



FOREST ARSONISTS: CRIMINAL PROFILING AND ITS IMPLICATIONS FOR INTERVENTION AND PREVENTION



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Abstract: The main aims of this study are the characterisation of criminal, psychological and social aspects of the Portuguese forest arsonists and the identification of their most important criminal characteristics. The research variables include criminal behaviour, socio-demographic and psychological and juridical-penal aspects. Results from a sample of 452 offenders show a typology characterised by four types of forest arsonists: instrumental-retaliatory; instrumental-beneficial; expressive-clinical history; expressive-fire attraction. The subsequent need for differentiated intervention and prevention strategies is discussed.

INTRODUCTION

Research shows that forest fire represents about 10 % of fires occurring annually (Anderson, 2010). Research also shows an incidence of intentional or negligent arson as around 13 % and 20 % in forest fire causes — the other identified causes being natural ones (Bushfire, 2010). In southern European countries, forest fires represent a problem with a strong social and economic impact. In order to develop appropriate prevention and intervention strategies, it is essential to develop studies to characterise this phenomenon.

This paper presents data from a research project carried out in Portugal by the Escola de Polícia Judiciária and the Polícia Judiciária, with the purpose of studying the individual and social characteristics of the forest arsonists. A similar study is being developed by the Spanish police (Guardia Civil) and it is expected that the two research teams will be able to compare results that can be used in a wider context, that is, by

other southern countries in Europe having this type of problem. This paper presents the most important results that have been obtained so far in Portugal and is organised in two parts: the first part discusses, in general, the psychological, social and behavioural variables that may explain the arsonist criminal conduct and tries to set up a specific offender's typology; the second part presents and discusses the main results of the Portuguese forest arsonist criminal profile project.

ARSON AND HUMAN BEHAVIOUR

An interest in fire is something that occurs in humans very early. Studies made on human behaviour related with reaction to fire have shown a natural interest in fire in very young children. Nurcombe (cited in Barker, 1994) said that children aged 2 and 3 years already show such interest. Block and collaborators (cited in Barker, 1994) consider that an interest in fire may arise





at between 3 and 5 years of age. Regardless of the age in which a special interest in fire appears, Lowenstein (2001) suggested that causes associated with arson include family problems, disruption of the personality or neurological predispositions, among others, which explain the appeal to use fire with a harmful intent.

Bearing in mind that this research refers to the study of forest arsonists' behaviour, a broad knowledge on the psychological, motivational, cognitive and social aspects of the individuals who commit this type of crime is important to understand the psychological processes they use to interact with the fire (Canter, 1990). Fineman (1995) argues that the arsonists' behaviour is influenced by individual, family, social and environmental factors. A study made by Geller (cited in Lowenstein, 2001) divided the arsonists into four categories: arsonists without any kind of disorder; arsonists with mental disorders; arsonists with medical or neurological disorders; and juvenile arsonists.

Arsonists' behaviour is often confused with pyromania. In psychological terms, it is important to clarify that pyromania explains just a small group of arson cases. Pyromania is categorised by an impulse to deliberately start fires as a way of relieving tension and typically includes gratification or relief afterward. Pyromaniacs feel fascination, interest, attraction and curiosity towards fire and its consequences, as well as pleasure and gratification after triggering fires. Despite this impulsiveness, pyromaniacs present some preparation before committing a crime. These individuals have a distinct behaviour from those who start fires because of psychosis, personal, monetary or political gain, or for revenge (APA, 2002). Thus, the main difference between pyromaniacs and arsonists refers to the presence, in the second group, of an instrumental motivation linked to concrete actions such as monetary aspects, criminal activity occultation and expression of an ideology, revenge, anger or even hallucination (APA, 2002).

Individuals with this kind of disorder are often regular observers of fire, usually begin false fire alarms and show interest in the mechanisms of fire combat. Therefore, their conduct presents a certain incongruity. If, on one hand, excitement by fire brings them to look for employment or apply themselves as volunteers in fire-fighting organisations, on the other hand, they are indifferent to the consequences fire can cause

to life or property and may even feel happiness facing the devastating results caused by fires (Barker, 1994). It has to be noted that research shows that the presence of pyromania is rare as an intentional cause of forest fire (Anderson, 2010).

