



Malwina Dankiewicz - THE PREVENTION AND DETECTION OF PERPETRATORS

Abstract:

The methods for identification of potentially aggressive persons based on observation of behavior and appearance were described. The results of studies on the signals from the facial expressions and other relationships between human behavior and hostile intent were presented. The practical use of tools for the detection of deception and hostile intent was described, based among others on the Paul Ekman's theory of basic emotions. The rules for creating the sketch of a suspect were described, it was also raised the issue of profiling offenders based on behavioral traces under analysis.

Key words: aggression, offender, the sketch of a suspect, criminal profiling, behavioral traces

The types of hostile intent detection techniques can be classified the same as lie detection techniques, because in both cases we are looking for the signs of stress and negative emotions at the suspected person. We can distinguish three main groups of currently used techniques, which are based on: human detection, monitoring of physiological responses (psychophysiological techniques) and direct recording of brain activity.⁷⁷

Lying itself is a good indicator of hostile intent and to detect it is used a technique relying on careful observation of the interviewed person whose appearance, physiology and behavior change while lying.⁷⁸ We can distinguish four interpersonal communication codes that help in the art of lie detection: body language, facial expressions, tone of voice and verbal code.⁷⁹ Currently, two techniques are used, based on analysis of verbal and nonverbal content. Lie detection is more reliable than the detection of truth for the majority of verbal and nonverbal methods.⁸⁰ The accuracy of lie detection with nonverbal procedures reaches only 53%, which is almost totally random, comparable with the results of coin tosses, but appropriately trained experts significantly increases the probability of detecting lies.⁸¹

⁷⁷ W. Froncisz, *Jak wykryć kłamstwo czy prawdomówność podglądając mózg*, „Wszechświat”, 2007, no. 1, p. 18-23.

⁷⁸ Ibidem.

⁷⁹ M. F. Cyr, *Prawda o kłamstwie*, Wydawnictwo KDC, Warszawa 2004.

⁸⁰ W. Froncisz, *Jak...*, *op. cit.*

⁸¹ C. F. Bond, Jr., B. M. DePaulo, *Individual differences in judging deception: Accuracy and bias*, “Psychological Bulletin”, 2008, no. 134, p. 477-492.

THE DETECTION OF HOSTILE INTENT

The facial expression

The expert in use of facial expression in detecting signs of lying, or intentional misleading another person without the notice of intention of such behavior, is Paul Ekman, author of Facial Action Coding System (FACS).⁸² Facial expressions (microexpressions) are appearing involuntary face muscle movements, lasting a fraction of a second, revealing the emotions felt by the person and usually remain unnoticed for people who have not undergone proper training to read facial expressions. The ability to detect microexpressions is positively correlated with the ability to detect lies.⁸³ Controlling the facial muscles is for most people difficult or impossible without special training, therefore these muscles are called by researcher "reliable". Movement of this muscles is controlled, among others, by vegetative system, over which we can not exercise control (belongs to them, for example, a lot of eyebrows and corners of the mouth muscles). Therefore, the first reaction of the face, which can later be masked by bringing, for example, a conscious smile (the most common mask) is usually honest.⁸⁴

Other indications of false expression, apart from the lack of reliable muscle participation, are: the asymmetry of expression, the time course of expression and deposition of expression in the course of conversation. Authentic emotions are visible on both sides of the face at the same time. Research with use of mounted photos with

⁸² P. Ekman, *Kłamstwo i jego wykrywanie w biznesie, polityce i małżeństwie*, PWN, Warszawa 2011.

⁸³ W. Wypler, *Aktualne trendy w psychologicznych badaniach nad kłamstwem*, [in]: *Profilaktyka społeczna i resocjalizacja*, (ed.) J. Kwaśniewski, Wydawnictwo IPSiR UW, Warszawa 2009, p. 161-181.

⁸⁴ P. Ekman, *Kłamstwo...*, *op. cit.*

halves of the same person's face showed, among others, that a person falsely smiling, smile with only half of face, which is slightly asymmetrical smile.⁸⁵ This is due to the fact that real emotion is formed in the subcortical brain centers (in the limbic system), which are poorly lateralized- it means that they influence to a similar extent both sides of the body. In contrast, in the cerebral cortex one of the hemispheres is dominant, that is responsible for specific functions more than the other, in accordance with the principle of lateralization. In the case of the fake smile, which is a kind of voluntary movement, the cerebral cortex is involved. Stronger nerve impulses sent from the dominant hemisphere to the subordinated side of face make one half of the face smiling more than the other. Perhaps the signs of asymmetry, occurring at faking emotions, also include other parts of the body and can be seen also in the gestures, but it is difficult to detect this kind of asymmetry because its symptoms are very subtle and require careful analysis.

