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**Prisoners' perceptions of the DNA database for
criminal investigation purposes and their perspectives
of social reintegration**

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INTRODUCTION

Following international trends regarding the use of genetics for criminal investigation purposes and strategies for the identification, prevention and deterrence of criminal activities, a DNA database was created in Portugal for criminal and civil identification purposes, in accordance with Law 5/2008 of 12 February.

It is an instrument which aims to provide the criminal justice system with a swifter and more scientific, accurate and reliable means of identifying criminals, seeking not only to investigate crime and contribute towards prevention and deterrence, but also to restore public confidence in the justice system in Portugal.

It should be emphasised that most European countries already possess this kind of database, following international recommendations, namely Recommendation R (92) 1, adopted by the Council of Europe Committee of Ministers on 10 February, Resolution 97/C 193/02 of the Council of the European Union of 9 June 1987, and Resolution 2001/C 187/01 of the Council of the European Union of 25 June 2001.

There are distinct representations and assessments of the current and future scenarios created by genetic databases for forensic purposes that reflect both an enthusiasm for its potential benefits in terms of efficient criminal investigation, crime prevention and deterrence, as well as concerns and uncertainties surrounding the social and ethical implications of the uses of genetic information, particularly in areas related to consent, privacy, and the physical and moral integrity of citizens.

This study intends to analyse the following:

- The social representations of prisoners concerning the DNA database for criminal investigation purposes;
- This population's assessment of the instrument's potential for crime prevention and deterrence and the promotion of social reintegration.

Thus, we aim to assess the prisoners' "levels of acceptance" and "assessment of the efficiency" of the forensic DNA database, as well as their expectations of the potential for "social reintegration" generated by this sort of instrument.

The Austrian government has recently authorised and financed a similar study with prisoners (Prainsack and Kitzberger, 2009), developed by this project's external consultant, Barbara Prainsack (Centre for Biomedicine & Society – CBAS, School for Social Science & Public Policy, King's College, London). The Austrian study explored,

in general terms, prisoners' representations of DNA and forensic technologies based on DNA, and the strategies used to avoid leaving traces at crime scenes.

Our research team set out to develop a comparative study in relation to the Austrian data, whilst widening the scope of analysis and adapting the study to the fact that the Portuguese DNA database is not yet fully operational, whereas in Austria the DNA database has been functioning since 1997. Therefore, we also investigated what the prisoner population thought about specific aspects of the Portuguese legislation on DNA databases, namely, the criteria for the inclusion and removal of DNA profiles, as well as the methods used for sample collection and submission to forensic examination. In addition, we set out to evaluate the DNA database's potential for crime prevention, deterrence and the promotion of social reintegration, from the prisoners' point of view.

As in other countries, the creation of a forensic DNA database in Portugal may be considered within a wider political and governmental strategy of crime detection, prevention and reduction, supported by a rhetoric which celebrates the efficiency and reliability of forensic genetics and the search to provide greater speed, credibility and efficacy for the criminal justice system. It is therefore common for this sort of technology to be seen as an instrument with great crime fighting potential, particularly crime in its most "negative" forms, such as the threat of terrorism, violent crime, and the allegedly recurring crimes, such as sexual crimes.

DNA technology emerges as a kind of panacea for the main problems that currently affect the Portuguese justice system, generally said to be caused by chronic delays, inaccessibility and inefficiency (Ferreira and Pedroso, 1997; Santos *et al.*, 1996), leading to the so-called "judicial crisis" (Barreto, 2000).

DNA's capacity to provide identification in an objective and secure manner appears to be a factor that may be used to strengthen public trust in the justice system and the criminal investigation agencies. However, the study of modes of public confidence in DNA databases has been limited to the representations and expectations of "law abiding citizens". It therefore remains to be discovered what other populations think, namely those who have been labelled by the justice system as criminals and whose DNA profiles might be included in forensic databases for criminal investigation purposes. Similarly, the kind of impacts these databases may have on crime prevention and deterrence has yet to be fully understood. This can be partially explained by the study of motivation and expectations within the prisoner population.

