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# Serial Arson

## Study of a phenomenon<sup>1</sup>



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Particular care and thoroughness are needed when investigating cases of serial arson. The frequency of the offences and the danger to the public always awaken fear and great concern in the urban and rural areas affected. The German media is quick to speak about “fire devil” arsonists. The subjective feeling of safety in large sections of the population immediately affected decreases considerably when an arsonist is on the loose. Unfortunately, a fully usable definition of serial arson cannot be found in the specialist literature on psychology, sociology and criminalistics in the German-speaking world. On the other hand, there are many findings concerning a possible “offender profile”. Serial arsonists tend to be male and act alone. They show a general preference for the same or similar targets, most of which are unlit, such as litter bins, waste containers, motor vehicles, unlocked buildings, wooded areas etc. It is only in rare cases that a serial arsonist changes their preferred targets during a prolonged arson series. Any inhibitions that the offender may have at the time of their first fire are shed very quickly after their first successful arson attack. Serial arsonists rarely use accelerants such as petrol, diesel etc. Serial arsonists who are active in the evening hours before or after the onset of darkness are frequently youths (aged between 14 and 18, by German law). Young adults (aged between 18 and 21, by German law) tend to act in the darkness of early evening, while adults typically only carry out attacks in the late night or early morning hours. Serial arsonists are mainly local offenders.

**T**he size of the fires ignited varies. Yet even fires intended to be small, such as the igniting of a waste-paper bin, a curtain in a changing cubicle or a product display, can become a large fire within seconds and set a whole department store on fire, putting the lives of staff and shoppers in danger. Arson is therefore a felony, rather than a misdemeanour.

For example, somebody who sets a display stand alight, generally does not end up causing a large fire. The offender “only” commits property damage (Section 303 of the German Criminal Code – objective elements of the case include pro-

perty damage not caused by negligence, an offence which may only be prosecuted upon complaint by the victim).<sup>2</sup> If, however, the fire spreads and the container fire spreads to a building, then the offender may be charged with serious arson (Section 306a of the German Criminal Code) or even arson resulting in death (Section 306c).<sup>3</sup> Most serial arsonists do not possess the necessary background knowledge of combustion theory to be able to anticipate the potentially devastating consequences of their deeds.

Serial arson has become an increasingly serious problem in developed industrial

countries in recent years. Barely a week passes without reports of series of arson attacks in the media. News of serial arson catches one's attention time and time again.<sup>4</sup>

The motive is often unclear. What drives such offenders? There is barely another crime where so many motives can come into consideration, including those that concern the psyche. The frequency of the offences and the danger to the public always awaken great concern in the population. The German media is quick to speak about "fire devil" arsonists. Particular care and thoroughness are therefore required when investigating cases of serial arson. Establishing precisely and thoroughly the source of the fire and its cause is crucial. Serial arson attacks are generally very difficult to solve because most of the time, the arsonist operates alone and does not have any accomplices, and as such there are no other persons with knowledge of the crime.<sup>5</sup> For that reason, such investigations can also be very time-consuming. Extensive investigation and identification of the cause and spread of the fire are essential in order to solve cases of serial arson.

During the investigation, it is important to obtain information that is as accurate as possible in order to provide a basis for comparison with a single arson attack or to enable the case to be identified as one in a series of arson attacks. There is a particular risk in assigning fires to a series if the cause of the fire (ignition source) has not been conclusively established during the fire investigation. All the more so if an attempt is made to construct a case against the offender using fires that have not been fully clarified. In other words, only those fires should be identified as belonging to a series where no doubts arise based on the time of the offence, the execution of the offence, the use of certain devices, the choice of target and the point of attack on

the target. For that reason, uniform standards are therefore required for investigative work at the scene of the fire.

The basic question needs to be asked: What is serial arson? Herein lies one of the problems. Closer study of this issue reveals that there is no fully usable definition of the term in the specialist literature on criminology in the German-speaking world.<sup>6</sup> Serial arsonists are recidivists who commit several arson attacks during a limited period of time. According to Douglas, Burgess et al. (Douglas/Burgess et al. 1992), serial arson is "an offence committed is an offence committed by firesetters who set three or more fires with a significant cooling off period between the fires."<sup>7</sup> Serial arsonists differ from occasional offenders by the particularly high social threat, whereby arson attacks are in any case classified as felonies because of the danger to the public.<sup>8</sup> A sudden increase in arson cases without looting attracts the attention of researchers. Attempts have repeatedly been made to develop a definition or explanation for "motiveless", i.e. non-militant, firesetting and serial arson. The focus of those attempts at explanation was on the "how" and "why" of "motiveless" firesetting. However, in the practical work of the police and judiciary regarding arson cases, there is a considerable need for elucidation as to arson motives. It is precisely such practical police work that requires scientific attention and terminological clarity. The official WHO definition of pyromania ("arson attacks without a motive") remains contested.<sup>9</sup> A majority of serial arsonists do not fulfil the clinical criteria for pyromania. However, 90 % of arsonists display some form of mental disorder.

