András László Szabó¹

Criminal Policy Approach to Lone Offenders and a Possible Model for their Identification

A magányos elkövetők kriminálpolitikai megközelítése és azonosításuk egy lehetséges modellje

The method of lone offence and its appearance in crime and terrorism have been persistent. Their identification is difficult with traditional methods of criminal policy and crime control. A fundamental reason for this is that criminal policy serves the reduction of the crime rate, that is, the prevention and investigation of a large number of similar offences, and the enforcement of the state's monopoly in criminal law. In this paper, I will demonstrate why criminal policy, the theory of deterrence and criminological interpretation of crime prevention are not suitable for identifying and preventing this method of attack. Due to their nature, lone offender attacks receive extensive media coverage, magnifying the dangers they represent. I will demonstrate the ways in which penal dogmatic and prevention models work or may not work. At the end of the paper I will outline a possible prevention model.

Keywords: identification, criminal policy, deterrence, lone offender

A magányos elkövetési mód és a magányos elkövető megjelenése a bűnözésben, a terrorizmusban folyamatos. Nehéz a beazonosítása a hagyományos kriminálpolitika és a bűnözéskontroll eszközeivel. Ennek alapvető oka, hogy a kriminálpolitika a bűnözés nagyságára, vagyis a nagyszámú közel azonos bűncselekmény megelőzésére, felderítésére és az állami büntetőjogi monopólium érvényesítésére szolgál. Tanulmányomban bemutatom, hogy a kriminálpolitika az elrettentés elmélete és a bűnmegelőzés kriminológiai értelmezése miért nem alkalmas ennek az elkövetési módnak a beazonosítására és megelőzésére. A magányos elkövetők által végrehajtott cselekmények, azok jellege miatt komoly médiavisszhangot kapnak, ezzel felnagyítva veszélyességüket.

Szabó László András, PhD student, University of Public Service, Doctoral School of Administration Sciences, ORCID: 0000-0001-7957-0724, e-mail: szabo.laszlo.andras@uni-nke.hu

Bemutatom, hogy a büntetődogmatikai és megelőzési modellek miként működnek vagy nem működnek. A tanulmány végén egy lehetséges megelőzési modellt vázolok fel.

Kulcsszavak: beazonosítás, kriminálpolitika, elrettentés, magányos elkövető

1. Introduction

This paper is based on certain parts of my study published in the journal 'Nemzetbiztonsági Szemle' (National Security Journal).² Identifying Ione offenders is difficult with the traditional methods of criminal policy. In my study, I go around this issue, focusing on the Ione perpetrator and the required methods. This mode of perpetration is particularly well represented in the media, so it is important to look for tools that are suitable for preventing crime and identifying the perpetrator; finally, I present a possible prevention model. In Hungary the number of criminal offences linked to Ione offenders, such as acts of terrorism and hate crimes, is relatively low. Coverage of the phenomenon in Western and Hungarian media, however, stirs strong emotions. By focusing on problems of prevention, I will present criminological theories that help us understand the multi-faceted features of criminal policy, the ways in which prevention works and why it does not work in relation to Ione offenders. At the end of the paper I will outline a possible prevention model.

2. Crime and lone offences³

The terminology is defined by Johanna Farkas, who also elaborates on the difficulties of definition. The definition of the phenomenon of terrorism is essentially problematic; there is practically still no scientific consensus regarding the terminology.⁴ This problem also occurs with the definition of lone attackers. Many people, for example, confuse lone attackers with jihadist attackers. In other words, the English term 'lone attacker' implies a sense of diversion that is further deflected in the world of terminology, because governments, private organisations, the media and researchers all have their own interpretation of the term and use different terminology.⁵

In Joosse's sociological approach, leaderless resistance is a particular strategy of right-wing extremist resistance carried out through the acts of individuals or smaller

² László András Szabó, 'A migráció hatására megjelenő magányos elkövetési mód kriminológiai szempontú vizsgálata és egy lehetséges megelőzési modell,' *Nemzetbiztonsági Szemle* 7, no 3 (2019), 3–17.

³ Johanna Farkas, 'A magányos merénylők radikalizálódása,' Acta Humana: Hungarian Centre for Human Rights Publication 4, no 5 (2016), 21–22.

⁴ Ramón Spaaij, Understanding Lone Wolf Terrorism: Global Patterns, Motivations and Prevention (New York: Springer, 2012), 856.

