

RISK MANAGEMENT AT THE POLICE PRACTICE THROUGH NEURAL NETWORKS

**Stanimir Karapetkov¹, Philip Philipoff^{2*}, Emad Abdulahad^{3*}, Kamen Ishtev⁴,
Diana Bankova⁵, Plamen Manev^{6*}, Elka Radeva⁷, Venelin Kondov^{8*}, Petia Minkova⁹,
Daniela Arnaudova¹⁰, Simeon Panev¹¹, Ivan Demerdzhiev¹², Blagovest Panev¹³,
Ilian Dinev¹⁴, Galina Maslarska^{15*}, Mehmet Salih Bayraktutan¹⁶,
Venkatanathan Natarajan¹⁷, Mario Muñoz Organero¹⁸, & Dimo Dimov¹⁹**

¹Professor, SDrSci, Technical University – Sofia (Bulgaria)

²Associate Professor, PhD., Institute of Mechanics-BAS (Bulgaria)

³Professor, PhD, University of Architecture, Civil Engineering and Geodesy-Sofia (Bulgaria)

⁴Professor, SDrSci, Technical University - Sofia (Bulgaria)

⁵Assistant Professor, PhD. Technical University – Sofia (Bulgaria)

⁶Associate Professor, PhD., University of Ruse “Angel Kunchev” (Bulgaria)

⁷Associate Professor, PhD., Medical University – Sofia (Bulgaria)

⁸PhD, Kondov & Kaliqi design team, Rome (Italy)

⁹Journalist press group 24 hours (Bulgaria)

¹⁰Journalist Maritsa Plovdiv newspaper (Bulgaria)

¹¹Professor, SDrSci, Technical University-Sofia (Bulgaria)

¹²“Demerdzhev, Petrov, Baev” (Bulgaria)

¹³PhD, LevIns Insurance Company (Bulgaria)

¹⁴GPS Control EAD (Bulgaria)

¹⁵GPS Control EAD (Bulgaria)

¹⁶Ast. Prof. Dr., Freelancer, Erzurum (Turkey)

¹⁷Professor, Sastra University (India)

¹⁸Professor, Universidad Carlos III de Madrid (Spain)

¹⁹Associate Professor, PhD., BestVet Clinic (Bulgaria)

Abstract

Three Psychological examples are described in this study. These examples are included in the area of the dualism - aggression / depression and are connected with deficit of special doctors: a psychiatrist and a psychologist communication in a real police practice. Unfortunately, everything in this report is authentic and based on real life events.

Keywords: *Dualism aggression – depression, signal processing in L₂, cognitive and experimental psychological neural networks.*

1. Psychological example 1

On September 18, 2023, a patrol car of 4 Region Office of Sofia Police Department (SDVR) detected a report of a robbery by three minors in the Lozenets area of the city of Sofia, Bulgaria. In the patrol there were two policemen from 4 Region Office, one of whom is Dimitar Petrov with seven years in the system of the Ministry of Internal Affairs and numerous awards for excellent service in management. The three perpetrators repeatedly robbed women and young girls, hitting them with a metal pipe and taking their belongings and money. Dimitar Petrov chased the perpetrators, repeatedly warned that he would shoot a pistol, fired signal shots and finally wounded Svetoslav Mladenov from a distance of 100 m. The two policemen put the shot young man into the car, but the boy died on the way to Tokuda Hospital. If the operation to arrest the perpetrators had been consulted with a psychologist and a psychiatrist, the results would not have been so tragic. If several patrol cars with more than ten policemen had been sent to the

*Corresponding authors: Philip Philipoff (philip.philipoff.decable.dregan@gmail.com); Emad Abdulahad (georgosing@gmail.com); Plamen Manev (pmanev@uni-ruse.bg); Venelin Kondov (venelinkondov@gmail.com); Galina Maslarska (office@tls.bg)

scene of the incident within minutes, the minors would have been detained within minutes without any shots being fired and would have been brought to 4 Region Office. Such a management organization can be implemented using a neural network for risk reduction in police operations.

Figure 1. Answer of the director of the SDVR Chief Commissioner Lyubomir Nikolov to the Psychological example 1.

МИНИСТЕРСТВО НА ВЪТРЕШНИТЕ РАБОТИ
СТОЛИЧНА ДИРЕКЦИЯ НА ВЪТРЕШНИТЕ РАБОТИ

Рег. № 513000-83860 /Екз. _____
Дата 13.12. / 24 г.

ДО
ДОЦ. Д-Р ФИЛИП ФИЛИПОВ
ИНСТИТУТ ПО МЕХАНИКА - БАН
e-mail: philip.philipoff.decable@regan@gmail.com

По вх. № 513000-87205/19.11.2024 г.
По вх. № 513000-87299/19.11.2024 г.
По вх. № 513000-88729/25.11.2024 г.

