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Examination of Terrorist Incident Scene – more questions than answers

Summary

Terrorist attacks are a challenge both to rescue services and law enforcement authorities because of the scale of the problems they bring about. Such scenes are particularly susceptible to contamination, which crime scene examination teams aim at avoiding.
In the article crime scene examination of terrorist character were analysed against "seven golden questions" that every investigator should ask himself.

Key words: forensic science, examination of terrorist attack scene, "seven golden questions"

A scene of a terrorist attack is unique due to the fact that the perpetrators act with the purpose of hurting (killing, injuring) a maximal number of persons. Therefore they attack in public common access places: in the street, in the underground railway, theatre, café, stadium, etc. They always make use of surprising the members of the public and the services. Often, the attacks of this kind are performed simultaneously in several locations. Chaos caused by an attack or attacks may bring about further negative effects including interference with rescue activities due to high involvement of forces and means. Undoubtedly "when facing a choice between protecting forensic traces and saving a victim, a police officer shall always stand on the side of protecting human health and life" (Bogusz, 2017) and therefore from the forensic point of view an incident of terrorist character is characterised by highest risk of contamination.

In a given tragic moment nobody ponders on this or analyses this matter because there are the most important things to do – saving life and well-being of the victims as well as preventing other after effects of the attack. One should always be conscious that the activities which will be undertaken will be the ones aiming at providing and answer to the basic questions: who is the perpetrator of an attack? or: who stands behind the attack? Even though the answer to that question is most important, it is not possible to find it without answering further questions. In forensic science they are referred to as "seven golden questions". For the first time, they were reported by Hans Gross, considered the "father of forensics". He draw attention to the fact that the essential task of the scene of crime officer is attempting to answer seven golden questions he considered the source of wisdom. In the present times one might say that those questions constitute or should constitute an important source of inspiration. A board with those questions stood on the desk in Gross's surgery. He emphasised that if every persons managing the investigative proceedings had this board in from of his/her eyes he/she would avoid making mistakes (Gross, 1894).

Therefore in order to avoid mistakes, prevent contamination, which is many times unavoidable, it is worth to look at the terrorist incident scene through the prism of seven forensic golden questions.

What? happened? What crime are we dealing with? Is it really a crime or an unfortunate accident? Or is it a an incident due to natural causes? For example, is the person driving a car into the crowd a terrorist? Are a wreck and remains of passengers a result of of a terrorist attack? Undoubtedly, terrorists acted in this way in the past and hence in case of a catastrophe in air or land traffic there are grounds for building a hypothesis about a terrorist attack. The question "what happened?" must always create the basis for building many versions including a terrorist attack, unfortunate accident or suicide. The proof for that may be the catastrophe of Germanwings plane caused by the copilot, Andreas Lubitz. The

investigation of that case demonstrated that Lubitz had suffered from depression (https://pl.wikipedia.or/wiki/Andreas_Lubitz).

The fact that surely indicates that we have to do with an act of terror is a public and common access location. The actions of terrorists are supposed to hurt many people. During their activities the perpetrator or perpetrators shout certain statements. Almost always, the organisation standing behind the attack confesses to its arranging, promises more attacks and urges its followers to perpetrate more acts of terror.

Where? did it happen? – This question of the crime scene, which should be looked at in the context of art. 6 of the criminal code and particularly paragraph 2. An action is considered as committed in a place where a perpetrator acted or ceased to fulfil his/her obligation, or where the effect being a demonstration of an offence took place or was supposed to occur according to the perpetrator's intention". In case of offences of terrorist character there is no problem with identifying this location because the perpetrators do not conceal their actions. On the contrary – their crimes constitute a kind of a public manifesto.

Places of committing such crimes have varied in terms of area and terrain conditions. In the past, they used to be areas with dense buildings (e.g. New York and Paris attacks) or premises crowded with people (stadiums, objects of culture, airports). Let us reflect on a few attacks to illustrate this issue.