ARSON AND CRIMINAL PROFILES

As already mentioned, it is possible to identify several explanations for arson as a criminal behaviour, which leads to the belief that there are different types of arsonists. Several studies present this conduct as a crime against property since the most important goal of the arsonist is the destruction of property (Canter & Fritzon, 1998). Other studies define arson as a crime against persons since arsonists may have a person or a group as a specific target (Canter & Fritzon, 1998). Geller (cited in Canter & Fritzon, 1998) characterises this behaviour as a form of emotional expression because it is used as a way to communicate a desire or a need and is usually present in individuals who have different type of disorders.

According to Canter and Fritzon (1998), the arsonists should be seen as individuals who cannot have the impact they want by other means. A fire is a strategy used by the arsonist to achieve his goals. This kind of behaviour is explained by difficulties in the resolution of interpersonal problems and limitations in resisting to frustration in social contexts. In this perspective, the arson can be seen as a process of destructive interaction with the world. In this kind of criminal behaviour it is possible to identify two different types of targets: 1 — an internal source, when the target of the fire is linked to personal or social identity; 2 — an external source when the target of the fire is associated with an external object. In this crime it is also possible to make a distinction between acts based on motivational aspects: 1 — the expressive motivation is based on emotions and in this situation the arson may arise from a need to express particular type of emotions; 2 — the instrumental motivation is based on external reasons and refers to activities that have a direct goal to achieve certain purposes (Canter & Fritzon, 1998).





THE PORTUGUESE FOREST ARSONIST CRIMINAL PROFILES PROJECT

AIMS

The main aims of the project are:

- ✓ the identification of a forest arsonist criminal typology;
- ✓ the characterisation of specific typology with several criminal profiles based on:
 - criminal behaviour variables
 - social and demographic variables
 - psychological and judicial variables
- ✓ to define prevention strategies for each obtained criminal profile.

RESEARCH METHODS

Sample

The sample is made up from 452 forest arsonists investigated and detained by the Portuguese criminal investigation police between 1995 and 2013. Four hundred and fifteen are male (92%) and 37 female (8%). Other relevant characteristics are shown in Table 1.

Table 1: Main characteristics of the population sample (in percentage of the total)

Age group	%
16–19 years	8
20–35 years	37
36–45 years	24
46–55 years	19
More than 56 years	12
Marital status	
Single	68
Married	19
Divorced	11

Educational level	
None	19
First level (basic)	41
Secondary school	20
Professional status	
Unemployed	37
Non-specialised professional	30
Sheppard or fire-fighter	10
Qualified worker	12
Clinical history	
Dementia associated to alcohol/mental disorders	11
Depression	5
Schizophrenia	2
Other	
Unknown	46
Criminal history	
None	73
Arson	13
Aggression	3
Other	

The large number of single people and divorcees can be explained by the psychopathological history and interpersonal problems shared by a representative number of offenders in the sample. The professional status distribution corroborates the information obtained in the scientific literature. As for the clinical history, it is important to explain that data still need to be confirmed. In a police investigation context, to obtain information on one offender's clinical offender history is difficult. A psychological interview, made by police psychologists, still has to be carried out in order to validate the data.

INSTRUMENTS

The data collection was carried out using two instruments. The questionnaire for the investigation of the arsonist profile (QIPI) (Soeiro, 2002), which allows gathering data on several areas related with the arson and the individual





behaviour needed to establish the possible criminal profiles, namely:

- ✓ offender's psychological and social characteristics;
- ✓ victim's psychological and social characteristics;
- ✓ offenders/ victims relationship;
- ✓ offender's behaviour during the police interrogation;
- ✓ offenders police records analysis.

An offender's psychological interview is being used as the second data collection instrument. The purpose of the interview is to confirm mental disorders and to identify the most salient aspects of the offender life history. The interview is based on the psychopathy assessment checklist made by Hart, Cox and Hare (PCL: SV, 1995). The information obtained from the interview is also used to screen other kinds of mental disorders, such as depression, pyromania, schizophrenia, drugs and alcohol addictions, in these cases through the checklist of psychopathological disorders (cf. DSM-IV) (APA, 2002).

RESEARCH RESULTS AND DISCUSSION

PORTUGUESE FOREST ARSONIST CRIMINAL PROFILES

In order to explore the data and to try to obtain an arsonist typology two exploratory statistical procedures were used: the homogeneity analysis (Homals) and the categorical analysis (CatPCA), through the statistical package social science (SPSS 14.0). Analysis of the variables criminal behaviour, socio-demographic, family and psychological characteristics of individuals permitted the characterisation of the criminal profiles of the Portuguese arsonist population.