The intentional (fake) expressions differ from the spontaneous in that they usually take too long: the authentic emotional expression lasts no more than a few seconds. In addition, the facial expressions unsynchronized with the movements of the body, which is inadequate embedding of expression in relation to speech, are probable false or deceptive indications.⁸⁶

Ekman and O'Sullivan shared indicators of lie in the visual and auditory.⁸⁷ In the case of lie becomes more frequent smiling, blinking, manipulative movements (e.g. rubbing), changes in body position (nervousness) and pupil dilation increases. False statements are shorter than the true and contain a smaller amount of details, the

⁸⁵ T. Witkowski, *Psychologia kłamstwa. Motywy – strategie – narzędzia*, Biblioteka Moderatora, Taszów 2006.

⁸⁶ P. Ekman, *Kłamstwo...*, *op. cit.*

⁸⁷ P. Ekman, M. O'Sullivan, *Who can catch a liar?*, "American Psychologist", 1991, no. 46, p. 913-920.

descriptions of people and events. They are characterized by greater negativity, less appropriateness of content, longer pauses between utterances and a greater number of grammatical errors and blunders.⁸⁸ Lying people tend to generalize (e.g., "never", "always", "everybody", "nobody"), misuse of words ensuring the caller (e.g., "true", "honestly", "certainly"), and emotional arousal causes the liar's voice becomes higher and even squeaky.⁸⁹

The basic emotion which may lead directly to aggressive behavior is anger. Facial expression for anger rarely takes the extreme form (very strongly clenched jaws and furrowed brows lowered up, glare and pursed lips are rather an attempt to impress anger). Usually the eyebrows are pulled down and toward each other (especially the inner corners are directed downwards), vertical wrinkles are visible on the forehead, upper eyelid is raised, the lower eyelid is taut, noticeably tight lips are stretched horizontally, corners of the mouth are lowered, jaw is gently extended and the angry person glares.⁹⁰

According to Ekman, nonverbal indicators are the most accurate and promising indicators of lie, because of the possible practical applications. Basing on he's own research, says that people have excessive confidence in verbal communication and tend to ignore or misinterpret most of the clear indications on the face, body and voice. He also refers to studies showing that training in the recognition of nonverbal indications described by him improves the relevance in identifying lies.⁹¹ The argument in favor of this position are also the contradictions in the reports of research on verbal indicators of lie- for example, it turns out that the answers of only some lying people are indirect, evasive and contain more

⁸⁸ P. Ekman, *Kłamstwo... op. cit.*

⁸⁹ T. Witkowski, *Psychologia..., op. cit.*

⁹⁰ Current Projects [w:] <http://www.paulekman.com> (20.05.2013).

⁹¹ Current..., *op. cit.*

information than the question required.⁹² Ekman's position seems to be supported by the research conducted on people with a damaged left hemisphere of the brain, who obtain better results in the test of truthfulness than the healthy subjects. This is explained by the fact that damage to the left hemisphere of the brain prevents the processing of verbal information. This persons may only process nonverbal information and they greatly outweigh the healthy individuals in lie detection skills.⁹³ According to Ekman learned reading of nonverbal indications aided with analysis of voice and speech increases the accuracy of lie detection to 90%.⁹⁴

The facial structure

In comparison with the expression of anger, facial structure is less intuitive indication of aggressiveness. Research conducted by Carré and McCormick and by Carré, McCormick and Mondloch showed that the more the face is wider in relation to its length (the higher is the WHR, called width-to-height ratio), that is more likely that the person owning it will be considered to be aggressive and will be aggressive in reality. Men with wider and shorter faces more often when playing game deprive their opponents points without gaining anything on this (indicator of aggressiveness), and hockey players with wider and shorter faces get more penalty minutes per game than players with longer and narrower faces. The relationship WHR – aggression applies only to men ($r = .38$) and WHR is independent of body size.⁹⁵

⁹² W. Wypler, *Aktualne...*, *op. cit.*

⁹³ W. Froncisz, *Jak...*, *op. cit.*

⁹⁴ P. Ekman, *Kłamstwo...*, *op.cit.*

⁹⁵ J. M. Carré, C. M. McCormick, *In your face: Facial metrics predict aggressive behaviour in the laboratory and in varsity and professional hockey players*, "Proceedings of the Royal Society B", 2008, no. 275, p. 2651–2656.