⁵ Matthew Feldman, 'Comparative Lone Wolf Terrorism: Toward a Heuristic Definition,' *Democracy and Security* 9, no 3 (2013), 270–288.

groups, where such acts are clearly politically motivated.⁶The term is associated with Louis Beam, an American Neo-Nazi leader, who called on his followers in an essay published in 1992: If their leaders are taken into custody, they should abandon the traditional, pyramid-style organisation structure, and carry out attacks in small groups or alone against the government and its representatives.⁷ The most commonly used term is 'lone wolf terrorism'.⁸ A synonym for this term is 'solo-actor terrorism', used by, for example, the Center for Terror Analysis (2011).⁹

The term 'lone actor' has been used recently, for example, by Gill (2015)¹⁰ in his large-scale summary work, or in the latest Europol study (2016).¹¹ Spaaij (2010) defines lone attackers as follows: 'He commits attacks alone, is not affiliated with any organized terrorist organization or network, plans and carries out the modus operandi alone, without any direct external instruction or control.'¹² In this paper I will use Connor's (2015) definition, who added certain ideological connotations to Spaaij's definition. This is the stance accepted by most experts today.

Accordingly, a lone attacker is a person who commits an act of violence alone, motivated by an ideology (political, religious or individual goal), without external support, that is, without the support of organised terrorist organisations or global networks.¹³

One can be an extremist, but such a person is not necessarily a terrorist. In simple terms, extremism can be defined as a process of accepting an extremist ideology aiming to change the social system.¹⁴

According to a common theory of lone-actor offences,¹⁵ there are four types of attackers:

 loner: This type is not linked to any extremist organisations, but legitimises his conduct with extremist ideology when planning and carrying out the act. Loners are usually passive observers of the networking activities and propaganda materials of the group they sympathise with, but do not contact members.

⁶ Paul Joosse, 'Leaderless Resistance and Ideological Inclusion: The case of the Earth Liberation Front,' *Terrorism and Political Violence* 3 (2007). Available: www.regonline.com/custl.m.a-ges/300000/302148/ LeaderlessResistance.pdf (11. 08. 2016.), 351.

⁷ Luis Beam, 'Leaderless Resistance,' *The Seditionist* 12, Febr. 1992. Available: www.louisbeam.com/leader¬less.htm (09. 10. 2016.)

⁸ Lewis W. Dickson, Lone Wolf Terrorism: a Case Study, Malmö University, Malmö, 2015. Available: https:// dspace.mah.se/bitstream/handle/2043/19258/Lone%20Wolf%20Terrorism%20-%20Masters%20Thesis%20 -%20Lewis%20W.Dickson.pdf?sequence=2 (11. 08. 2016.)

⁹ 'The Threat from Solo Terrorism and Lone Wolf Terrorism,' Center for Terror Analysis. PET, Denmark, 2011. Available: www.pet.dk/English/~/media/Engelsk/the_threat_from_solo_terrorism_and_lone_wolf_terrorism_-_engelsk_version_pdf.ashx (11. 08. 2016.)

¹⁰ Paul Gill, Lone-actor Terrorists – a Behavioural Analysis (New York, Routledge, 2015), 1–24.

¹¹ *European Union Terrorism Situation and Trend Report 2016*, EUROPOL, Netherlands. Available: www.europol. europa.eu/content/european-union-terrorism-situation-and-trend-report-te-sat-2016 (10. 08. 2016.), 5.

¹² Quoted by Matthijs Nijboer, 'A review of lone wolf terrorism: The need for a different approach,' Social Cosmos 1 (2012). Available: http://socialcosmos.library.uu.nl/index.php/sc/article/view/43 (12. 08. 2016.)

¹³ Jeffrey C. Connor and Carol R. Flynn, *Report: Lone Wolf Terrorism*, National Security Critical Issue Task Force, Georgetown University, Washington, 2015. Available: http://georgetownsecuritystudiesre-view.org/wpcontent/uploads/2015/08/NCITF-Final-Paper.pdf (08. 08. 2016.), 9.

¹⁴ József Kis-Benedek, Dzsihadizmus, radikalizmus, terrorizmus (Budapest: Zrínyi, 2016).

¹⁵ R. Pantucci, *A typology of lone wolves: Preliminary analysis of lone islamist terrorists* (London: International Centre for the Study of Radicalisation and Political Violence, 2011).