Of those mental disorders, 36 % may be classified under the schizophrenia spectrum. Pathological firesetting or pyromania is one of the most striking psychological disorders, and also one with the most far-

reaching consequences. Unfortunately, in the case of firesetting that is genuinely pathological, there is little fully established knowledge about offenders, their characters, background and motives. Replacement of the term “pyromania” with “non-extrinsically motivated firesetting” should therefore be considered.<sup>10</sup>

A US study distinguishes between six motive groups: vandalism, attention seeking, revenge, crime concealment, profit and extremism. From investigations carried out by FBI profilers into serial killers in the USA, it is known that there is an association between cases of adolescent arson and later murders in the case of sexually motivated serial killers. The so-called “homicidal triad” (Macdonald triad) consists of bedwetting late into childhood, animal cruelty and firesetting.<sup>11</sup>

In Germany, two of the best-known serial murderers were also firesetters. The Swabian village teacher Ernst August Wagner murdered 13 people in a killing spree before the First World War and set four fires. The serial killer Peter Kürten was found guilty of 18 murders and 31 counts of arson and was executed in 1931. He murdered and set fires for sexual gratification. In this context, German researchers have identified three groups: offences without rational motives, rational motives, urge for social recognition, and a mixture of the two.

Based on the results by their fellow American colleagues, experts at the National Centre for the Analysis of Violent Crime (NCAVC) at the FBI Academy in Quantico, Virginia, have carried out in-depth research into the phenomenon of “serial arsonists” in recent years. They found it necessary to provide clear definitions of terminology to facilitate an understanding of their own findings and conclusions.

Arson was classified according to type and style. A distinction was made, accor-

ding to the behaviour of arsonists, between single, double and triple arson attacks, as well as between mass, spree and serial arson. Criteria for determining arson type include number of fires set, number of separate events occurring, number of sites and locations involved and whether or not an emotional cooling off period took place.<sup>12</sup>

### OFFENDER PROFILES

Four out of ten offenders have a previous criminal record. Almost half live with their family, with most being unmarried (or divorced shortly before). Two-thirds of the fire targets are buildings with no direct connection to the offender, with the remainder divided between the offender’s own residence and workplace (although half of arsonists are no longer working at the time of the offence). The average age of offending is relatively low, with arson generally being committed in the first decades of life. The majority of arsonists come from the countryside. Two-thirds set fires at nights (more commonly adults), while a quarter do so during the day (more commonly youths). The allegedly high proportion of sexually motivated arsonists features particularly prominently in German-language psychiatry because of the influence of Sigmund Freud. There may be individual cases of sexually motivated arson, but sexual gratification is not a statistically relevant motive, at least in the case of those pyromaniacs about whom there are records.

Some “have to” to set fires (Type 1), while others “have to” (Type 2). It has emerged, for example, that serial arson attacks (Type 1) committed for an extrinsic purpose (function-oriented) are most commonly caused by problems in the private, interpersonal sphere.

Crimes of passion, based on revenge, envy, disappointment or jealousy, are high

on the list of motives. The “function-oriented” serial arsonist (Type 1) acts aggressively and wants to vent their rage and disappointments (rational).

The fire-obsessed serial arsonist (Type 2), on the other hand, acts quasi-unintentionally (irrational). According to experts, such offenders take pleasure in fire as though it were a work of art. They are driven by an undetermined feeling of pleasure. For them, it is about the power of fire, the crackling, darting and whipping of the flames. The second type acts from a “compulsive, irrational satisfaction of their needs”.<sup>13</sup>

They are “fire-obsessed” and often remain at the site of the fire (strategy: it has proven worthwhile to compare photographs of curious bystanders at the various fire scenes). They are primarily interested in the spectacle of the flames; their focus is on the fire itself and they also watch fires that they have not set. Further, the thought of achieving a great effect with the smallest effort – striking a match – is seductive, especially for people suffering from extreme inferiority complexes. Arsonists experience a feeling of their own greatness, when the small flame that they have lit is transformed into an impressive fire that endangers others. The offender takes pleasure in their work as a staging of their own importance.<sup>14</sup> Since that high is extinguished with the last embers, such people often become serial offenders. This is where the series becomes a downward spiral (vicious circle). The downward spiral results from the offender “not being able to stop”.