The largest crime scene ever examined that extended over 1200 square miles was Lockerbie, above which a bombing occurred on 21st December, 1988. The perpetrators planted a bomb in Boeing 747 airplane. The explosion in the air destroyed the aircraft. All passengers and crew members, a total number of 269 persons, were killed. Falling fragments of the aircraft killed 11 more persons on the ground. (https://pl.wikipedia.org/wiki/Zamach_nad_Lockerbie)

329 persons died in an explosion on board of Boeing 747-237B on 23 June, 1985. The aircraft was going from Canada to India with a stopover at Heathrow. Examination of the remains of the airplane and human dead bodies recovered from the Atlantic Ocean near Irish Coast demonstrated that most victims had died in the air (https://pl.wikipedia.org/wiki/Katastrofa_lotu_Air_India.182). In that case, the examined scene was made of constantly moving waters of the Ocean, which made the proceedings difficult.

Another example of "marine crime scene examination" difficult due to the location but of different character was carried out in the course of investigating Al-Kaida attack on USS Cole (DDG-67) guided-missile destroyer that took place on n 12th October, 2000 in Adena. Terrorists used a motor boat filled containing explosives driven by suicide bombers. The explosion led to tearing off 12 m of the board. 39 marines were injured and 17 persons, including the two terrorists, were killed. It was necessary to examine the damaged board over and below water surface, as well as the inside of the vessel. This terrorist attack is considered the beginning of the new type of terrorism: "maritime terrorism" (https://pl.wikipedia.org/wiki/USS_Cole_(DDG-67)).

Pm 14th July, 2016 a criminal in Niece used a truck to crash into the crowd on the Promenade des Anglais killing 86 persons and injuring over 200. Also the perpetrator, 31-year-old Tunesian Mohamed Lahouaiej Bouhlel died (https://pl.wikipwdia.org/wiki/Zamach_w_Nicei).

A truck was also used by the perpetrator of the terrorist attack in Berlin during the Christmas Fair. 12 persons died and over 50 were injured. The criminal fled from the scene. Documents found in the vehicle directed the suspicion to a Tunisian, Anis Amri. A few weeks later he was shot dead by Italian police officers in Milan (https://pl/wikipedia.org/wiki/Zamach_w_Berlinie).

However, the events with most tragic effects were a series of four coordinated terrorist attacks in the USA on September 11, 2001. The attacks killed 2,996. During the sole rescue operation over 300 firemen and policemen were killed. Twenty six persons are considered missing. In order to identify dead bodies and human remains DNA analysis was applied for the first time on such a great scale. (https://pl.wikipedia.org/wiki/Zamach_z_11_września_2001.roku#Przebieg). Additionally, the attacks brought about fires and construction catastrophes. Both World Trade Centre Towers collapsed.

When? did it happen? The answer to this question is not difficult because terrorists' actions are "public" and usually are recorded by surveillance cameras and remembered by witnesses. It must be, however, taken into consideration that such events may cause a posttraumatic stress disorder, which affects perception and remembering processes.

How? was perpetrator acting and **what was the implement?** he/she was using when perpetrating the attack? Finding the answer to these questions is not difficult either because research has demonstrated that as many as 70% of the attacks were made with home-made bombs, and in approx. 50% of those cases pipe or tube bombs of very simple construction were used (Foran, Gehring, Stallworth, 2009). In addition to that, perpetrators use firearms with which they are able to hoot at and kill a large number of persons.

It seems, however, that in Europe, due to more difficult access to firearms, perpetrators have and will use easily available means, including vehicles. Until

recently, using an airplane guaranteed a high mortality result, i.e. effectiveness of an attack. However, stricter security checks in airports have induced attackers to start using cars. Also combined implements have been used: cars were driven into crowd and people shot at, or explosives were used. There were also cases of using gas in Tokio and Sankt Petersburg.

The use of the above means has guaranteed the attackers high effectiveness, i.e. annihilation of a maximum number of people. In the 21st century it is difficult to prevent someone to use surface transport, particularly to automobiles. It seems easier to control air transport than surface transport. It is thus more difficult to ensure security in public transportation (the underground, buses, trams). the difficulty results from easy and general access.

Why? The question about the motif the answer to which is generally known. Terrorism is the effect of fundamentalism with a religious and political dimension. The world of a fundamentalist consists exclusively of enemies, which are to be pulled onto the side of "the only rightful truth". If the society does not wish to accept this "rightful truth" it must be applied by force. "This is where hatred, cruelty and ruthlessness of all kinds of fundamentalisms come from. And this absolutely does not refer only to Islam. It is a cross-culture feature of humankind […] Fundamental terror constitutes an effect of a certain state of mind and any particular religion or a political-ideological option. This state of mind is an effect of influence of a certain type of power and politics that derives strength from fundamentalism. Because this is not about some ideas, but about power"(Szlendak, 2002, p. 58).

