

## Polygraph Examinations as Preventative Measure of Corruptive Behavior – A Case Study

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### *Abstract*

The following publication presents brief case study of corruptive behavior of an employee of a private company for supplier of electricity. Interview and polygraph examination also was used. It also presents a short analysis of the corruption behavior problem as a psychological category. Methods for integrity assessment and the polygraph method are presented as instruments which have high validity and reliability. Besides the focus on psychodiagnosis of corruptive behavior, this publication pays attention to the need of incorporating preventive measures.

*Keywords:* polygraph, corruption, corruptive behavior, loyalty testing, psychodiagnosis.

### 1. Introduction

The problem of corruption and corrupt behavior attracts the attention of citizens, journalists, psychologists, politicians, economists, legislators and various social institutions (Pinto et al., 2008; Heywood, 2017;). Almost every daily press issue presents readers with information about supposed corrupt behavior by public or private figures (Caiden & Caiden, 1977). The scientific discussion of the topic of corruption finds expression most often through the prism of its legal, economic or sociological aspects (Gould, 2019; Prasad et al., 2019). The genesis, structure and manifestations of corruption in the system of public services are studied primarily through sociological analysis, with the help of public opinion surveys, or in the context of the problems with legal regulations (Hall, 2012; Rose & Peiffer, 2018). At the same time, psychological categories such as goals, motives, values, attitudes, emotions and behavior of civil servants are beyond the scope of scientific analysis, which does not give an opportunity to obtain a comprehensive view of corruption as an ongoing phenomenon.

Providing a comprehensive definition of corruption is considered an extremely difficult task (Rose, 2018). According to Robert Brooks (1910/1970, p. 58), corruption is “the intentional misperformance or neglect of a recognized duty, or the unwarranted excise of power, with the motive of gaining some advantage more or less personal.” Klitgaard (1988: 24) pointed that “corruption occurs when an agent betrays a principal’s interests in pursuit of her own.” According to Marriam-Webster Dictionary (2022) corruption is:

- dishonest or illegal behavior especially by powerful people (such as government officials or police officers): depravity;

- inducement to wrong by improper or unlawful means (such as bribery);
- a departure from the original or from what is pure or correct;
- decay, decomposition.

The term “corruption” comes from the Latin (*corrumpere*) and in literal translation means “corruption”, “waste”, “damage” (Cresswell, 2010; Reshetnikov, 2008). It was first mentioned in Roman law defining activities, aimed at disrupting the normal course of the judicial process or the order of government (Velkova, 2015). By its nature, crimes of corruption are part of self-interest crimes and part of organized crimes (Kulger et al., 2005). It is considered a common type of crime, especially in countries where the economy is poorly developed and it is recognized as crime against humanity (Antonyan, 2004; Bantekas, 2006; Sebake, 2020 Schaefer et al., 2014).

There should be no dispute that the psyche is unified, whole, and indivisible. For this reason, the definition of corruption from the point of view of psychology finds expression in the understanding that it is directly related to behavior. In this sense, corruption in itself does not exist without being manifested through corrupt behavior. For example, Carl J. Friedrich (1997) explains corruption as behavior deviating from the norm in the political sphere and conditioned by a motivation to obtain personal benefit at the expense of society. D. R. Simon (2018) defines corrupt behavior as a dysfunction (deviation) of the ruling elite. Corruption should be seen as the deviant (deviant) behavior of public officials, which is contrary to the interests of society and others. It manifests itself in unregulated use of the existing powers granted by achieved status, in connection with the extraction of benefit for personal, narrow group and/or corporate purposes (Antonyan, 2004; Friedrich, 201; Hall, 2012).

Behavior can be seen as the result of complex socio-cognitive and emotional processing. Its analysis, especially in complex situations such as those related to corruption, can be carried out on the basis of the social learning model predicting behavior proposed in the theory of Julian Rotter (Rotter, 1982). According to him, four main components should be considered:

*Behavior potential* – it is expressed in the probability of performing a certain behavior in a specific situation. In this case, the term “behavior” refers to all types of human activity in response to a stimulating situation that can be measured – motor, emotional, verbal, and non-verbal reactions are included (Krastev & Yordanova, 2017).