The structure of face not only correlates with aggression, but it is also a basis for assessing someone's propensity for aggressive behavior. Carré and colleagues asked subjects to assess the aggressiveness of the face of the various WHR indicators. Ratings highly correlated with WHR indicators ($r = .59$) and with the actual aggression ($r = .42$), and the results were similar even when the face was presented on the screen for 39 milliseconds. The authors suggest that the ability to assess the aggressiveness of neutral faces may be due to generalizing signs of aggression such as lowered brow line and raised lips line. Expression of anger causes that the face gives the impression of shorter and wider, and the neutral face may be judged by the similarity to this emotion.⁹⁶

Where prevention is impossible, because there is no opportunity to observe behavior and it comes to an act of violence committed by an unknown perpetrator, with help comes criminal profiling based on behavioral analysis. When the perpetrator was seen by the victim or witnesses, and his appearance and behavior can be described, it is possible to create a sketch of a suspect.

CREATING THE SKETCH OF A SUSPECT

Each of us is different and has individual characteristics of appearance that allow to identify us, not only by family and friends, but also by the police. The identity of the person can be determined primarily on the basis of those characteristics that can be measured, counted and described.⁹⁷

The sketch is a detailed description of the external features, especially a face, using uniform terminology, prepared using any technique, by which it is possible to identify a perpetrator. Its

⁹⁶ J. M. Carré, C. M. McCormick, C. J. Mondloch, *Facial structure is a reliable cue of aggressive behavior*, "Psychological Science", 2009, no. 20, p. 1194-1198.

⁹⁷ W. Kędzierski (ed.), *Technika kryminalistyczna*, vol. 2, 3, Wydawnictwo Wyższej Szkoły Policji, Szczytno 1995.

essence is to reconstruct the appearance of a person based on the testimony of a witness.⁹⁸ To be able to use the sketch of a suspect, user have to know the characteristics that may be present in a face, understand the terminology of the external characteristics, form the habit of watching people and catching the characteristics of appearance, as well as master the skills for determining and describing the characteristics of different sizes, shapes and the details.

The ability to describe the external characteristics of people is very important in the police work. The description of features is used for observation of the suspect; organizing and conducting of pursuit of the offender; the selection and elimination of suspects; conducting a search; forensic records of the crime, criminals, missing persons, unknown corpses and dactyloscopic registry; the selection, determination and identification of offenders, as well as the identification of unknown people and unidentified corpses.⁹⁹

The methods for determining and describing human appearance

There are three groups of methods: drawing, compositional and computational ones. Today, there are almost exclusively used the computational methods.

The drawing method involves making the direct and indirect portrait. The direct portrait is detailed description of the characteristic features of appearance of a person who is physically available, usually for the purpose of registration. Such a person may be an interrogated one, detained or arrested. The indirect portrait is

⁹⁸ Z. Dębiński, T. Kozieł i Z. Niziałek, *Antroposkopia kryminalistyczna. Podstawy rysopisu człowieka*, Wydawnictwo Centralnego Laboratorium Kryminalistycznego KGP, Warszawa 1994.

⁹⁹ W. Kędzierski (ed.), *Technika kryminalistyczna*, vol. 2, 3, Wydawnictwo Wyższej Szkoły Policji, Szczytno 1995.

prepared based on the testimony of witnesses, and it involves the most characteristic features of the perpetrator's appearance. A witness sometimes have too little time to observe carefully a whole figure, or even a perpetrator's face, moreover human memory is sometimes unreliable, so the information a witness provides can be insufficient or false. There is also the shortened portrait, which takes into account only the specific characteristics of an appearance, as it is in the case of a caricature.¹⁰⁰ The compositional method, where a witness selects the elements of a face matching to a person in his opinion, include Foto-Robot, Identi-Kit, IRK, PIK, MIMIC, Vaicom, or Photo-Fit.¹⁰¹ Among the computational methods may be mentioned the programs like: POL-SIT, FACES, Identikit2000, C.R.I.M.E.S., Comphofit, E-FIT, PROfit, AFRAID, ISIS, and PIPS.¹⁰² There are also the fourth-generation systems based on the genetic algorithm such as EvoFIT, EigenFIT, or ID.¹⁰³

In Poland is successfully used the program POL-SIT. Standard shapes of facial components stored in the system memory are matched to the Polish population anthropological types. It has also the function of "aging" and "rejuvenation" of appearance of wanted

¹⁰⁰ W. Kędziński (ed.), *Technika kryminalistyczna*, vol. 2, 3, Wydawnictwo Wyższej Szkoły Policji, Szczytno 1995.