In the case of this group, genuine commitment to extremist ideology is hard to establish, because underlying psychological or social problems (for example poverty, solitude) are not uncommon. Radicalisation and planning plots also serve to cover up such circumstances. Experience shows that these people openly proclaim their ideas, even their intention to attack, and can therefore be easily noticed by authorities. However, due mainly to the likelihood of mental illness, it is difficult to estimate the probability of such planned attacks.

- lone wolf: Lone wolves carry out acts of terrorism alone, without any visible external influence, but their link to at least one radical group can be evidenced. They primarily contact terrorist organisations or other lone offenders on the internet. Usually no information is available on persons these lone wolves cooperate with in real life, or whether they participate in any training or terrorist boot camps. Generally, terrorist acts committed by lone wolves are backed by an extremist organisation, influencing the given person by exhortation or possibly by indirect control.
- lone wolf pack: a term signifying a loose organisation of lone wolves. People of
 this type operate in small groups, share extremist views of larger organisations,
 but they do not form part of those. Members of such groups usually connect
 to carry out acts of terrorism together, thus their cooperation is not a longterm one. A number of indications suggest that members communicate with
 other organisations, but, similarly to the previous type, they, too, reach out
 to each other on the internet.
- lone attacker: Attackers who carry out attacks alone, but are proven to enjoy the physical and financial support of a larger terrorist organisation. Weapons, money and instructions (for example choice of location) for the attack are usually provided by the leader of the given group.

According to the most common theory of modelling terrorist acts committed by lone offenders, four dimensions characterise this method of attack:¹⁶ the extent of radicalisation, motivation, execution and risk awareness.

3. The concept of criminal policy

Criminal policy is 'a discipline investigating the causes and effects of crime that establishes the limits of government measures against crime'.¹⁷ In the field of criminal sciences, criminal policy is related to criminal jurisprudence, that is, criminal law, rules of criminal procedure and law of corrections, and non-legal disciplines, such as criminology, criminal psychology and forensics,¹⁸ linking these within a framework.

¹⁶ R. A. Bates, 'Dancing with wolves. Today's lone wolf terrorists,' *The Journal of Public and Professional Sociology* 4, no 1 (2012), 1–14.

¹⁷ Quoted by Katalin Gönczöl, Klára Kerezsi and László Korinek, Kriminológia – Szakkriminológia (Budapest: Complex Kiadó Jogi és Üzleti Tartalomszolgáltató Kft, 2007), 601.

¹⁸ Andrea Borbíró, Katalin Gönczöl, Klára Kerezsi and Miklós Lévay, Kriminológia (Budapest: Wolters Kluwer Kft, 2017), 716.

The subsystems of criminal policy are policing and crime prevention policy, victim protection policy, criminal policy, criminal law policy, criminal justice policy and prison policy.¹⁹ The theory of deterrence is defined within the framework of criminal policy. This theory is paramount because it plays a primary role in managing crime and crime control. It is the basis of how the state manages crime both on the level of the individual and as a social phenomenon.

4. Deterrence as the basis of prevention

To understand the doctrine of deterrence, we need to revert to the theory it is derived from. Criminologist Andrea Borbíró puts it this way: 'The classic paradigm is based on the theory of free will. It maintains that human beings are rational individuals acting out of free will, whose behavior and decisions are shaped only in their own best interests. According to the classic paradigm, crime does not have any particular reason other than that individuals, following their own interests, decide to commit acts of crime, because it is good for them for some reason, that is, it is worth it (this is why the related criminological theories are also called decision theory or choice theory).²⁰ Certainty of penalty lends its deterring force. These theories are discussed in Cesare Beccaria's (1778) work entitled 'On Crimes and Punishments'.²¹ This is how the so-called classic paradigm emerged. This criminal policy was dismissed for some time. From the 1970s it gradually reemerged with the crisis of the welfare states.

This is regarded as the neoclassical turning point in criminal policy, taking place in 1984. This is when the state assumed the role of establishing or enforcing law and order, and the focus again shifted on the doctrine of deterrence. It is commonly associated with neutralisation, that is, with neutralisation of the individual or the act. But what is deterrence itself based on? The sudden sharp rise in the rate of crime cannot be matched with the number of solved crimes. In Hungary the number of registered offences rose fourfold between 1985 and 1992; socio-economic changes also significantly transformed causal trends.²² In his book entitled *Igazságosan vagy okosan*? (Just or Smart?), published in 1992, the criminologist András Szabó dedicated the fifth chapter to the study of deterrence.