*Expectancy* – a subjective perception of the likelihood that a given behavior will lead to a certain outcome or reinforcement. Rotter believes that expectancy is based on the individual's past experience in an identical or similar situation, i.e., the more the reinforcement has been present in the past, the more likely it is to be repeated (Rotter, 1982).

*Reinforcement value* – By “reinforcement,” Rotter (1982) refers to the outcome of the behavior, and its “value” refers to the achievement of desired outcomes. The more desirable the outcome of the behavior, the higher the value of the reinforcement. As with expectancy, the value of reinforcement is subjective and is associated with the expectation that the same behavior will lead to the same desired outcome.

*Psychological situation* – represents the subjective perception and interpretation of the specific situation by the specific person. It is on this interpretation that the expectation and value of the reinforcement depend. Rotter believes that it is always important to keep in mind that different people interpret the same situation differently, and this in turn determines their behavior.

Thus, according to Julian Rotter's (1982) theory, the predictive formula of behavior is a combination between the Behavior Potential (BP), Expectancy (E) and Reinforcement Value (RV):

$$BP = f(E \& RV)$$

Necessities can also be seen as a factor for corrupt behavior. The concept of “need” is generally interpreted as a force that impels a person to action (Lewin, 1935). Until they are satisfied, needs motivate the individual to take action to satisfy them (Maslow, 2019). In this sense, corrupt behavior can be a mechanism for satisfying needs for power, security, money, etc. Motives for corrupt behavior can be broadly divided into internal and external (Petrovsky, 1987). Extrinsic motives can be any external influences. In relation to corruption, these can be social example, approval (especially by a person who is considered an authority figure), avoiding problems or speeding up a given procedure, etc. Intrinsic motives refer to the inner characteristics of the personality. These can be needs for power, money and self-affirmation, a sense of impunity, career ambition and many others.

Antonyan (2004) believes that the causes of corruption crime have a complex nature, on the one hand, because they are a complex of phenomena of different nature, and on the other hand, because they have existed for a very long time and have become traditional and a way of life. As the most important causes of corruption crime, he points to the economic, political, organizational, and psychological ones (Antonyan, 2004). On the other hand, Kamneva and Annenkova (2013) accept that there are a number of manifestations of corruption: bribery, favoritism, protectionism, lobbying, nepotism, provision of soft loans, procurement, illegal appropriation of resources for public purposes, unauthorized distribution and redistribution of public resources and funds, illegal support and financing of political structures, illegitimate privatization, use of personal connections in order to access public resources – services, goods, sources of income, privileges, the provision of various services to relatives, friends, acquaintances, etc.

Corruption can rightly be considered as one of the acute socio-psychological problems of modern Bulgarian society. The Corruption Perceptions Index (CPI), which measures the perception of the prevalence of corruption in the public sector of various countries around the world, shows that in 2018 Bulgaria ranks 77<sup>th</sup> among 180 countries worldwide. This trend is a signal that corrupt behavior should not be the subject of consideration only by law and economics, but also by psychology, which seeks the reasons, factors and personality characteristics that determine such behavior. On this basis, psychodiagnostic tools are the main means of detecting both tendencies for corrupt behavior and realized ones.

Corruption behavior is considered as a special type of criminal activity of officials and its research, in order to limit its manifestation, is highly necessary. The development of theoretical-methodological approaches for the study of corrupt behavior includes the use of conceptual approaches for systematic psychological analysis. “A well-constructed psychodiagnostic procedure is a guarantee of objectivity and reliability of the obtained results” (Mancheva, 2017: 6). On this basis, we will consider the following psychodiagnostic methods, which can be used both as independent methods and as a complex approach to the study and detection of corrupt behavior.

### *1.1 Integrity test*

Integrity can be thought of as a code of ethics according to which people act regardless of circumstances, consequences, external pressures, and personal gain. It is one of the most important, but also one of the most underrated, qualities sought in employees. The goal of every company is to form the best team composed of people who are honest, loyal and do not take corrupt actions. Poor selection can lead to turnover, leaked company information, corruption, sabotage, theft, etc. (Integrity check, 2022).

A widely used method for evaluating loyalty is the Integrity Check test. This test is an objective integrity check tool and it measures personal attitudes towards compliance with social, moral and organizational norms and rules with the main goal – the prevention of theft, abuse, fraud and other types of counterproductive and corrupt behavior in the workplace. It is used in:

- the process of selection of candidates for work in risky professions;
- planning programs and systems to increase loyalty;
- screening and prevention of corrupt behavior, theft and abuse in the workplace.