This report is divided into three chapters:

In the first chapter, we will explain what a forensic DNA database is, by describing the most relevant ethical and legal aspects associated with this instrument. We will focus on the main issues in Portuguese legislation in this area, pointing out the “advantages” and “disadvantages” of this sort of database.

The second chapter presents the methodology that was followed, the profiles of the prisoners interviewed and the specific objectives of the study.

In the third and final chapter, we list the main results of the study and develop a set of recommendations aimed at the authorities regarding the uses, in Portugal, of the DNA database for criminal investigation purposes. We must emphasize that the set of recommendations, drawn from the prisoners’ point of view, aims to combine their perspectives with other views. This is achieved by linking them, whenever possible, with opinions already made public in an academic context by experts in law, bioethics, forensic genetics and criminal investigation.

How can a balance be achieved between the different perspectives? We do not have definitive answers. However, the statement made by the National Ethics Council for the Life Sciences that we reproduce below, when called upon to pronounce on the Decree-Law Proposal (June 2007), appears to be prudent and wise:

“In the matter of the forensic DNA databases it seems to be necessary to think in pairs: public and private, security and freedom, social tranquillity and controlling vigilance, individual rights and public duties, reality and appearance, present and future... and, simultaneously, to be cautious so that we do not at any moment allow this thinking in pairs to lose its balance and swing towards either side. In forensic terms, perhaps it could also be beneficial to take Paul Ricoeur’s stance on the ethical debate into account when he argues that the epistemological place of justice lies between legality and goodness and it will therefore always try to find the proper place for that which in each case is fair, knowing that, inevitably, goodness will always elude us, but that we must not merely be satisfied with what is legal” (Henriques and Sequeiros, 2007: 22-3).

In order to think in pairs we must also involve those who are never summoned to the debate and the decision-making. The implementation of the database does not involve mere abstract recipients, but citizens with their own social standing, perceptions, experiences, and different expectations, namely those regarding relations with the justice system and the police agencies. It is the actual addressees that have to be collated with the principles that guide the Portuguese legal framework and determine the terms, characteristics and limits of the database in Portugal.

CHAPTER 1: DNA DATABASES FOR FORENSIC PURPOSES¹

1. DNA databases for forensic purposes

Following international directives and, above all, to meet political guidelines that aspire to fight and control crime, almost all European countries nowadays possess a genetic database for criminal investigation purposes. In accordance with transnational trends regarding the application of genetics in criminal investigation contexts and strategies for the identification, prevention and deterrence of criminal activities, a DNA database has been created in Portugal for civil and criminal identification purposes, regulated by Law 5/2008 of 12 February 2008. According to the definition in Portuguese law (Law 5/2008), a DNA database consists of a structured set of files with DNA profiles and personal data files for criminal investigation or civil identification purposes, accessible through regulated criteria.

The first DNA database was created in 1995 in England and Wales and is, proportionally, the world's largest. It contains over five million profiles obtained by the police from individuals held in custody and over three hundred sixty-five thousand profiles from crime scene stains (ENFSI, 2010).

Although the initial intention was to create a universal database (Moniz, 2009: 2), Portuguese legislation can be seen as rather restrictive in a European context in terms of the criteria for including profiles in the DNA database, as well as the criteria for their removal, and also because it stipulates the mandatory destruction of samples. Thus, in Portugal, only profiles from individuals convicted of a serious crime involving a prison sentence of 3 years or more will be added to the database, pending a dispatch from a judge ordering sample collection and profile insertion. Furthermore, this legal instrument allows for the removal of the profiles of convicted criminals after the judicial proceedings or at the end of the maximum statutory limit for criminal proceedings stipulated in the Penal Code, thus focussing on the idea of re-socialization, or social reintegration, in accordance with the humanitarian tradition of the Portuguese penal code, which dates back to the 19th century. However, many believe that the trend towards expanding the number of profiles and widening of the uses of the DNA

¹ This chapter summarises the contents of chapters 7 and 8 of the book *Technological justice: Promises and challenges*, by Helena Machado, Susana Silva and Filipe Santos (Machado *et al.*, 2008). We thank Susana Silva for her permission to reproduce some parts of the aforementioned chapters in this report.

database will be almost inevitable in the near future.