András Szabó defined the theory of deterrence with the following elements: Threat, Fulfilling the threat, Choice and responsibility, Balance of advantages and disadvantages, Certainty and stringency (inevitability).²³

All punishments have a general and a specific deterring effect. General punishments are aimed at potential offenders. Specific punishment is aimed at the person already punished. Among means of deterrence, punishment based on acts – which is proportionate to the acts – is the most important one. In crime and punishment, traditional criminal procedure does not take into account the psychological,

¹⁹ Borbíró et alii, *Kriminológia*.

²⁰ Ibid., 36.

²¹ Cesare Beccaria, A bűnökről és büntetésekről (Budapest: Attractor könyvkiadó kft, 2012), 112.

²² Borbíró et alii, Kriminológia,, 754.

²³ András Szabó, Igazságosan vagy okosan? (Budapest: Akadémiai Kiadó, 1993), 99–100.

sociological and cultural circumstances of the perpetrator, only examines the fact of committing the sin. Clearly it is effective in handling a surge in crime or migration, for example. It provides for general prevention, is universally applicable to all, and produces rapid and visible results. It is relatively cheap, as it does not require any significant organisational development, only a one-off technical investment. In terms of criminal law, it ensures a certain level of deterrence and crime prevention, but not in the sense of classic threefold crime prevention. The most common form of deterrence is incarceration. 'The number of detainments decreases crime, because it shows direct and immediate crime solving results or social response.'²⁴

In the theory of deterrence, the act of crime is punished. The (neo)classic paradigm, however, no longer only punishes the act, but, with the development of technical and environmental tools and methods, it makes committing the crime more difficult or prevents it. This is called environmental criminology or situational crime prevention. The theory was developed by the American criminologist V. Ronald Clarke.²⁵ Many scientists in the field of criminology, including Clarke, do not consider this to be criminology or science, as it does not analyse the causal links of crime or provide any explanation of these. He considers it as a mere set of technical solutions.

5. Identification of lone offenders

The problem is that the penal system aims at covering the widest spectrum possible, allowing individual perpetrators to remain invisible. This may be inferred from the concept that punishment should be inevitable. This will not deter lone offenders, radicalised or motivated otherwise, from committing crimes. They do not want to get away with crime, nor do they want to escape. Their only goal is to carry on causing as much damage as possible. For the time being the (neo)classic criminal policy – based on the principle of crime and punishment – serves as the basis for crime prevention, and is correlated with the above noted theory of deterrence.

Below I provide an interpretation of the theory with a focus on the lone offender:

- Threat: the perpetrator is completely indifferent to it.
- Fulfilling the threat: he does not fear punishment because he will no longer be alive, or will commit suicide, or make the police kill him.
- Choice and responsibility: he is certain to sufficiently consider and plan his act. The responsibility always falls on others: on the government, society and the victims.
- Balance of advantages and disadvantages: this is a crucial factor. The goal is to cause as much destruction as possible in the shortest possible time.
- Certainty and stringency (inevitability):²⁶ unfortunately, he/she is completely unaffected. The lone offender's only concern is to be detected soon and prevented from committing his act.

²⁴ Ibid., 98–125.

²⁵ V. Ronald Clarke, 'Situational Crime Prevention: Its Theoretical Basis and Practical Scope,' Crime and Justice 4 (1983), 225–256.

²⁶ Szabó, *Igazságosan vagy okosan?* 99–100.

All punishments have a general and a specific deterring effect. In this case, general punishment is aimed at potential future offenders, who are in fact not even offenders in a classic sense. No information is available on the number of acts of terrorism prevented by deterrence, therefore deterrence in this sense is ineffective. We do not know how many potential lone offenders are detected before committing any crimes. The media cover successful or attempted attacks. Such coverage tends to reinforce potential future lone offenders in their conviction that they would be much better in executing crimes. In other words, the above noted theory of crime and punishment is compromised, not to mention the pain caused to victims, the victims' families and the whole of society. András Szabó pointed out that victims are not provided any explanation or compensation. Perpetrators often leave a manifesto behind, in which they explain their actions. The victims, however, will never get an answer to the question: Why me?

Thus there are two reasons why prevention does not work. The first reason is that it was not envisaged for such type of crime. The second reason is that the offender's personality is unique to the extent that it remains invisible and undetectable under the radar.