If serial arsonists are identified and punished, there is a high likelihood that they will stop setting fires. The reoffending rate for serial arsonists is 4 %. This is far below the reoffending rate for those convicted of battery or robbery. In the case of mentally ill firesetters, the rate is 11 percent.

Offenders repeatedly set fires in their close environment (local offenders). That “local area” can even be in a block of flats where the arsonist themselves has a flat. Subjective investigations to identify a suspect in cases of wilful firesetting are focused on whether it may be assumed that the offender’s own property or property unrelated to the offender was set alight as as a single act of arson or as one of a series of arson attacks.

In general, serial firesetters prefer the same or similar targets (e.g. waste containers, rubbish bins, doormats, detached buildings, barns, hay huts, motor vehicles, wooded areas, caravans). In rare cases, the offender changes the type of target during a persistent series (strategy: unlike in the case of other serial offenders, there may be no changes in terms of victim/offender risk or there may be atypical changes). Generally, the time of the arson attacks remains the same (e.g. dusk, night time, at certain hours, moonlit, rainy days). Solving cases of serial arson is rendered more difficult if the arson attacks are only committed between long intervals or if the scenes of the fire are spread out over a wide area.

Often, the existence of fire marks and the use of state-of-the-art technical equipment make it relatively straightforward to discover the causes of the fire and to identify technical failings or human error as the cause. However, it is far more difficult to identify the offender in the case of known arson, because witnesses to acts of arson are extremely rare and it is uncommon for identifying evidence to be left behind at the scene of the fire. It is therefore important that the police use sophisticated equipment during their investigation of an arson case as well as experienced detectives with a keen insight into the criminal mind. For it is precisely in a case involving a series of arson attacks that a criminological

evaluation of the perpetrator's standard operating procedure, or "modus operandi", plays a significant role.<sup>15</sup>

However, the modus operandi as a constant is not sufficient grounds in itself for assigning individual offences to a series. For this, it is crucial that the constant features convey sufficiently reliable information for a series of fires to be identified. This is why, in addition to the "modus operandi", there are additional criteria which enable individual cases to be compared and for a series of fires to be identified through analysis.

Icove, Schroeder and Wherry (Icove et al. 1979) explain this as follows: "The manner in which an arsonist sets his fires, including location(s) chosen, the technique of ignition, configuration of trailers or other devices to speed fire spread, type or accelerant used (or lack thereof), the way accelerant is applied, and behaviours surrounding the firesetting (property removal, time, geography etc.). The 'modus operandi' is often called the 'signature', meaning that it is unique to that arsonist. Also known as method of operation. Comparing the 'modus operandi' of how different fires were set can identify whether multiple fires are the work of the same arsonist."<sup>16</sup>

The following features in particular can make up the "signature" of the serial arsonist. It should be noted that only precise observation of the individual elements of the method of operation can provide a meaningful basis for comparison. Arsonists hope that the fire will erase their traces. However, with each fire they leave new clues and a pattern develops. In this respect, it is particularly important to make the relationship of the arsonist to fire and their individual previous experiences with fire (fire-specific learning history) a component of the investigation. One offender, for example, hit on the idea

of igniting cars with non-locked petrol caps by placing petrol-soaked rags in the tanks for emotional release after having watched a video of exploding cars.<sup>17</sup>

Arson can be committed by spontaneous firesetting, delayed firesetting and manipulated firesetting. There are many possibilities for recognising the signature of the arsonist based on the imagination of the offender, their technical knowledge and their manual skills. However, the possibility of changes in the entire "modus operandi" or certain aspects of the offence must always be taken into account. Such noteworthy changes to the "modus operandi" can occur based on the adaptation of the method to the actual conditions at the scene of the fire and personal changes. Changes are especially likely in the case of a prolonged series of arson attacks (e.g. learning effect).