¹⁰¹ Z. Dębiński, T. Kozieł i Z. Niziałek, *Antroposkopia kryminalistyczna. Podstawy rysopisu człowieka*, Wydawnictwo Centralnego Laboratorium Kryminalistycznego KGP, Warszawa 1994.

¹⁰² R. Waluś, *Komputerowe tworzenie portretów pamięciowych*, Wydawnictwo Szkoły Policji, Katowice 2000.

¹⁰³ C. G. Tredoux, D. Nunez, O. Oxtoby, B. Prag, *An evaluation of ID: An eigenface based construction system*, "South African Computer Journal", 2007, no. 37, p. 90-97.

persons. The sketches currently published in high-profile cases are made only with use of the computer techniques.¹⁰⁴

Determining and describing the static and dynamic characteristics

The external features are either static (stable and unchanging), or dynamic (changeable and functional). The static characteristics are immutable parts of a body and their morphological qualities, such as physique, shape, size, colour and specific features. The appearance elements taken into account when creating a description of the static features are: head, face, hair, forehead, eyebrows, eyes, nose, mouth, teeth, chin, ears, hair, neck, wrinkles, scars and marks. When determining the static features of human appearance, it is also taken into account a front of the body (en face) and the characteristics of a profile. The basis is to determine a physique and shape of each body parts, with comparison to the geometric figures. There are five types of the human silhouettes (frail, slim, medium, stocky and obese) and four postures (A- perfect, B- good and C- defective). The different parts of a body can take many forms, such as a face may be ellipsoidal, round, oval, rhomboidal, pentagonal, rectangular, trapezoidal or triangular; an ear can be round, oval, rectangular or triangular; a chin- oval, round, rectangular, trapezoidal, triangular; and a forehead- rectangular, square, trapezoidal, etc. The size of individual parts of a body is assessed visually without using measuring tools, by comparing them with others. The body parts are evaluated in the three-point scale as large, medium or small, rarely in the five-point scale as very large, large, medium, small or very small. The height may be defined as high,

¹⁰⁴ Z. Dębiński, T. Kozieł i Z. Niziałek, *Antroposkopia kryminalistyczna. Podstawy rysopisu człowieka*, Wydawnictwo Centralnego Laboratorium Kryminalistycznego KGP, Warszawa 1994.

medium or low, it is also described the slope and its direction, such as vertical, flat, or convex forehead, the spacing of individual elements of a face- narrow, medium wide, or wide, and colour of a skin (complexion), hair and eyes.¹⁰⁵ The height of a head is determined by a profile. It can be low, medium or high, and in terms of size and its relation to the whole body: small, medium or large. A face is divided into three parts: a forehead, a nose and a lip-chin one. The profile of a face can be positioned in a straight line (vertical) or in a line slightly or strongly convex. The skin tone of a face is defined as a pale, normal, red, swarthy, yellow or ebony complexion. The hair is described in terms of shape, colour (of the hair on a head, moustache and beard), thickness and length. A forehead is described in a profile and a front, taking into account its height, width, shape, frontal bones and arches above the eye sockets and specific characteristics. Specificity of the eyebrows is determined on a basis of their length, settings, spacing, location, shape, colour, thickness and their distinctive characteristics. It is described the colour and markings around eyes and also the nose features: length, width, protruding, profile, nasal bridge, wings, nasal septum, nose holes, and its distinctive characteristics. Analyzing the appearance of lips attention is drawn to the height of an upper lip, upper lip profile shape, width and depth of a philtrum, thickness and shaping of an upper lip, height, shape, thickness and shaping of a lower lip, the proportions of lips, the shape and length of a lip gap, setting and depth of the lip corners and distinctive characteristics of lips. The teeth are described in terms of size, colour and distinctive characteristics, there is also determined the shape, size, location and specific characteristics of a chin, as well as the size, shape and position of the ears, size, position and shape of

¹⁰⁵ W. Kędzierski (ed.), *Technika kryminalistyczna*, vol. 2, 3, Wydawnictwo Wyższej Szkoły Policji, Szczytno 1995.

an individual ear lobe and the specific characteristics of ears. It is also taken into consideration the facial hair (moustache, beard and sideburns), a neck (length and thickness of a neck, appearance of a throat), the wrinkles, scars and marks.