6. Interpretation of profiling

Due to the unique character of lone offenders, profiling can offer a possible solution for prevention. Professional protocols describe profiling as follows: 'Psychological profiling aims at determining probable psychological characteristics of the offender and his act primarily by aggregation, analysis and evaluation of psychological data and application of psychological theories, methods and research findings in relation to the given crime.'²⁷

According to a study of the University of Maryland,²⁸ psychological analyses are applied on three levels in combating terrorism:

• In the analysis of individual characteristics, researchers aim to identify personality or psychopathological traits associated with the expression of terrorist behavior. As noted in the first chapter, certain personal traits and social circumstances determine why some people become terrorists; mental and personality disorders, unfavourable social, economic and political circumstances will jointly increase the influence of terrorist groups over both individual and society. The profiling of underlying motivation, a propensity to susceptibility and the general psychological profile of a terrorist may support counter-intelligence in the detection of individuals who may be members of terrorist groups or may be plotting an attack. Creation of a profile also plays an important role in the preparation of deradicalisation plans.

A. Pásztor, Cs. Mityók and F. Németh, 'A rendvédelmi bűnügyi pszichológiai tevékenység szakmai protokollja,' 2009. Available: https://psycho.unideb.hu/munkatarsak/csukonyi_csilla/targyak/rendvedelempszichologia. pdf. (27. 10. 2020.)

A. W. Kruglanski and S. Fishman, 'Psychological factors in terrorism and counterterrorism: Individual, group and organizational levels of analysis,' *Social Issues and Policy Review* 3, no 1 (2009), 1–44.

- Group-level analyses focus research on social influence aimed at the recruitment
 of new members, the spread of terrorist ideology and means of education
 under such ideology, and language reinforcing the legitimacy of terrorist norms.
 Social-psychological findings pertaining to the topic demonstrate the group
 dynamics and the characteristics of interactions between the individual and
 the group in the profile of terrorist organisations.
- Organisational-level analyses focus on training, logistical and financial characteristics that indicate future acts of terrorism. These include strategic and tactical briefings, the setting of goals, decision-making methods, tools of deterrence, and methods of planning and carrying out attacks. Organisationlevel analyses also identify group hierarchy and political goals. These results help in determining terrorist groups' means of attack and possible targets to enable authorities to take the appropriate security measures.

7. Use of predictive profiling for identification purposes

While profiling basically supports the identification of unidentified perpetrators of crimes already committed, the predictive profiling of lone offenders attempts to provide points of reference suitable for the identification of possible future offenders based on their personality traits, detecting potential radicalised lone offenders, by summarising the individual psychological, sociological, anthropological and criminological traits of perpetrators of crimes or acts of terrorism already committed.

It is important to note that such screening will not work without a warning system at national level, where teachers, family care staff, probation officers, policemen, school psychologists, youth mentors active on the appropriate levels can assess possible future attackers based on provided criteria. Subsequent steps are determined by the extent of deviance and the analysis of their behavior. The life of a merely rebellious or deviant person, however, should not be ruined. The presumption of innocence must be observed under these circumstances as well.

In addition to identification, profiling can support the creation of a proactive strategy. If experts, namely, have sufficient information on the type of criminal behavior associated with the given personality type, they can screen potentially dangerous individuals in advance.²⁹

Lívia Szíjártó observed the following: 'Preventive measures can also be supported by victimology, as the examination of the probability of becoming a victim may help build a better security system.'³⁰

The targets of aggression and the underlying motivation are completely irrelevant. Prevention is in everybody's interest. Security is a common cause and a common system or product. Artificial intelligence is the way of the future. It supports the filtering of large samples of data, relieving the workload of staff. Artificial intelligence

²⁹ E. Beauregard, 'Criminal profiling: Art or science?' The Society of Notaries Public of British Columbia 16, no 4 (2007), 16–17.

³⁰ Lívia Szijártó, Alkalmazott pszichológiai módszerek a szélsőséges csoportok és a terrorizmus elleni harcban, PhD dissertation, NKE Hadtudományi Doktori Iskola, 2019. Available: (04. 06. 2019.)

recognising intention replaces human work, but humans have the last word; artificial intelligence cannot substitute human expertise and empathy.