It should not be forgotten that firesetting is an easy and cowardly act! It requires neither special knowledge, nor great preparations. Some 75 % of arson attacks are crimes of opportunity. The perpetrator only has inhibitions when it comes to their first fire. After their first successful fire, such inhibitions are quickly shed. Out of 870 fires investigated in one insurance evaluation, 740 were ignited using unsophisticated methods, namely matches or cigarette lighters. The greatest effect is achieved with minimal effort, just the striking of a match or the flick of a lighter. Accelerants were only used in 130 cases. Criminal resolve was relatively low in these cases. In many cases, the arsonists almost felt invited to carry out their deed.<sup>18</sup>

We can speak of spontaneous firesetting if combustible material at the site of the fire is wilfully set alight without preparations and the perpetrator leaves the scene quickly to avoid being detected.

A time-delay device can be made simply without great technical effort using one or more candles. Electrical or chemical igni-

tion devices can also be used to cause fires with a time lag. The aim of delayed fire-setting is to allow the offender to get away from the scene, after having set things up, so that they have an alibi for the time of the delayed fire. Indeed, the firesetter can even appear as a witness and claim to have noticed technical shortcomings that could have led to the fire.

Manipulated firesetting can look like either spontaneous or delayed firesetting and therefore poses a particular challenge for fire investigators. The ignition devices and ignition-delay devices used in cases of serial arson can be classified as mechanical, electrical or chemical.

During the investigative work, crime mapping can be used to record arson cases cartographically. This enables serial arson attacks to be visualised, so that police resources can be allocated appropriately. The identity of the offender is secondary in that process.

Unfortunately, it is still the case that the units of criminal investigation departments specialising in fire offences are not notified of a majority of firefighting operations. The reasons are extremely varied. For example, small incipient fires which are extinguished by residents or fire fighters are generally not reported to the criminal investigation department or are only recorded as an activity when reported by the uniformed police. As a result, series can only be observed through crime mapping and be submitted to geographical profiling at a relatively late stage. It is therefore important that documents with the fire services and police control centres tied to firefighting operations always be included. The three specialist units dealing with fire offences at the Berlin Federal Office of Criminal Investigation receive a daily report about all "fires". The relevant fire locations are visualised, and thus incipient possible arson series can be recog-

nised at an early stage. Armed with this information, there is the possibility for the officials to determine the probable area where the arsonist is residing, based on the arrangement of the fire locations, because there is normally a certain relationship between the fire locations and the serial arsonist's place of residence (local offender). Based on crime mapping and a database containing records of previously convicted arsonists, the officials can quickly get an overview of previously convicted arsonists living in the given area by searching in the registry of residents when a new incident in an arson series occurs.<sup>19</sup>

"Geographical case analysis" is also used.<sup>20</sup> This refers to the evaluation of an arson series according to place, time and situation. This needs to be closely linked to operative case analysis, because geographical case analysis alone is not sufficient without behavioural evaluation. The aim of geographical case analysis is to draw conclusions about the probable area in which the offender lives. In this way, police investigations can focus primarily on that particular area.

It is not uncommon for arson series to break off suddenly. Various reasons can play a part (e.g. a change of residence, a move away from the area, imprisonment because of a conviction for other crimes, changes in living circumstances etc.).<sup>21</sup>

A further criminological possibility for investigating serial arsonists is the use of the Arson Information and Analysis System (BIAS), a computerised database system developed by the Brandenburg Federal Office of Criminal Investigation in cooperation with several police colleges. Based on extensive empirical research into solved arson cases in Brandenburg, Sachsen-Anhalt, Sachsen and Mecklenburg-Vorpommern, an attempt was made to develop criminological, geographical and case analytical strategies that provide leads to facil-

itate more professional and faster investigation and conviction of arson suspects. Following state-wide testing in Brandenburg, the database was made available to fire investigators in other federal states in Germany (e.g. Sachsen, Niedersachsen) as a practical aid to solving cases of wilful arson and an optimal manner.<sup>22</sup>

Another possibility to support serial arson investigations comes from the field of operative case analysis, namely the Violent Crime Linkage Analysis System (ViCLAS).<sup>23</sup> However, serial arson cases are not necessarily a main focus of operative case analysis.<sup>24</sup> Operative case analysis aims to identify the most likely characteristics of the arsonist, which can then distinguish him from others. Identifying an actual series of fires also presents important difficulties in operative case analysis. The reasons for this lie with the formal police and territorial jurisdictions. As with other multiple offenders, the offender's intrinsic attitude towards the property of others, the possible confrontation with people and risks taken when committing the offence are particularly important in assessing a serial arsonist.