The dynamic characteristics are those which are changeable, that is, they appear and disappear, and may be linked directly to a physiognomy or body motility. They include a posture, the way of holding head and hands, the way of walking and looking, voice, manner of speaking and pronunciation, gestures, facial expressions, way of dressing, way of smoking the cigarettes and tobacco, skills and habits, and behavior in the environment in relation to other people.¹⁰⁶

In spite of many advantages of a sketch of a suspect it also has some disadvantages. Its creation is affected by, among others: the place, the conditions and the time of observation; the type of an event and the role of a witness in it; the passage of time from the moment of perception until testifying; the witness personality traits, and above all the ability of perception, memorizing, the ability to reproduce and describe seen features; the mental state of a witness and his involvement in the creation of a sketch and in the process of finding a perpetrator; the impact of suggestions given before and after the interrogation of a witness; the cooperation of an interrogator with a witness; the witness's conviction of his ability to identify a specific person; the personality traits, the ability and preparation of an interviewer and a sketch maker; the aids for reproducing the features and creating a sketch.

Even the most perfect techniques can not fully eliminate the risk of error in the process of making a sketch. The final effect is based on easy to distort processes of perception. For a variety of

¹⁰⁶ W. Kędziński (ed.), *Technika kryminalistyczna*, vol. 2, 3, Wydawnictwo Wyższej Szkoły Policji, Szczytno 1995.

reasons, the perception may be affected. It is dependent on stable, individual characteristics of a person, but it can also be emotion-related, especially to negative ones. Therefore sometimes working with a number of witnesses to the same event brings the results in several different sketches.¹⁰⁷ The separate risk is generated by any kind of external suggestions. The cause of mistake may also be the inadequate form of questioning.

A sketch should be prepared not only with use of psychology of witness testimony, but it also should follow some rules: the witnesses should be interviewed alone (avoid contact between the witnesses who saw the same person); an interrogation should take place as soon as possible after the observations were made; the purpose of an interrogation must be explained to a witness, he must be able to identify a person and it must be clear to what extent he is involved in a case; a preliminary discussion about the circumstances in which a person has been seen should be carried out; skillfully check out the ability of perception of a witness; ask general and specific questions about the characteristics of an appearance (do not use the suggestive questions- suggesting a specific response); the features given by a witness describe according to the terms of an appearance of the external characteristics; and skillfully use the characteristics catalogue or other auxiliaries.

Interrogating a witness it should be obtained information on age, body, individual elements of a face and head as well as the specific features, the items of clothing, etc. The more the witnesses who make a sketch, the better. The sketches able to fulfill their task

¹⁰⁷ Z. Dębiński, T. Kozieł i Z. Niziałek, *Antroposkopia kryminalistyczna. Podstawy rysopisu człowieka*, Wydawnictwo Centralnego Laboratorium Kryminalistycznego KGP, Warszawa 1994.

should be used as soon as possible since their creation, because later an offender can make a change in his appearance.¹⁰⁸

CRIMINAL PROFILING

Creating the psychological portrait of an offender is based on the assumption that each offender's behavior reflects his psychological characteristics, and that people with certain traits will behave in a typical manner, especially in similar situations. The person making the offender profile analyzes and interprets a physical trace, or a change in the environment that results from an offender behavior or the interaction of an offender and a victim, assuming that behind every behavior is hidden the psychological mechanism (such as a need or a habit), and behind it is a set of personality traits, predispositions and potential disorders that a particular type of offender consists of.¹⁰⁹

Among the applications of profiling are mentioned: drawing up the psychological opinion containing psychophysical characteristics of unknown perpetrator, typing a specific perpetrator of the suspects and the evaluation of evidence found at a suspect, as well as preparing the strategy for questioning a detainee. Criminal profiling applies to all crimes of violence, whenever an offender is unknown.¹¹⁰

Behavioral evidence analysis is the newest approach to making psychological portraits of unknown perpetrators, placing particular emphasis on the process of deduction (analysis of trace evidence and victimology analysis). It differs from the offender profiling in that it does not rely on the use of the developed

¹⁰⁸ W. Kędzierski (ed.), *Technika kryminalistyczna*, vol. 2, 3, Wydawnictwo Wyższej Szkoły Policji, Szczytno 1995.