8. Predictive analytics as method

Data mining and big data are often associated with predictive analytics. Predictive analytics (or forecasting) is a method of data science. Essentially we estimate the probability of or predict future behavior under the given circumstances on the basis of data categorised according to special characteristics and past behaviour.³¹

Predictive analytics is a complex procedure in which we identify already known results based on known factors and yet there are other results to be identified based on such factors. It involves the prediction (modeling) of expected future behavior using the largest amount of past data possible. It is the sum of mathematical, statistical and econometric methods that identify correlations within databases and help us make better decisions.

Shmueli and Koppius (2010)³² defined two components of predictive analytics:

- empirical predictive models (statistical models and other methods, such as data mining algorithms) that base forecasts on observations;
- evaluation of the methods, the model's predictive power, that is, predictive accuracy. Only models with the ability to also allow for the interpretation of the 'new' in time – that is, at a future point of observations in time – can generate accurate forecasts.

Key behavioral characteristics that determine the probability of a given conversion are called predictors. Predictors can be, for example, times, durations, locations and so on. The more predictors are available, the more accurate the predictive analysis will be. To enhance success, predictors must be combined within a given model. For example, physical proximity can be a predictor.

In practice, three types of models support predictive analysis. The choice of the appropriate model depends on the purpose of analysis.

8.1. Descriptive model

This is the predictive analytics model most commonly used in business. Essentially, our customers and products are classified (described – hence the model's name) by way of data analytics. Unlike the predictive model, the element is not analysed according to aspects of a single event (consequence or conversion), but is classified on the basis of several aspects and correlations.

³¹ J. Tessényi and K. Kazár, 'Szerencsejáték-vásárlási szokások vizsgálata "prediktív analitika" segítségével,' Statisztikai Szemle 90, no 7-8 (2012), 677–695.

³² Galit Shmueli and Otto Koppius, *Predictive Analytics in Information Systems Research*, Robert H. Smith School Research Paper No. RHS 06-138, 2010.

8.2. Predictive model

The probability of a future event is determined by analysis of data from the past. The predictive model is used when we want to determine the probability of a given consequence for an element with one or more known characteristics. The method essentially involves the consideration of the behavior of an element with known characteristics under the given circumstances, and establishing the probability of the behavior of a different element with similar characteristics under similar but yet unknown circumstances.

8.3. Prescriptive model (or decision model)

This model serves the forecasting of the expected results of given decisions, that is, it analyses all possible outcomes of the given decisions and their probability in consideration of different factors. It gives us the option to analyse and optimise changes in outcomes by changing different factors (for example before a business expansion, it helps estimate the rise and fall in demand for different products). The model's second name suggests that it commonly serves the setup of decision mechanisms and sets of rules.

The starting point is the definition of the lone attacker: 'He commits attacks alone, is not affiliated with any organized terrorist organization or network, plans and carries out the modus operandi alone, without any direct external instruction or control.'³³ The emphasis is on predictors, that is, he acts alone, plans his activities, without external influence. Examining these three factors with a statistical method – a technique based on statistical data – made it possible to use the tools of psychology to identify potential dangerous groups and lone offenders based on activities in cyberspace by assigning a predictive method, analysis in the direction of the filter, that is, possible identification of potentially dangerous individuals. The result of the analysis are predictors; the method will yield the identity of perpetrators of probable acts of terrorism, that is, the psychological traits of perpetrators of planned acts, committed alone, without external influence. Based on the risk assessment, the final assessment must be carried out by a group of experts.

Criminal acts can be compared to unexpected lightning strikes. This raises the question of whether lightning strikes can be predicted. The answer is yes. Human behavior is also predictable. Long, calm periods are interrupted by such flashes.³⁴ Flashes are sudden, unexpected acts or events of extraordinary importance exceeding the average level of ordinary life situations. Human behavior is unpredictable and random. But if it is random, it is also predictable.³⁵ The filtering of large samples of data is possible by summary of the above theories and conversion of the sociological, psychological and criminal characteristics of perpetrators of past attacks into algorithms.

³⁵ Ibid.

³³ Nijboer, 'A review,' 34.

³⁴ Albert-László Barabási, *Villanások. A jövő kiszámítható* (Budapest: Libri, 2010).