Task force models abroad are a particular form of cooperation between fire investigators and other emergency services organisations in the investigation causes of fire. This model has been used successfully for several years in some US states when investigating arson attacks. The secret to this model's success is that police fire investigators, fire department experts and technical specialists work together under one roof. In some fire departments, insurance investigators are also members of the team. In recent years, the task force model has also been increasingly used in the investigation of serial arson attacks in Great Britain. The adoption of the American task force model was encouraged by the new Fire and Rescue Services Act 2004 in Great

Britain. The Fire and Rescue Services Act 2004 ("the Act") received Royal Assent on July 22<sup>nd</sup>. It replaces the Fire Services Act 1947 with a new legislative framework to ensure the Fire and Rescue Services are better able to meet the particular challenges of the 21<sup>st</sup> century. In this law, unlike the Fire Services Act 1947, fire fighters are given the possibility to conduct fire investigations or join forces with the police fire investigators for that purpose.<sup>25</sup>

### **QUESTIONING OF WITNESSES AND PERSONS CHARGED**

An essential principle is that during questioning, even the slightest deviation, for example from the objective investigative findings at the fire scene is of particular importance. It is essential that such "untruths" be discovered and always got to the bottom of. Since the facts of the case can be variously reported in the case of fires, there is no universally applicable "system of questioning strategy" for fire offences and in particular cases of arson, at least not for practical use.<sup>26</sup> Therefore, the questioning of all persons who could be considered as witnesses in the broadest sense to establish the facts of the case should be recorded in writing. Every claim made during questioning should be checked with further witnesses or material evidence from the investigations at the scene of the crime. In addition, it is important to pay attention to precise times for whereabouts and activities. If differences in times occur, as this is unfortunately rather often the case, these should be compared with radio or television broadcast times where applicable.

It is likewise essential that investigators check time intervals and distances. In each case, it is recommended to visualise statements made using "distance-time diagrams"<sup>27</sup>, in order to establish where certain persons could have been in relation to the fire scene or whether their presence at

the time the fire started was logical or necessary.

In addition, the presence of one or more particular people at the various fire scenes is always suspicious and requires thorough investigation. During questioning, serial arsonists suspected of having committed an offence are rarely willing to make a confession because of a lack of material evidence and in particular because of later possible lawsuits against them. In this context, reference should be made to the fundamental role of the confession of the accused. That is why extreme care is necessary in the case of explanations or “memory aids”. At a later stage in the proceedings or before the court, the accused can claim to have been directly or indirectly influenced during questioning. A cardinal error that unfortunately is repeatedly made is that a confession of causing the fire is taken as fact and further investigations to substantiate that confession at the scene of the fire or comparisons with objective findings at the fire scene from the investigation until that point are omitted. Later retraction of a confession or the denial of individual acts of arson in a series does not require particular courage. If the confession can no longer be relied on as evidence and appropriate checks have not been carried out using the material evidence of the particular acts of arson, often the retrospective procurement of evidence and therefore a conviction are no longer possible.<sup>28</sup>

### PREVENTION EFFORTS

Regrettably, reducing the incidence of arson has ceased to be a major target of crime prevention in Germany since the end of the 20<sup>th</sup> century. The stepping up of cooperation between police, fire services, insurance companies and property owners in local security partnerships, especially in

the USA and Great Britain, has shown that serial arson and forms of anti-social behaviour cannot be separated from one another.<sup>29</sup>

More targeted cooperation between the criminal investigation department information centres, fire services and other partners on a local level, for example in the form of public-private partnership models, to tackle and prevent fire offences would also be conceivable in Germany: Protection against breaking and entering is also protection against arson! In this context, it should be recalled that many serial arson attacks are acts of vandalism with the intention of causing property damage.<sup>30</sup>

Efforts to combat serial arson in the field of “crime prevention in urban development” unfortunately are still in their infancy. For that reason, serial arsons currently still pose a great threat.

### SUMMARY

Cases of serial arson are very difficult to solve because in most cases the perpetrators act alone, set the fires once darkness has fallen and rarely leave traces that lead directly to the perpetrator (dactyloscopic traces [fingerprints], biological traces [DNA]). On the other hand, presuming a series of fires is identified in time, it is possible to put a stop to the arsonist’s game if the investigation is conducted appropriately. The rate of serial arson cases that are solved is comparable to that of murder and manslaughter. It is over 90 %, which means that almost all serial arsonists are convicted sooner or later. Thorough and comprehensive investigation into the cause and spread of the fire on site are crucial when it comes to convicting serial arsonists. The investigation and conviction of a serial arsonist will stand or fall according to the quality.