Integrity check is the first integrity check tool published in Bulgarian.

### *1.2 Polygraph method*

Corruption practices are traditionally associated with countries of low economic status, but corruption and dishonesty have existed for centuries, and will continue to exist to one degree or another in all societies. In an effort to reduce and control corruption levels, scientists have developed a variety of scientific methods. Some of them are related to self-administered integrity tests, others are scientific experiments aimed at establishing the presence of corrupt behavior. Both types of tools are used by employers, and both face the same criticism. To date, no one has invented a method to predict future behavior. There is a highly reliable procedure for detecting past acts of corruption called the polygraph examination that has been used effectively by the public and private sectors for over 60 years (Kurke, 1991).

Polygraph testing, like any type of scientific test, can take the form of a diagnostic or screening test (Nelson, 2015). The purpose of diagnostic tests is to reach a conclusion on the basis of which decisions can be made to take specific actions regarding the case at hand. These actions may affect the rights, freedoms or health of the examinee. For this reason, it is extremely important that the degree of validity of the test which is applied is high. Diagnostic tests achieve a high degree of validity because of the choice of one specific problem on which the test focuses. On the other hand, the purpose of screening examinations is to provide information for decision-makers about the presence of risky practices without a known or established problem (corrupt behavior). This is achieved by asking questions about specific disloyal and/or corrupt practices. The absence of an identified problem (criminal action) is a key feature of screening tests (Wilson & Jungner, 1968). When properly conducted, the polygraph examination can reach up to 95% validity of the result. That is, in establishing the presence of a particular unwanted behavior, we can be 95 percent certain of the result that that particular examinee committed that particular act (Nelson, 2015).

## 2. Case presentation

In order to ensure compliance with ethnic standards and not to damage the reputation of the company, electricity supplier and its employees, it will be named “X”. The employee will tentatively be named “John Smith”. The experts who conducted the polygraph examination have the necessary competencies, according to the APA (American Polygraph Association) and PEAK C.A.T.C. specialized psychological support of the examined person was provided, as an additional ethical consideration.

A private company “X”, a supplier of electricity to citizens, receives a complaint from a customer, containing an accusation that an employee of the company “X” asked him for money in order not to write him a fine in connection with a violation that the citizen have committed and suggested that the citizen pay him a fee to repair the damage as a private contractor.

Company “X” decided to have an interview with their employee, John Smith, to understand how he feels about this and what he has to say about the complaint. He denied asking the citizen for money to cover up his violation and said he hasn’t asked him for money to fix his electrical problem as a private contractor.

After this conversation, John Smith’s manager decided to seek the services of a consulting company and subject John Smith to a polygraph test in order to check the veracity of his statements. John Smith agreed.

### *2.1 Demographics and personality*

At the time of the study, John Smith was 38 years old, married with one child – 9 years of age. He is visibly calm and communicative, with lively facial expressions. Makes good visual and verbal contact and has a good appearance. The family lives with John Smith’s parents in a town with a population between 50,000 and 100,000. One year before the crime in question, he took a bank loan to buy an independent house in the same town.

The psychological assessment was carried out through a battery of psychological inventories and methods, including Bulgarian adaptation of MMPI-2 (Butcher et al., 2001) and IST-2000 – R (Amthauer et al., 2001). The results showed that John Smith has an extroverted orientation and a choleric temperament. His IQ is 98. In a calm environment, he is sociable and positive, under-controlled, manipulative. In extreme or different from the typical environment, he is impulsive, excitable, and sensitive. He demonstrates high levels of self-confidence as compensation for his inner self-doubt, missed life chances, and unsatisfied need for support and recognition. He shows apparent restraint and self-control but does not know how to process failures rationally and accumulates internal tension and hidden aggressiveness. Because of this, he tends to lash out on trivial occasions that do not correspond to the actual cause of his irritation. Self-centered and narcissistically vulnerable. Hypochondria, depression and paranoia are not considered. Interests are similar to those of most men. Excessive drinking is not considered neither. Typically, does not experience disabling anxiety but does feel sometimes nervous.