This is possible only if the potential attacker has a so-called virtual footprint. If this is not the case, the responsibility to detect potential lone offenders falls on actors of the above noted threefold crime prevention system. Flashes, that is, acts violating norms, can occur in both cases, but their prevention requires different capabilities. In the first case, filtering is performed in virtual space; in the second case, detection is up to the human factors of the system. People without a virtual footprint can be filtered, because together with other factors, this may suggest a potential offender. Of course, potential violations of norms should be ranked; more serious ones require immediate action, while monitoring may suffice for less serious ones.

The assumption of the predictability of human behavior needs clarification. Predictive forecasting is not always possible because human actions are influenced by external and internal factors, with a pronounced effect of momentary psychological, emotional and mental states. In some cases, under certain circumstances the potential future actions of individuals may be predicted on the basis of their attitudes and relationships to these, and in other similar cases, prediction is not possible.

9. Conclusion

In my study, I presented a general non-specific solution, the significance of which is that, supplemented with the characteristics of the area to be examined and the predictors specific to the area, we obtain a usable method of prevention. In Hungary, the number of crimes committed by lone offenders, such as acts of terrorism or hate crimes, is fortunately low. Coverage of the phenomenon in Western and Hungarian media, however, stirs strong emotions, shifting focus on the issue of prevention. As shown above, criminology theories help us understand the multi-faceted features of criminal policy. Nevertheless, criminal policy does not offer any solutions for the identification of lone offenders or for the prevention of lone-actor offences. The method of predictive profiling and predictive analytics offers a solution. Predictors noted in the study can be anything – causes such as fear, the feeling of social exclusion, rage, resentment, belonging to the majority or to the minority. For me, a key fundament of predictive profiling is identification and analysis of identity because traditional prevention methods – owing to their general applicability – are ineffective in relation to this modus operandi. The focus of attention should be shifted to unique features, involving competent experts and the setting up of a prediction system. Predictive profiling, as a method, is one of many alternatives. It may be effective precisely because of the unique nature of such crime. Law enforcement organisations need to manage their resources. They can be supported with predictive analytics, which replaces humans in the processing of large amounts of data, creating a basis for the focused analysis of the targeted person or phenomenon. The next step of predictive analytics will be the use of artificial intelligences in law enforcement and crime prevention. However, the final decision should always be taken by competent humans.

References

- Bates, R. A.: 'Dancing with wolves. Today's lone wolf terrorists.' *The Journal of Public* and *Professional Sociology* 4, no 1 (2012), 1–14.
- Barabási Albert-László: Villanások. A jövő kiszámítható. Budapest, Libri, 2010.
- Beam, Luis: 'Leaderless Resistance.' *The Seditionist* 12, Febr. 1992. Available: www. louisbeam.com/leader-less.htm (09. 10. 2016.).
- Beauregard, E.: 'Criminal profiling: Art or science?' *The Society of Notaries Public of British Columbia* 16, no 4 (2007). 16–17.
- Borbíró, Andrea Gönczöl, Katalin Kerezsi, Klára Lévay, Miklós: *Kriminológia*. Budapest, Wolters Kluwer Kft, 2017.
- Beccaria, Cesare: A bűnökről és büntetésekről. Budapest, Attractor könyvkiadó kft., 2012.
- Clarke, V. Ronald: 'Situational Crime Prevention: Its Theoretical Basis and Practical Scope.' *Crime and Justice* 4 (1983), 225–256. DOI: https://doi.org/10.1086/449090
- Connor, Jeffrey C. Flynn, Carol R.: *Report: Lone Wolf Terrorism*. National Security Critical Issue Task Force, Georgetown University, Washington, 2015. Available: http://georgetownsecuritystudiesre-view.org/wp-content/uploads/2015/08/ NCITF-Final-Paper.pdf (08. 08. 2016.)
- Dickson, Lewis W.: Lone Wolf Terrorism: a Case Study. Malmö University, Malmö, 2015. Available: https://dspace.mah.se/bitstream/handle/2043/19258/Lone%20 Wolf%20Terrorism%20-%20Masters%20 Thesis%20-%20Lewis%20W.Dickson. pdf?sequence=2 (11. 08. 2016.)
- *European Union Terrorism Situation and Trend Report 2016.* EUROPOL, Netherlands. Available: www.europol.europa.eu/content/european-union-terrorism-situation-and-trend-report-te-sat-2016 (10. 08. 2016.) DOI: https://doi. org/10.2813/525171
- Farkas, Johanna: 'A magányos merénylők radikalizálódása.' Acta Humana: Hungarian Centre for Human Rights Publication 4, no 5 (2016), 17–31.
- Feldman, Matthew: 'Comparative Lone Wolf Terrorism: Toward a Heuristic Definition.' Democracy and Security 9, no 3 (2013), 270–288. DOI: https://doi.org/10.1080 /17419166.2013.792252
- Gill, Paul: Lone-actor Terrorists a Behavioural Analysis. New York, Routledge, 2015. DOI: https://doi.org/10.4324/9781315766348
- Gönczöl, Katalin Kerezsi, Klára Korinek, László: *Kriminológia Szakkriminológia.* Budapest, Complex kiadó Jogi és Üzleti Tartalomszolgáltató Kft., 2007.
- Hansen, Randall: 'Migration to Europe since 1945: Its History and its Lessons.' *The Political Quarterly* 74, no 1 (2003), 25–38. DOI: https://doi.org/10.1111/j.1467-923x.2003.00579.x
- Joosse, Paul: 'Leaderless Resistance and Ideological Inclusion: The case of the Earth Liberation Front.' *Terrorism and Political Violence* 3 (2007), 351–368. Available: www.regonline.com/custl.m.a-ges/300000/302148/LeaderlessResistance.pdf (11. 08. 2016.). DOI: https://doi.org/10.1080/09546550701424042
- Kis-Benedek, József: Dzsihadizmus, radikalizmus, terrorizmus. Budapest, Zrínyi, 2016.

