it, by virtue of the inefficiency on them of the voluntary control (Tiberiu Bogdan, 1973, p.102), with a well-defined and distinct character from a specific danger (resulting from the content of the informational message of the question) and accompanied by strong neurohormonal discharges triggered by reflex.

C. A strong source of genesis of emotional states is (along with the "fear of detection", especially after the test of stimulation cards) and the conflict that occurs cognitively and in the decision process, between the field of knowledge data that underlies the true situation and the intentional data domain that underpins the lie.

Consciously concealing the truth requires a voluntary effort, which triggers easily detectable emotional states in psychophysiological parameters. If the denial of truth is possible in the verbal plane of dialogue (during the investigation freedom of conscience is not limited in any way), this is not possible in the plane of neurovegetative reactions, where the conflict acquires proportions, the cortical court leading, through subordinate structures, the centers of the system. vegetative to successive imbalances and rebalancing adaptive to the dangerous situation in which the individual is. Starting from these substantiated scientific data (in the Romanian specialized literature, Ion Ciofu, within the Institute of Psychology of the Academy, imposed himself through the researches on the simulated behavior),[2].

[2]"These reactions can be identified because they are transmitted by a special part of the nervous system. We can say that the human nervous system has two components. A somatic one responsible for transmitting somatic muscular impulses and skeletal posture. Another, older and relatively independent of the central nervous system, the autonomic or vegetative, which deals with subconscious vital activity. We breathe, the heart beats, digestion takes place, hormones are eliminated in the blood flow that passes through the body, the temperature is regulated, the pupil dilates or contracts, without any conscious adaptation ... these changes include flushing or pallor of the face, excessive sweating, increased heart rate, dry mouth, many visceral sensations and more (HJ Eysenk).

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In this sense, there are direct correlations between mental life and cardiovascular changes. The acceleration of the heart rate during emotion was well known long before the problem was scientifically analyzed (Bkov). Experimentally, tachycardia was obtained during the application of a battery of tests that introduced a state of stress (Thiessen), waiting for the electric shock (Kransogorski), even if this wait lasts for tens of minutes (Lundberg), establishing that during immediately before and after the action of the same harmful stimulus, anxiety causes a decrease in this rhythm. The emotion of fear, therefore, is related to cardiac interception, a relationship perfectly expressed by the clinician Brown: fear is an "essential property of cardiac psyche." Another parameter of the activity of the heart in emotion is the vascular changes. Observations, first clinical (Psonic), established that there is a dilation of cerebral blood vessels during emotional states of any kind (Franck), in pain and shame (Mosso) or in anxiety (Negel). [3].

At the same time, the emotion is accompanied by an increase in blood pressure. Regarding the activity of the cardiovascular system, we also mention the glandular effects that can be detected in emotion. In strong emotion (anger) there is an activation of the sympathetic nervous system, accompanied by an excess of adrenaline. As a result, there is a whole procession of physiological reactions that prepare the body to cope with the situation (Canon, Funkenstein); breathing becomes deeper, heart rate more frequent, blood pressure increases, blood flow to the heart and muscles occurs, the processes in the food channel decrease and so on; the liver dilates and secretes blood sugar supplies, and the latter coagulates faster (Ruch, Bkov). In psychic tension, such as that caused by fear, various hormones are secreted in addition to adrenaline: noradrenaline,

Emotions cause through the vegetative nervous system and electrical changes in the skin, both electrical resistance and potential[4]. From the first researches of the application of the cutanogalvanic technique (Pierron, Camppellman) it was established the dependence of the relation emotion-resistance and electric potential not only on the novelty of the body's arousal, on the character of physical or intellectual effort, but, to a large extent, and of affective states in which electrodermal resistance (RED)[5]is particularly active. Using a polygraph method, potential changes were obtained in relation to the emotional load of the word stimulus (Kreindler). In parallel with the electrodermographic reaction, there is an intensification of the activity of the sweat glands. Palm sweat is especially present in the emotion. It can be effectively detected in emotional stress (Funk Hausser) (I. Ciofu, 1974, pp. 38-39, 75).

[3]"The impulses of the sympathetic system can cause rapid heartbeats. They can cause constriction of blood vessels ..., and the acceleration of heart rate and constriction of blood vessels can increase blood pressure " (CT Morgan, 1965, pp. 334-336)

[4] "Psychogalvanic responses have been used in all psychological research tests targeting emotional conditions or measuring emotional reactions to stimuli" (CT Morgan, 1965, pp. 334-336)

[5]"Along with other recordings, RED competed for a better operational definition of emotion. What may be surprising is the correlation between electrodermal activity and the intensity of the emotion, less its quality. However, there are some differences depending on the quality of the emotion; shortening the latency time and increasing the RED amplitude to "wonder" and "surprise"; increasing the latency period and decreasing the amplitude for the states of tension. Ax finds higher values of skin conductance in the emotion of anger than in that of "fear". Chevanes highlights the intervention of unconscious defense mechanisms that subjectively strengthen stimuli with low affectogenic value reflected by RED ". – (I.Fl. Dumitrescu, 1976, p. 262).

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MODIFICATION OF NORMAL BREATHING CHARACTERISTICS UNDER THE INFLUENCE OF EMOTION.

Choking, swallowing, shortness of breath and difficulty breathing are among the changes in breathing that can occur with emotion. The impulses of the sympathetic system dilate the pulmonary bronchi increasing the change of oxygen and carbon dioxide[6].

Usually, after a false response from the offender, in the path of the respiratory rhythm either one or two fast waves with an increased amplitude are highlighted, or the breathing is blocked for a moment or acquires a scalariform character (what polygraph operators call "in steps ").

During the investigation, the experienced officer can, of course, discover and expose the simulated behavior of the offender, using impeccable logic and cracking his defensive system by highlighting the contradictory and sometimes absurd nature of statements that belong to him. Also, the wide range of questions that surprise the offender, subjecting him to unpredictable reasoning and generate a characteristic behavior in mimicry, gestures, intonation, only provides a series of clues that highlight the insincerity and attempts to mislead. Although this way of investigation sometimes gives good results, the discovery of the simulation is uncertain in some individuals, in others being even impossible, due to an increased self-control in the external manifestations of the simulated behavior, obtained by some training or by the habit of recidivist, hardened criminals. Therefore, the most used and safest way for detection is to probe the simulation through physiological indicators, especially those that highlight the inapparent behavior.

The consciousness of guilt, of fear, mobilizing an emotional state that can be masked with difficulty, determines the individual to react emotionally whenever an object is presented to him or a word is uttered in connection with the crime committed. The cardiac indicator and the other vegetative indicators react visibly, even if the offender does not actually lie, but only hides the truth, trying to evade the efficiency of the test, to defeat it ("to beat the test"). But the effort to hide is futile. As Mandsley rightly proves, sadness (as one of the manifestations of emotion), if not manifested in tears, instead forces the internal organs to "cry."

The lie detector (polygraph) exploits precisely this grounded scientific possibility to record physiological changes in respiratory rate, blood pressure, pulse and RED, concomitant with emotional states related to the denial of truth and the state of fear felt by the offender against the possibility of its unmasking. [22] .

[6]"In 1934, CA Ruckmick reviewed the studies of respiration, observing its change in various emotional states: the respiratory rate would increase in the case of a pleasant stimulation and would decrease in the case of an unpleasant one. Benussi claims that the inspiration-expiration ratio is significantly increased before the true response compared to the falsified one, during several respiratory cycles. Conversely, after the assertion of the truth, the I / O ratio is slightly lower than after the assertion of the lie " (I. Ciofu, 1974, pp. 38-39, 69, 72, 75)

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