### *2.2 Pre-test interview*

During the pre-test interview John Smith shared information regarding his work, his duties and the usual steps all employees take when they go to a client who needs to be fined because of fraudulent behavior. He said he works for the company for five years and has been awarded employee of the year two times. Also, added he took a bank credit one year ago because he bought a house for his family and has been having some financial problems since then. John Smith denied ever taking money from citizens, clients of the company mainly because he was afraid, they could tell his bosses. He claimed he never did anything disloyal to his employer.

After John Smith was informed about the procedure, the questions he will be asked during the exam, he signed a declaration for informed consent. He agreed to take the polygraph in order to check the veracity of his statements in regards to the signal against his which the client sent to company “X”.

### *2.3 Instrumental part*

During the instrumental part of the examination, an Acquaintance test was performed in order for the examinee to get used to the procedure and for the examiner to make sure Smith can follow the instructions given. Then the exam regarding the main topic was performed using an LX5000, manufactured by Lafayette Instrument, USA. A 10-channel polygraph with all

sensors, including a seat sensor which monitors movements on part of the examinee during the test. AFMGQT v2 2 RQs validated polygraph technique was used. Two diagnostic tests were performed in order to check if Smith has taken money from the particular citizen who is a client of company “X” and if he has ordered him to provide services and private contractor.

#### *2.4 Data assessment*

After conducting the instrumental part of the test, the analysis of the collected data (evaluation of the charts) starts. The assessment is carried out using the ESS – a validated three-level scoring system. Accordingly, in zone analysis, scores are given for each of the relevant questions in each of the individual charts. Each channel is evaluated independently of the others in the charts. The breathing channel has a cumulative score of -1/0/+1 depending on the subject’s reactivity; the electrodermal activity channel is scored with -2/0/+2; the heart activity channel: -1/0/+1. After summing all scores from all channels in all charts, the score for each relevant question falls into one of the following categories: Deception Indicated, Inconclusive, No Deception Indicated.

The reached conclusion on both tested topics was: “Deception Indicated”, meaning the examinee failed both exams.

#### *2.5 Post-test interview*

After a polygraph examination, during which he was asked whether he asked for money from subscribers of the company in order not to give them fines and whether he offered private services for a fee, it became clear that Smith was not telling the truth. After a post-test interview, Smith admitted that he had indeed committed the acts of which he was accused. He said he's sorry for what he did but excused himself by saying that “all electricians do that.”

As a result of the work done and the analysis that followed, the company “X” decided to implement the polygraph examination in its methods of controlling employees and preventing disloyal and corrupt practices.

In this way, Company “X” improved its quality of work, employee satisfaction, and enhanced its image as a company which is responsible to its employees and customers.

### *3. Conclusion*

The primary purpose of polygraph examinations used in the public and private sectors is prevention. Specifically, prevention of disloyal practices, corrupt behavior, theft and other crimes. On the one hand, screening tests can be conducted as part of recruitment procedures in order to hire employees who are reliable and loyal. On the other hand, employees may be subjected periodically, every 3 or 6 months, to a polygraph examination, in order to establish the presence of contraindications for holding the position, or in other words – in order to establish corrupt or disloyal practices on their part. These practices may include abuse of position and access in exchange for favors or money, improper giving or receiving of money, disclosure of confidential information, etc.

Preventing corruption is both an organizational and an individual ethical responsibility. Although it depends on the individual, it can be unwittingly encouraged or protected by certain management structures. Many corrupt practices can be prevented with quality control exercised by top management. The adoption of effective prevention of corrupt

practices is a responsibility of the managers and high authorities, which is achieved by creating systems for supervision and control.

The presented approaches guarantee a high percentage of reliability of the results. This allows for additional study of the personality of persons with established corrupt behavior through the application of personality inventories. Knowledge of the personality characteristics of the perpetrators of corruption allows the development of a psychological portrait of the corruption offenders and their characteristics. On this basis, effective programs can be established to prevent and quickly identify areas where corruption is likely to occur.

In an organizational context, the above-mentioned methods become methods of control and prevention of corrupt behavior. In this way, the management could carry out monitoring and could be warned about corruption indicators, which leads to their rapid limitation and prevention.

Raising awareness about the principles of corrupt behavior can lead to a wider use of the presented methods for psychodiagnosis of corrupt behavior, which turns them into effective plans for preventing corrupt practices.

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