- Korinek, László: 'Félelem a bűnözéstől, rejtett bűnözés.' In: *Kriminológia*, ed. by Borbíró, Andrea – Gönczöl, Katalin – Kerezsi, Klára – Lévay, Miklós. Budapest, Wolters Kluwer Kft., 2017.
- Kruglanski, A. W. Fishman, S.: 'Psychological factors in terrorism and counterterrorism: Individual, group and organizational levels of analysis.' *Social Issues and Policy Review* 3, no 1 (2009), 1–44. DOI: https://doi.org/10.1111/j.1751-2409.2009.01009.x
- Nijboer, Matthijs: 'A review of lone wolf terrorism: The need for a different approach.' Social Cosmos 1 (2012), 33–40. Available: http://socialcosmos.library.uu.nl/index. php/sc/article/view/43 (12. 08. 2016.).
- Pantucci, R.: A typology of lone wolves: Preliminary analysis of lone islamist terrorists. London, International Centre for the Study of Radicalisation and Political Violence, 2011.
- Pásztor, A. Mityók, Cs. Németh, F.: 'A rendvédelmi bűnügyi pszichológiai tevékenység szakmai protokollja.' 2009. Available: https://psycho.unideb.hu/munkatarsak/csukonyi csilla/targyak/rendvedelempszichologia.pdf (27. 10. 2020.)
- Spaaij, Ramón: Understanding Lone Wolf Terrorism: Global Patterns, Motivations and Prevention. New York, Springer, 2012. DOI: https://doi.org/10.1007/978-94-007-2981-0
- Shmueli, Galit Koppius, Otto: *Predictive Analytics in Information Systems Research*. Robert H. Smith School Research Paper No. RHS 06-138, 2010. DOI: https://doi. org/10.2139/ssrn.1606674
- Szabó, András: Igazságosan vagy okosan? Budapest, Akadémiai Kiadó, 1993.
- Szabó, András László: 'A migráció hatására megjelenő magányos elkövetési mód kriminológiai szempontú vizsgálata és egy lehetséges megelőzési modell.' *Nemzetbiztonsági Szemle* 7, no 3 (2019), 3–17. DOI: https://doi.org/10.32561/nsz.2019.3.1
- Szijártó, Lívia: *Alkalmazott pszichológiai módszerek a szélsőséges csoportok és a terrorizmus elleni harcban.* PhD dissertation, NKE Hadtudományi Doktori Iskola, 2019.
- Tessényi, J. Kazár, K. (2012): 'Szerencsejáték-vásárlási szokások vizsgálata "prediktív analitika" segítségével.' *Statisztikai Szemle* 90, no 7-8 (2012), 677–695.
- 'The Threat from Solo Terrorism and Lone Wolf Terrorism.' Center for Terror Analysis. PET, Denmark, 2011. Available: www.pet.dk/English/~/media/Engelsk/ the_threat_from_solo_terrorism_and_lone_ wolf_terrorism_-_engelsk_version_pdf.ashx (11. 08. 2016.)