¹⁰⁹ J. Gołębiowski, *Profilowanie kryminalne*, Logos, Warszawa 2008.

¹¹⁰ Ibidem.

typologies of criminals and matching them to the specific cases, but on the study of each behavioral trace individually and the preparation of the psychological reconstruction of an event.¹¹¹ In this approach the individual characteristics that make up the silhouette of an unknown perpetrator are selected. Analysis of a crime is to reconstruct the course of events, which consists of the analysis of a physical evidence, victimology analysis and analysis of a crime scene, which gives the indications about behavior. For each trace and trace unit is assigned the list of behaviors of an offender, a victim and both of them in interaction. On this basis, is described the motivation and behavioral traits of a perpetrator. The traces of evidence (e.g., physical traces) and behavioral traces (e.g., modus operandi) are analyzed. The trace is a remnant of behavioral activity, a change in the environment, which represents the action taken and refers to the activities performed by both an aggressor and a victim.¹¹² The modus operandi is "the special, distinctive and usually repetitive way of behaving by a perpetrator, which reflects the individual characteristics and capabilities of a man who use that way", which can change over time, but these changes are not permanent. To the modus operandi do not belong the specific behavior. It is determined, for example, on the basis of all the tools used to commit a crime.¹¹³

The behavior of an offender can be divided into four phases. The phase of behavior prior to the crime and planning is combined with stressful events, critical for an offender, such as conflicts, failures and problems. The dominant state of mind at this stage is frustration, anger, hostility, excitement and stimulation. At this stage the choice of a victim is made. The next phase is the act of

¹¹¹ J. Gołębiowski, *Profilowanie...*, op. cit.

¹¹² Ibidem.

¹¹³ T. Hanausek, *Kryminalistyka. Zarys wykładu*, Kantor Wydawniczy Zakamycze, Kraków 2000.

committing a crime. The third phase is the treatment and way of leaving the victim's body (place of leaving the body, its position and attempt to hide, staging of a crime scene and specific behavior). The last phase is the behavior following a crime (visiting a crime scene or a place of burial, changes in lifestyle, increased consumption of alcohol or making contact with the victim's family, the police or the media by a perpetrator). On the basis of behaviors taken by an offender it is possible to ascertain the mode of action, which is always similar and "signature" (specific behavior, that is constant and unchanging part of the modus operandi), which together with traces of evidence creates a whole behavior. It shows the personality of an offender, allows the description of it and provides help in capturing an offender.¹¹⁴

The method of criminal profiling is not appreciated enough and not very popular in the work of a judiciary and law enforcement, because of objections (not always justified) relating to its credibility as a scientific method. Even in the case of professional preparation of an accurate profile, it is never a proof of the commission of a crime. A profile should be used in building a version of events, and even consulting with the silhouette of a perpetrator should precede the work on building a version which allows pre-typing of the suspects. Since a profile can strongly suggest the direction of an investigation, all other evidence and circumstantial evidence against a profile are relevant. The analysis is performed only on the basis of materials provided to profiler, therefore a profile accuracy depends on a quality of secured evidence and made expertise. The research on usefulness of the profiles conducted in Poland in 2002 by Kowanetz shows, that despite the fact that profiling is used far too late when it comes to

¹¹⁴ R. K. Ressler, A. W. Burgess, J. E. Douglas, *Sexual homicide: Patterns and motives*, Free Press, New York 1988.

stage of an investigation, in most cases the use of profiles have been evaluated positively. According to the respondents (the prosecutor's office employees) a profile directs the search for a perpetrator, allows you to narrow down the circle of suspects and systematizes the collected material for a case.¹¹⁵

When it comes to violence, it is possible to detect and capture a perpetrator, by observing the effects of behavior and the occurring relationship between the scheme of an action and the personality of a perpetrator. By analyzing behavior we can not only predict aggression and take preventive actions, but also take appropriate actions at each stage of an event.

¹¹⁵ J. Gołębiowski, *Profilowanie...*, op. cit.

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