<sup>1</sup> This article is the summary of a seminar module in the advanced training course of the certified fire investigation programme at the Rheinland Pfalz Police College, Vocational College for Public Administration – Police Department and the École de Police Grand Ducale Luxembourg, Police Academy Baden-Württemberg.

<sup>2</sup> Under German law. This article as a whole is based on German law. However, with regard to arson, German law and Austrian law are broadly comparable.

<sup>3</sup> Sections 306 ff and 308 of the German Criminal Code deal with fire offences.

<sup>4</sup> „Neuer Verdacht gegen den Feuerteufel“, Kölner Stadtanzeiger, 05 August 2010, [http://www.ksta.de/html/artikel/12809289\\_47686.shtml](http://www.ksta.de/html/artikel/12809289_47686.shtml) und „Polizei untersucht jetzt sechs Brände“, General-Anzeiger.online, 04 August 2010, <http://www.general-anzeiger-bonn.de/index.php?k=loka&itemid=10490&detailid=770025>.

<sup>5</sup> Bondü, R. (2006). Die Klassifikation von Brandstraftätern. Eine Typologisierung anhand des Tatmotivs und anderer Variablen, Frankfurt a.M.

<sup>6</sup> Jäkel, H./Wirth, I. (2007). Serienbrandstiftungen – Definition und Zuordnungskriterien, *Kriminalistik* (11), 660 ff.

<sup>7</sup> Douglas, J. E./Burgess, A. W. et al. (1992). *Crime classification manual: A standard system for investigating and classifying violent crimes*, San Francisco.

<sup>8</sup> Zieger, M. (2008). *Verteidigung in Jugendstrafsachen*, Heidelberg.

<sup>9</sup> WHO – ICD 10, Kategorien F63.3 Pyromanie „pathologische Brandstiftung“.

<sup>10</sup> Dreßling, H./Foerste, K. (eds.) (2008). *Psychiatrische Begutachtung: Ein praktisches Handbuch für Ärzte und Juristen*, Heidelberg.

<sup>11</sup> US profilers have identified an association between serial killing and juvenile arson. Serial killers typically already have

criminal experience of arson or animal torture. Rider, A. O. (1980). *The Firesetter: A Psychological Profile*. Federal Bureau of Investigation, Quantico; Rider, A. O. (1980). *The firesetter: a psychological profile*. *FBI Law Enforcement Bulletin* (June, July and August).

<sup>12</sup> Geller, J. L. (1992). Arson in review, *From profit to pathology*, *The Psychiatric clinics of North America* 15 (3), 623–645; Ritchie, E. C./Huff, T. G. (1999). *Psychiatric aspects of arsonists*, *Journal of Forensic Science* 44 (4), 733–740.

<sup>13</sup> Sieber, G. (2006). Süchtig nach dem Tanz der Flammen, P.M.-Perspektive; Sieber, G. (2007). Brandstifter sind einfach zu dumm, *Stern*.

<sup>14</sup> Douglas, J. E./Ressler, R. K. et al. (1986). *Criminal profiling from crime scene analysis*. *Behavioral Sciences and the Law*; Ressler, R. K./Burgess, A. W./Douglas, J. E. (1988). *Sexual homicide: Patterns and motives*.

<sup>15</sup> Füllgrabe, U. (1993a): *Psychologische Täterprofile I*. *Kriminalistik* 47 (5), 297–305; Füllgrabe, U. (1993b): *Psychologische Täterprofile II*. *Kriminalistik* 47 (6), 373–376.

<sup>16</sup> Icove, D. J./Schroeder, J. D./Wherry, V. B. (1979). *Combating Arson for Profit*, Columbus – see also: Icove, D. J. (1979). *Principles of Incendiary Crime Analysis*. Unpublished Ph.D. dissertation, University of Tennessee; Icove, D. J./Estepp, M. H. (1987). *Motive-based offender profiles of arson and fire-related crimes*, *FBI Law Enforcement Bulletin* (April); Icove, D. J./Gilman, R. (1989). *Arson reporting immunity laws*, *FBI Law Enforcement Bulletin* (June); Icove, D. J./Horbert, P. R. (1990). *Serial arsonists: an introduction*, *The Police Chief* 57 (12), 46–48.