STANDARD ARSONIST CRIMINAL PROFILE CHARACTERISTICS

It is possible to identify a set of variables that define the most frequent behavioural aspects of

the individuals that make up the current sample and also to define the most frequent criminal behaviour as follows:

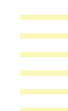
- ✓ related criminal acts: arson;
- ✓ offender Sex: male;
- ✓ marital status: single;
- ✓ age: 20–35 years;
- ✓ level of eEducation: illiteracy/first level;
- ✓ offence time: 6.00 p.m.– 4.00 p.m.; 8.00 p.m.;
- ✓ ignition tools: candles, matches, lighters;
- ✓ type of affected rural area: forest;
- ✓ offenders behaviour after the offence: quitted the crime scene;
- ✓ crime scene/offenders' residence proximity: near;
- ✓ offenders/victim (landowner) relationship: strangers;
- ✓ criminal history: without criminal records;
- ✓ offenders' profession: non-qualified worker.

CRIMINAL PROFILES

The statistical results show a typology defined by four different arsonist criminal profiles.

Profile A — Instrumental — Retaliatory

This profile includes individuals who committed the crime based on motivations such as anger and revenge or family problems (e.g. inheritances). In this profile it is also possible to find individuals who referred loneliness as a prime motivation. They used the crime to express their emotions targeting a victim or victims, who are usually family members and/or social acquaintances. They are usually individuals who have a clinical history of problems involving epilepsy and consumption of alcohol. The more representative age group is 46 years old or more and the individuals have in general a low level of education. The information about the criminal background shows that some of these arsonists





have criminal histories related to aggression. The crime is committed using simple ignition tools, such as matches, a lighter or candles and occurs between noon and 4 p.m. and 4 p.m. and 8 p.m. The type of rural area destroyed by the fire was forest and uncultivated fields. These individuals generally leave the crime scene immediately after committing the crime. During the police interrogation, suspects referred, as the main motivation for their behaviour, to hostility against the owner/victim and loneliness. For the crime investigation police, alcohol was the main source of motivation. This group of offenders is composed of men and women. This criminal profile accounts for 41.5 % of the cases of the population sample.

Profile B — Instrumental benefit

This profile includes arsonists who committed the crime motivated by several benefits, that is, to achieve tangible rewards (e.g. money) or other benefits related to the offender life style. They are generally male and some of the individuals have convictions for other types of crimes (e.g. driving without a licence). The arson can be associated with other types of crimes, including crimes related to property trespassing or robbery. This offender group can use a more sophisticated ignition tool to set the fire (e.g. inflammable bombs). Individuals had no sign of psychiatric history, nor of alcohol consumption at the time the crime was committed. The type of rural area destroyed by the fire was forest, uncultivated fields and agricultural land. The fire was set between noon and midnight. Most had no relations with the owners/victims. Normally they left the crime scene after starting the fire and economic factors and negligence was the most important motivation/explanation. For the criminal investigation police there was no evident motivation. This profile accounts for only 3 % of the population sample.

Profile C1 — Expressive — Clinical History

This profile includes individuals who have psychiatric problems, such as schizophrenia, dementia, resulting from the consumption of alcohol, and mental retardation. They have poor skills in terms of socialisation and are mostly single. The most representative age ranges are the 36- to 45-year and the 46- to 55-year-old groups. They are usually illiterate. These aspects also affect their professional status, which is generally low. They tend to commit the crime near

the place where they live, and most commonly during working days. The crime is committed using simple ignition tools, such as matches, a lighter or candles and usually between midnight and 4 a.m. or 8 p.m. and midnight. The type of rural area destroyed by the fire was forest. These individuals generally stay at the crime scene after committing the crime. The motivation is based on reactions resulting from the impact of their mental disorders. They showed signs of alcohol consumption at the time of the crime. This profile accounts for 55 % of the population sample.

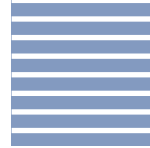
Profile C2 — Expressive — Fire Attraction

Individuals fitting into this profile are very rare and it is necessary to add more cases to better analyse the associated psychological and sociological variables. In this profile were included individuals who showed attraction to fire and actions such as helping fighting the fire. These individuals, male, single, university students, are the youngest of the sample. They are in the age group under 20 and in the group between 20 and 35 years old. Their main motivation for their criminal behaviour is an irresistible impulse to set fire to things. According to the crime investigators, lack of control (e.g. impulsivity) was the main cause. They do not have any sign of psychiatric history nor of alcohol consumption at the time of the crime. This was usually committed between 8 p.m. and midnight and the type of rural area destroyed by the fire was forest. Fire was usually started near the workplace and the offender usually returned afterwards to help the fire-fighters. A more detailed study with a higher number of cases is necessary to better define this profile.