2. Legal aspects of the DNA databases

The most controversial aspects of forensic DNA databases concern the normative and ethical issues, leading to the question of usefulness versus costs and risks. DNA databases represent a strengthening of the powers of the state for the sake of the collective good – security and tranquillity. However, this need may imply restricting or limiting citizens' rights, freedoms and privileges. What sort of guarantees can ensure the protection of individual rights and freedoms – the right to privacy, physical and moral integrity, the right to non self-incrimination and the presumption of innocence – that should be expected in a democratic state?

The processing of information contained in genetic profiles raises specific legal questions that we now address.

Law 12/2005 of 26 January concerning personal genetic information and health information enforced fundamental rights regarding the legal framework of DNA databases in Portugal, namely the concept of genetic information (Article 6(1)), the concept of genetic databases (Article 7), the principle of non-discrimination based on genetic characteristics (Article 11), and the concept and principles of the constitution and operation of DNA and other biological product databanks (Article 19).

Portuguese law on personal genetic information defines “genetic information” as: *“the health information which concerns hereditary characteristics of one or more individuals, kinship relations between them or common characteristics of the same type”* (Article 6(1) of Law 12/2005 of 26 January).

The sensitive nature of this sort of information led the legislator to emphasize the need to reinforce protection in the regulation of access, confidentiality and security for this type of personal data:

“Genetic information must be subject to legislative and administrative measures of reinforced protection in terms of access, security and confidentiality” (Article 6 (6) of Law 12/2005 of 26 January).

In Portugal, there are legislative instruments which protect citizens in terms of the storage, processing and circulation of personal data, namely the Constitution of the Portuguese Republic which, in Article 35, guarantees the principle of non-

discrimination in the use of computer technology for processing personal data and safeguards adequate forms of data protection.

As stated by Moniz (2002: 242), Article 35 of the CPR relates to citizens' informational self-determination, which is indispensable in any debate surrounding the legal and ethical aspects of the DNA database. According to the author, the right to personal self-determination, particularly the right to informational self-determination is substantial, granting citizens "*the right of access to all data that may concern them (whether automatically or manually processed), with the possibility of demanding rectification and updating, as well as the right to know the purposes of the creation of the database*" (Moniz, 2002: 243).

Nonetheless, this right to informational self-determination becomes complex due to the fact that an individual's genetic information, even if restricted to identification purposes, always enables biological kinship to be established, in which case the holder of that information is not just the individual but his or her whole family. However, in the United Kingdom, familial searches are allowed in cases of serious offences, although under strict conditions (Williams and Johnson, 2004), in order to identify the potential family members of a person who left a biological sample at a crime scene when this person is not in the DNA database. The risk of disproportionate intrusion into private life in face of the objectives of the criminal investigation therefore becomes evident.

Again according to Helena Moniz, the right to preserve one's private life may also be legitimately invoked in relation to personal databases, but not as an absolute right, insofar as it may be restricted, namely through consent or legal authorisation with guarantees of non-discrimination, as stated in Article 35 of the CPR (Moniz, 2002).

The construction of the DNA database, as foreseen in the Portuguese legislation, also raises another question related to the nature of its design and use in a forensic context. The legislation does not include any reference to the creation of a file for the profiles of suspects or *arguidos* ("official suspects").² Therefore, the collection of a sample from an individual and its use in judicial proceedings depends on the issuing of a dispatch by a judge stating its requirement. Only after definitive judgment, may the judge rule on whether the profile is to be included in the DNA database. Meanwhile,

² According to Article 57 of the Portuguese Penal Process Code, *arguido* is the status of the individual against whom a formal accusation or inquiry has been brought. Article 58 states that a person may be made an *arguido* based on duly justified suspicions of crime. The *arguido* status of an individual is designed to provide certain rights, such as knowing the details of the charges or the right to remain silent during interrogations and to have a lawyer present at all times, and obligations that can range from a simple identity and residence statement to custody, even if there is no formal accusation and an investigation is still underway.

both sample and profile remain attached to the criminal proceedings file, where they may only be used within that same proceeding or others that may have already been started.