Who? is the perpetrator of a terrorist attack? This is the principal and the most important question that low enforcement officers and citizens demanding justice ask themselves.

However, is we look at the results of terrorist attacks, they are unfortunately measured with the number of killed and injured victims. Therefore, it is necessary to ask another question: **who?** are those killed and injured persons? If it is not known who they are, they must be identified, which is not an easy task due to the mass character of an attack as well as the means of crime causing fragmentation and deformation of bodies, which are also displaced, according to the reports from WTC attacks. At present, determining identity of victims in such cases is possible, however, time-consuming and costly, depending on the scale of an attack.

In this complex situation it is justified to ask another question: **who?** performs the pre-court proceedings of crime scene examination and recovers traces on the scene? In spite of the fact that Gross, asking **who?** had in mind the perpetrator of the crime, the issue of his detecting and identifying the victims has rested, does and will rest with law enforcement authorities. This is where another derives from: **"who?"** performs examination of terrorist attack scene?

As stipulated in the Proclamation of the Minister of Justice of 18th May, 2017 on publication of the unified text of the Regulation by the Minister of Justice – "Internal regulation of operation of public prosecution organisational units" (Journal of Laws 1206, art. 169) "In cases of manslaughter, bringing about a transport or construction catastrophe or their threat and in cases of fatal accidents in workplace and in cases of other serious crimes resulting in a death of a persons, the prosecutor carries out crime scene examination or manages its performance and, if necessary, reproduces the course of events or controls that process." Therefore, in case of terrorist incidents the entity carrying out scene examination will be the prosecutor. The problem is that nobody teaches lawyers, i.e. potential prosecutors in what way scene of crime examination is to be performed. They cannot learn that in the law school even if they take an optional forensic course because this course consists of only few hours. Prosecutors very rarely manage crime scene examination on their own and usually commission police officers to do that. Lack of prosecutors' experience in this area was demonstrated by results of research carried out by Monika Całkiewicz (2010) who found that in a sample of 200 examinations of corpse finding scenes prosecutors had participated in 33 and managed the scene in 11. If Polish prosecutors do not perform examinations of "plain" corpse finding scenes, will they be able to carry out examinations of extraordinary scenes of crime with several, several dozen or even several hundred or thousands human remain? The answer is simple: they will not be capable of that!

It seems that the only competent persons are scene of crime officers belonging to crime scene examination teams. But a s.o.c.o. himself with a status of a specialist, is not a judicial organ. He either does not have experience in the examination of mass murder scenes where the perpetrators have used explosives. Practice does not leave any delusion in this respect and the situation calls for implementation of suitable training projects (Kwiatkowska-Wójcikiewicz, 2011 and literature mentioned in the Bibliography to the work).

Here, it is worth to mention Polish legal regulations, particularly *Guidelines no. 1 of 23rd July, 2015, by the Chief Commander of the Polish Police (Official Journal of Police Headquarters, item 59)* and *Methodology of examining scenes of terror crimes and catastrophes, and identification of dead bodies* of August, 2012 (further referred to as *Methodology). Methodology* deserves a positive rating. This document is attempt to determine "uniform rules of organizing examination

of scenes of terror crimes and catastrophes (mass and extraordinary incidents), as well as identification of victims" (2012, p. 4). Is is supposed to help the organs responsible for preparatory proceedings in appropriate organisation, execution and coordinating crimes scenes examination from the moment of reporting an incident and taking over control of the area/building from a body conducting rescue operation until completion of gathering and recovering all information and physical evidence during crime scene examination, as well as facing the difficult issues of terrorism and terrorist attacks and mass incidents in practice. It embraces also the proceedings and especially examinations of the most difficult crime scenes: the ones of terrorist character and catastrophes. They are, as it has been already emphasised, doomed to contamination due to means used by perpetrators: explosives, firearms, or means of transport that can cause death and injuries of many people. Using such means causes also other consequences, such as fires, catastrophes, etc.