УВАЖАЕМИ ГОСПОДИН ФИЛИПОВ,

В СДВР са постъпили три електронни съобщения от вас, регистрирани под горните номера, в които изказвате мнение до множество институции за случая с полицай Димитър Петров, отшел живота си.

В рамките на своята компетентност, Столична дирекция на вътрешните работи Ви уведомява, че за смъртта на младеж в София през нощта на 17 срещу 18 септември 2023 г. е образувано досъдебно производство, което се ръководи от наблюдаващ прокурор, който извършва непосредствен надзор за законосъобразното провеждане на разследването и приключването му в определен срок.

Съгласно чл. 194, ал. 1, т. 2 от НПК, разследването по дела за престъпления, извършени от държавни служители по чл. 142, ал. 1, т. 1 от ЗМВР се провежда от следователи. Решението за това кой следва да бъде разпитан в рамките на воденото досъдебно производство е от компетентността на наблюдаващия прокурор и следователя.

В отговор на Вашето твърдение, че полицай Димитър Петров е уволнен, Ви информирам, че действително срещу него е било образувано дисциплинарно производство, но към момента на смъртта му, същото не е приключило и Димитър Петров е бил служител на СДВР.

За изпълнение на служебните си задължения в МВР, Димитър Петров е бил награждаван многократно, но не и от министър на вътрешните работи.

След инцидента на 18.09.2023 г. на Димитър Петров е била предоставена психологическа помощ от психолог при Института по психология към МВР.

ДИРЕКТОР:
Lyubomir Nikolov

София, 1303, ул. „Антон Г“ № 5

Figure 2. Answer of the director of the SDVR Chief Commissioner Lyubomir Nikolov to the Psychological example 3.



The Ministry of the Interior Affairs in Bulgaria has its own Psychology institute, but it does not use it effectively in the field of Cognitive and Experimental Psychology, neither for innovative nor for operational work. The ministry has its own hospital, but it treats patients from the top operational management of the Ministry of the Interior Affairs. All employees of the ministry are patients, but the prevention of employees in the field of psychology is far from modern innovative and scientific practice. After the tragic incident on September 18, 2023, police officer Dimitar Petrov was dismissed from his position and charged with murder. Dimitar Petrov had a permanent employment contract in the Sofia Directorate of Internal Affairs at the Ministry of Internal Affairs

Dimitar Petrov had a permanent employment contract in the Sofia Directorate of Internal Affairs at the Ministry of Internal Affairs. He had compulsory health insurance at the Ministry of Interior Affairs Hospital. According to the accompanying legal documents (Law on the Ministry of Internal Affairs and by-laws), consultation and possible treatment by a psychiatrist and psychologist after the case of September 18, 2023 were mandatory.

The case is being investigated by investigator Vera Simeonova from the National Investigation Service and prosecutor Delcheva from the Sofia City Prosecutor's Office. There are journalistically data that the two employees systematically crushed Dimitar Petrov and retrained him THE CHARGE OF MAN SHOULDER IN INTENTIONAL MURDER. Colleagues of Dimitar Petrov and two senior officers from

the Ministry of Internal Affairs, Anton Zlatanov and Kalin Stoyanov, stand behind Dimitar Petrov. The policeman who killed himself left 6 obituaries and a girlfriend who cries for him. Regardless of the fact that he was a contingent of the Ministry of Interior Affairs Hospital, HE WAS NOT EXAMINED BY A PSYCHIATRIST AND A PSYCHOLOGIST. On the day he receives a court summons, he ends his life by hanging himself in his new police uniform. The operational management of the Ministry of Internal Affairs is hiding from responsibility and trying to cover up the case.

The use of artificial intelligence is proposed to reduce the risk in conducting police operations. A neural network connects all patrol cars of the Ministry of the Interior Affairs, all departments and directorates, the Institute of Psychology of the Ministry of the Interior Affairs and the hospital of the Ministry of the Interior Affairs and ensures a wide participation of psychologists in the operational work of the police.

2. Psychological example 2

A terrible tragedy is happening in Sofia. The 32-year-old Ukrainian citizen Ksenia, married to a Bessarabian Bulgarian, killed her two children aged 5 and 11 with a knife in a particularly cruel way. She then attempts to commit suicide by hanging herself, having supplied a suitable rope for the purpose. Ksenia is arrested and confesses. The family lived in Aheloy (near Nessebar in the Black Sea coast) with the status of refugees, where nothing reminded of the terrible tragedy that unfolded days later in Sofia. **ON THE CONTRARY. SOCIETY PERCEIVES THE FAMILY AS VERY SUCCESSFUL AND HAPPY.** Apparently, it is about unlocking mental illness in the mother who brutally killed her own children and tried to commit suicide. Again, there is an episode of the Aggression-Depression Duality. In the first episode, Aggression kills the children, and then in the virtual second episode, the insanity was about to turn into Depression and she intended to kill herself. In both conditions, there are hallucinations that guide the actions of the perpetrator. Both episodes deal with crimes that could have been prevented if there had been PSYCHIATRISTS AND PSYCHOLOGISTS in the police teams involved in the respective police actions.