LESSONS FOR INTERVENTION AND PREVENTION STRATEGIES

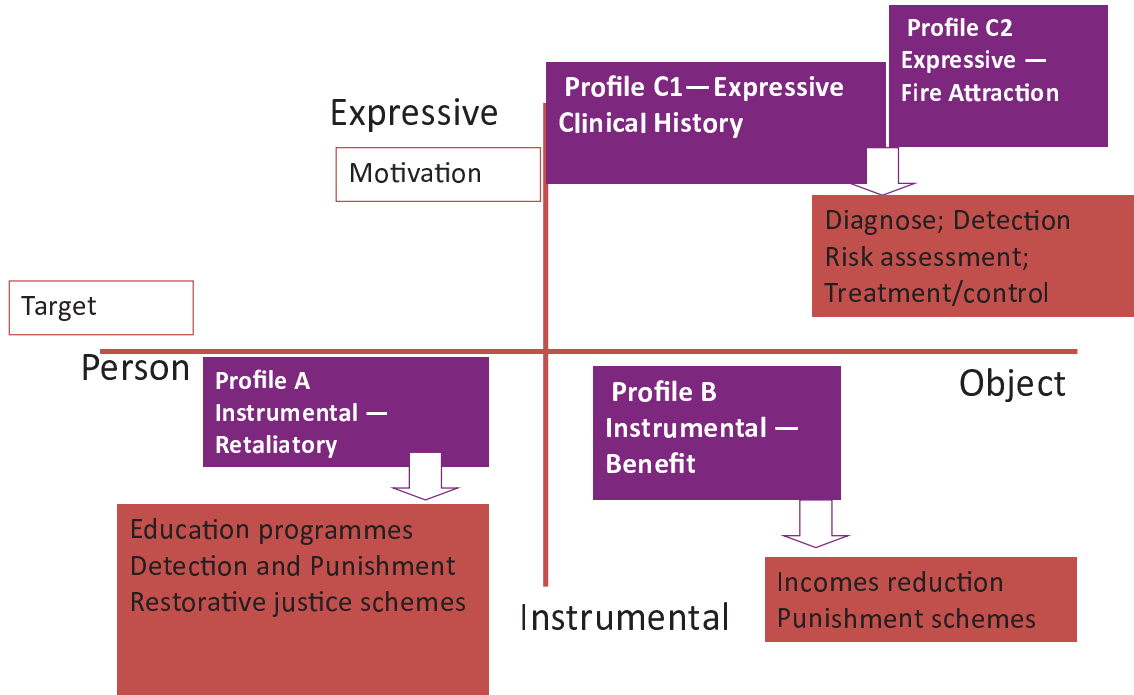
A criminal profile is a forensic tool that can help crime investigation by supplying guidelines on how to deal with specific types of offenders. The definition of interrogation strategies is one of the most important contributions of a criminal profile. A criminal profile is also an important tool for the judicial process as a whole, by helping to select better types of approaches (e.g. most adequate type of punishment, of restraint measures, of rehabilitation and social reintegration measures).





The figure below shows some suggestions for intervention and prevention within each criminal profile, taking into consideration causes, offenders and target characteristics.

Figure 1 — **Arsonists' criminal profiles and associated strategies for intervention and prevention**



CONCLUDING REMARKS

Results show that most Portuguese forest arsonists are characterised by social maladjustment, psychological problems and specificities of their criminal behaviour. Four distinct profiles were found:

- ✓ Profile A includes individuals motivated by anger and hostility. Targets are generally family members and acquaintances. Alcohol consumption history is frequent.
- ✓ Profile B includes males having qualified professions and no psychiatric history. They can have a previous criminal history, but related to others crimes. The motivation is basically financial reward; victims are strangers.
- ✓ Profile C1 includes arsonists with a psychiatric history. In this group we can include offenders with alcohol consumption, schizophrenia and mental disorders.
- ✓ Profile C2 includes offenders with several behaviours that can be related to fire attraction (however, more cases are necessary for clarification).

Intervention and prevention of forest arsonists should therefore take into account these profiles in order to assure better efficacy. Still during 2014, the two research teams mentioned beforehand, from the Portuguese police (Polícia Judiciária) and Spanish police (Guardia Civil), will try to carry out a comparative data analysis, in order to better sustain prevention and intervention guidelines that can be shared by other southern European countries.





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