Another factor leading to further contamination is the rescue operation itself: extinguishing fires, preventing construction catastrophes, first aid, etc. These activities are connected with presence of many individuals who contaminate the scene while performing their duties. This constitutes the yet another reason for cooperation among rescue services and raising their awareness of evidential value of the crime scene and possible negative effects of rescue operation this value. "Introduction" of *Methodology* mentioned above suggests that there is a lot of work to be done in this area, because, "as practice shows, cooperation of judicial organs with rescue services and respective national commissions of accident examination should be improved. Decisions taken already in the phase of rescue operation are of direct importance for subsequent investigative proceedings and those of designated commissions. It should be taken into consideration that proceedings on mass incident scene involve various services responsible for specific stages in response to a crisis situation and already during those proceedings it is necessary to undertake judicial proceedings, such as inspection of parts of crime scene subsequently (in stages) handed over to the disposal of law enforcement authorities." (2012, p. 4)

While striving to determine **who?** is the perpetrator of a terrorist attack? one should not lose sight of a problem that a lone attacker does not prepare the action on his/her own. Therefore not only the identity of the perpetrator, who, for example, killed himself in the attack, should be determined but but also the accomplices, who had participated in the preparation and, for example, had constructed the bomb. Their traces may be detected and secured during crime scene examination. In particular, we may deal with biological traces, finger marks and osmologicals traces.

A significant meaning for the identification of culprits may have DNA traces and, paradoxically, more elusive, osmological evidence. It was previously mentioned that explosive materials were used in as many as over 70% of terrorist attacks. This is connected to the fact that a bomb is easy to construct. According to reports, approx. 50% of incidents attackers detonated pipe or tube bombs. Foran et al. carried out an experiment involving detonating 51 such explosive devices with deposited DNA traces of 18 persons. Not only mtDNA was detected on the post blast residues but half of the persons were successfully identified (Foran et al., 2009).

Besides, terrorists use materials based on peroxides (triacetone triperoxise – TATP, diacetone diperoxide – DADP, hexamethylene triperoxide diamine – HMTD), which was used in another experiment carried out in Arizona. 13 teams were formed. Each of them included a dog with a handler. Out of 13 dogs, which participated in the experiments, only 5 had been previously trained in finding post blast traces. Bombs were planted in a vehicle and in the ground on the roadside. In case of the bomb planted in the vehicle, 12 dogs correctly indicated the explosive devices. Eight dogs out of 11 successfully identified the persons. In case of the bomb buried in the ground on the roadside 11 out of 12 dogs indicated it correctly. A total number of 73,5% correct indications were registered (Curran, Prada, Furton, 2010).

Stockham, Slavin, Kift (2004) reported another experiment performed by the FBI. It was done in two stages – explosion and fire. 16 handlers and 20 dogs participated in the experiment. For the explosion part, 4 pipe bombs (two filled with low explosive material, among others charcoal, sulphur, black powder and two filled with high explosive material, such as ammonium sulphate). Dogs found "perpetrators" in 53 cases out of 80. In the "fire" 2 canisters were used: a metal one and a plastic one. Petrol was poured over them, then they were left to burn for two minutes and, finally, the fire was distinguished with water. The dog succeeded in identifying 31 out of 40 "perpetrators". It is worth to emphasise the fact that there were no false positive indications.

Undoubtedly, objects that may have been lost or abandoned by the terrorists at the scene may bear not only biological or scent traces, but also finger marks. An example of that may be a latent fingerprint detected and recovered during examination of March 2004 Madrid terrorist attack scene. It was recovered on a plastic bag. This mark, difficult due to its poor quality, was identified as coming from an Algerian, Ouhnane

Daoud. However, even it that case, it was impossible to avoid mistakes during the identification stage (more in: Kwiatkowska-Darul, Wójcikiewicz, 2008).

To summarise it should be stated that examinations of scenes of terrorist incidents do not differ from "regular crime scene examination" in terms of methodology, because, as any other such procedure they should be conducted with due respect to the subject matter and great regard to traces that may be present there. The crime scene becomes the starting point of the encounter with a criminal – terrorist and here the struggle to gaining evidence starts (Gurgul, 2003). Therefore nothing can justify mindless rushing onto the scene without looking at what is under our feet (Bogusz, 2017).

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