However, by trying to prevent the use of the same sample in different proceedings, the legislator requires the judge to examine the requirements related to the collection of samples in every different case (Moniz, 2009: 7). For example, if an individual is being tried for homicide and the judge orders a DNA sample, and if the same individual is brought to trial for an unrelated crime which also requires a DNA sample, another judge would have to order it again and justify the decision.

The destination of official suspects' samples collected during criminal proceedings is currently in a legal limbo, since there is no specific regulation regarding destruction. In other words, if the official suspect is included in the database as a convicted criminal, the sample is destroyed after the profile has been obtained (Article 34(1)). However, if there is no dispatch from a judge ordering the profile to be added to the database or the individual is exonerated, the law's omission in this matter leads to the assumption that the biological samples are to be destroyed at the end of the proceedings, or two years later according to the law which regulates forensic evidence (Article 25(2) of Law 45/2004). The destruction of the samples was foreseen in the proposed law but was not included in the approved final draft (Moniz, 2009: 8).

The construction of a DNA profile always requires the collection of biological material, which may also involve problems relating to the right to physical integrity (Article 25(1) of the CPR). In most European legal systems the legal framework regarding the human body follows a division between "strictly personal" body parts and products – such as blood – and "not strictly personal" body parts – which include hair (except for pubic hair), nails and saliva (Oliveira, 1999).

According to legislation in Portugal and many other countries, the right to physical integrity is only safeguarded if the collection of biological material is carried out with the individual's consent. Article 126(1) of the Penal Process Code establishes that "*all evidence obtained by means of torture, coercion, or general offence against individual physical or moral integrity is null and void, and cannot be used*" (Penal Process Code, 2007). How, then, can the balance between citizens' rights (and namely those of convicted and official suspects) and their necessary restriction in order to benefit society, be guaranteed, in this case, for the sake of security and the fight against crime?

The Portuguese law which regulates the functioning of the DNA database only safeguards the principle of free, informed and written consent in cases of sample collection involving volunteers or relatives of missing persons (Article 4 of Deliberation no. 3191/2008). The protection of human dignity and individual physical and moral integrity, in the case of official suspects and convicts, appears to be limited to the method of sample collection, as established by Article 8 of Deliberation no. 3191/2008, which stipulates: *“The collection of samples from individuals is made in duplicate, through the collection of cells from the buccal mucous membrane or other non-invasive methods which respect human dignity and individual physical and moral integrity”*.

The Law for the Protection of Personal Data (Law n. 67/98 of 26 October), mentions the need to suit means to ends, stating the following:

“The treatment of personal data for criminal investigation purposes should be limited to what is absolutely necessary in order to prevent imminent danger or to repress a certain offence, to the exercise of competences foreseen in the respective organic statute or any other legal disposition and also under the terms of any international agreement or convention to which Portugal is a signatory”.

This law tries to steer its course, but the complexity of the ethical and moral issues that surround the construction and uses of a DNA database anticipates a tortuous path for any attempt to provide acceptable answers within a free and democratic society. Furthermore, the diversity of European legislation can raise potential problems regarding the exchange of information between member states which could jeopardize the principles of equality between citizens and the presumption of innocence. In other words, the insufficient harmonization of insertion criteria, sample preservation and profile retention is likely to raise potential situations of inequality and conflict, since the regulations for the transfer of genetic information require compliance with the rules of both the providing and the requesting states, which can be somewhat diverse (Moniz, 2009: 11).