<sup>17</sup> Jordan, U. (1996). *Brandermittlung. Phänomenologie und Motivation ländlicher Serienbrandstifter*, *Kriminalistik*

(50), 475 ff.

<sup>18</sup> According to a statistical evaluation by the property insurance company Münchner Rückversicherungs-Gesellschaft (1982), Brandstiftung, München. Münchner Rückversicherungs-Gesellschaft (1987) Brandstiftung, *Anatomie eines Risikofaktors*, München.

<sup>19</sup> Chainey, S./Ratcliffe, J. (2005). *GIS and Crime Mapping*, Chichester; Rossmo, D. K. (1995). *Geographic Profiling. Target patterns of serial murderers*. Dissertation Simon Fraser University, Burnaby; Rossmo, D. K. (2000). *Geographic Profiling*, Boca Raton.

<sup>20</sup> According to the definition used by the German Federal Office of Criminal Investigation, in Germany reference is made to operative case analysis rather than profiling. Such operative case analysis also differs from the more behaviourist approach in the USA.

<sup>21</sup> Kästle, H. (1992). *Brandstiftung. Erkennen – Aufklären – Verhüten*, Stuttgart.

<sup>22</sup> The criminological study of the research project laid the foundations for identifying structures of arson crime in the context of the offender and the offence which can guide the process of the investigation. The computerised BIAS (Arsonist Information and Analysis System) database system was developed as a result of this project.

<sup>23</sup> This database system is based on findings from offender profiling and is updated with new cases on an ongoing basis. The relevant data on individual serious crimes are checked for possible linkages to series of crimes. ViCLAS was developed by the RCMP (Royal Canadian Mounted Police). The aim was to identify serial and repeat offenders more quickly and with greater confidence. The system has been used since 1994 and since 1996 all cases that correspond to the ViCLAS

criteria must be reported within 30 days of the start of the investigation to the Ontario Provincial Police ViCLAS Centre. See <http://www.rcmp-grc.gc.ca/html/viclas-e.htm>.

ViCLAS came to Europe via the USA. With the establishment of the Criminal Psychology Service of the Federal Ministry of the Interior (1993) and the introduction of the ViCLAS software (1995), Austria and Germany played a pioneering role in Europe.

<sup>24</sup> Musolff, C./Hoffmann, J. (2006). Täterprofile bei Gewaltverbrechen: Mythos, Theorie, Praxis und forensische Anwendung des Profiling, Berlin.

<sup>25</sup> The Fire and Rescue Services Act 2004 – see also: The Housing Act 2004: Fire Safety; The Regulatory Reform (Fire Safety) Order 2005.

<sup>26</sup> Strategy: Particular care is advised in the case of mutual alibis of friends, colleagues, fellow fire fighters or other good acquaintances. It should be borne in mind that the person questioned for the purpose of checking could be the “offender” or an “accomplice”.

<sup>27</sup> Ackermann, R./Clages, H./Roll, H. (2010). Handbuch der Kriminalistik, Kriminaltaktik für Praxis und Ausbildung, Stuttgart; Clages, H.

(1997). Kriminalistik. Lehrbuch für Ausbildung und Praxis, Stuttgart.

<sup>28</sup> In terms of strategy, these observations have come full circle: great caution is necessary with regard to causes of fire that have not been established beyond question or doubt.

<sup>29</sup> Kelling, G. L./Wilson, J. Q. (1982). Broken Windows, The police and neighbourhood safety, in: Atlantic Monthly; The Gloucestershire Arson Task Force is a partnership of the Fire & Rescue Service, Police, Gloucestershire County Council, the six district/borough councils, the Probation Service and the Youth Offenders Service.

<sup>30</sup> Suffrain, G. (1997). Vandalismus und Brandstiftung als Objekt-Subjekt-Beziehung, Hamburg; Schneider, M. (2001). Vandalismus, Erscheinungsformen, Ursachen und Prävention zerstörerischen Verhaltens sowie Auswirkungen des Vandalismus auf die Entstehung krimineller Milieus (PhD thesis).

#### **Further Literature and Links**

Stolt, F. D. (2008). Brandstiftung, in: Kemper, H. (ed.) Handbuch Brandschutz, Landsberg.

Stolt, F. D. (2009). Brandstiftungen, Saarbrücken.

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