The arrival of the refugee family with the father's relatives among Bessarabian Bulgarians in Vakarel near to Sofia should have been reported to the mayor of Vakarel and the police district inspector in connection with their status as refugees from the war. Already during their stay in Aheloy, from where they arrived, they should have been diagnosed as potentially risky patients, in whom it is possible to unlock mental illnesses with very dangerous and criminal consequences.

3. Psychological example 3

On Monday, 3 February 2025, a 30-year-old man threw himself twice in front of passing cars on Blvd. Tsar Boris III. To the police, who arrested him after the traffic accident he caused, he claimed that no psychiatric clinic wanted to accept him. A video appeared on social networks, which was later deleted by the author of the video. He called the injured man "Mursha" and explained his aggressive attitude towards the victim with a lack of empathy in himself, due to the fact that the latter obstructs traffic on the boulevard by throwing himself under the cars. He gets confused with a light arcade and the eyebrow and the arrived team from 6 RU SDVR arrests him for PPT, which causes on the boulevard. There is a PSYCHOLOGICAL ERROR IN THE ASSESSMENT OF THE PSYCHOLOGICAL SITUATION. The police officers who detained him did not take into account that the DEPRESSION that is present is the opposite phenomenon of AGGRESSION, but with an opposite sign and is directed at the person who commits the act. At the time of the arrest and afterwards in the 6th Regional Department of the Internal Affairs Directorate, neither a PSYCHIATRIST nor a PSYCHOLOGIST was present. In such cases, the police officers called an ambulance, but without specialized therapists. The doctors assessed the patients' condition and gave them sedative injections. However, a mistake was then made, and the patients were released to leave, because according to the police they had not committed a crime. On the contrary, according to the theory, in a fit of DEPRESSION, they committed a crime, but against themselves. The case was missed that the patients were also people against whom a criminal act was committed. In this case, the man was released and he left, without the ambulance placing him in a specialized facility. While the case lasted, the authors of the report had a painful feeling that this patient, deprived of clinical care in a specialized psychiatric clinic, was doomed due to the incompetence of the police and the ambulance, in whose actions there was a lack of a PSYCHOLOGIST and a PSYCHIATRIST. The doctors ascertained the condition of the patients and administered sedative injections. However, a mistake is then made and the patients are allowed to leave because the police believe they have not committed a crime. On the contrary, according to the theory, in a bout of DEPRESSION, they commit a crime, but against themselves. It misses the case that patients are also people against whom a criminal act is being committed. In this case, the man

was released and he left without the Emergency Service placing him in a specialized facility. As long as the case lasts, the authors of the report have a painful feeling that this patient, deprived of clinical help in a specialized psychiatric clinic, is doomed due to the incompetence of the police and the ambulance, whose actions lacked a PSYCHOLOGIST and a PSYCHIATRIST. The denouement is not long in coming. The patient committed suicide on Wednesday, February 5, 2025, by jumping from the 5th floor of a block of flats in the Mladost district of the capital. The correct decision in the case was to detain him as long as necessary in the detention center of the 6th Regional Directorate of the Internal Affairs Directorate, because he was aggressive towards himself, until a suitable clinic was found, and then to be released from detention and detained in the clinic.

4. Risk management at the police practice through neural networks

The common denominator in the three examples presented is that there is no special communication between the police officers working in extremely difficult field conditions and the general operational management of the Ministry of Interior Affairs. There is only radio communication between the patrol cars and the control center. After receiving the task, the patrols' competence is equal to the competence of the senior officer in the patrol. However, in the modern complex world this is not enough at all. In all three cases described it was necessary to have a PSYCHOLOGIST and a PSYCHIATRIST present on the scene. If this had been done in all three cases there would have been no casualties. It is practically difficult and even impossible to achieve such a presence. It is practically difficult and even impossible to achieve such a presence. It is practically difficult and even impossible to achieve such a presence. However, if the similar networks are used, this task can be easily solved. Specialists are physically located in another place in space, but they make a diagnosis and prescribe therapy and appropriate measures REMOTELY. Then, in every case that needs psychiatric and psychological help, there can be a favorable outcome. The relevant actions are carried out by police officers in the field under the remote guidance of psychology and psychiatry specialists who are physically located in the control Center. The Theorem 6 from: Jivkov, & Philipoff (2016), can be seen:

$$F^{common\ function}(j\omega) = 2 \left(R_e^{even\ left}(\omega) + jI_m^{odd\ right}(\omega) \right)$$

as a continuous analogue of James Cooley and John Tuckey's 1965 discrete algorithm. This makes it possible to build efficient hardware FFT processors in proposed Neural Networks. This Theorem 6 gives directly complex spectra function for length N by two parts with length N/2 – Real and Imaginary parts.

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