CHAPTER 2: OBJECTIVES, METHODOLOGY AND SAMPLING

2.1. Main objectives of this study

As explained in the first chapter, Portuguese legislation regarding DNA databases appears to be restrictive with regard to profile inclusion and removal criteria, which potentially offers better protection of individual rights in comparison to other legal frameworks in Europe. In fact, Portuguese law only allows for the inclusion of profiles from convicted individuals sentenced to a term of imprisonment of 3 years or more, unlike other countries (such as Scotland, Spain, Sweden, Northern Ireland, Switzerland and the United Kingdom) where the DNA profiles of simple suspects are inserted into databases. In addition, this legal instrument enables the profile of convicted criminal to be removed after the judicial proceedings or at the end of the maximum statutory limit for criminal proceedings stipulated in the Penal Code. This contrasts with the legislation in some countries (Austria, Scotland, Northern Ireland and the United Kingdom) which allows the profiles of convicted individuals to be held indefinitely in the database, and does not order the destruction of biological samples.

In a different provision, Portuguese legislation aims to ensure each and every individual has the possibility of resuming life in society “free” from any official record that might directly identify a person as a previous offender. Given this framework, it then becomes fundamental to assess the potential for the “social reintegration” of convicts provided by the DNA database in Portugal through the removal of their profiles. The possible deterrent effects that this instrument may, or may not provide, can also be considered from the prisoners’ perspective.

Given the above-mentioned aspects, we now present the main objective of this study:

To analyze prisoners’ representations of the application of forensic genetics in criminal investigation and their motivation towards social “reintegration” in the context of a society which has a DNA database for the identification of criminals, but also to prevent and deter crime.

In order to meet this objective, the study investigated the following:

- Sources of knowledge of DNA technology and evaluation of potential threats and benefits;

- Representations of criminal investigation supported by DNA technology and expectations relating to the future functioning of the criminal justice system and other instances of control;
- Expectations of social reintegration by prisoners and modes of realization, since the DNA profile is to be removed at the end of the maximum statutory limit for criminal proceedings stipulated by the Penal Code.

A similar project was carried out with the support of the Austrian Ministry of Justice (Prainsack and Kitzberger, 2009). Therefore, we aimed to conduct a comparative study that may provide some references for similarities and differences between Austria and Portugal regarding representations of DNA technology amongst prisoner populations.

We should stress that the scope of our analysis is broader than the above-mentioned study, and that the design of our study was adapted to the fact that the DNA database is not still operational in Portugal, whereas in Austria it has been functioning since 1997. Hence, we sought to know what the prisoner population thought about specific aspects of the Portuguese legislation on the DNA database, namely the criteria for profile inclusion and removal, methods of sample collection and submission to forensic examination. In addition, we proposed to evaluate, from the prisoners' point of view, the DNA database potential for crime prevention and deterrence and the promotion of social reintegration.

2.2. Methodology

We conducted 31 semi-structured interviews with prisoners in the following prison establishments in the Judicial District of Oporto: Paços de Ferreira (19 interviews), Guimarães (8 interviews) and Braga (4 interviews).

The interview script³ contained a set of flexible questions in order to avoid direct question-answer situations, with the aim of facilitating the interviewee's discursive production in order to allow a deeper discussion of certain topics. The interviewer intervened only to answer possible questions or doubts by the interviewees, or to redirect conversations back to the proposed topics.

³ We thank Barbara Prainsack (Centre for Biomedicine & Society – CBAS, School for Social Science & Public Policy, King's College, London) for her comments and suggestions in the preparation of the interview script.

Under ideal circumstances the criterion for selecting interviewees would fall on individuals convicted of serious crimes and sentenced to 3 or more years in prison (according to the criteria established by law for the inclusion of profiles in the DNA database).

However, given that the criterion of a sentence of 3 or more years in prison for a serious crime is rather broad, and given the scarcity of available time and resources, we chose to reformulate the interviewee selection criteria. A theoretical sample was devised, based on representativeness by diversity and exemplariness (Hamel *et al.*, 1993), combined with convenience sampling, considering individuals that were possibly be more predisposed to participate in this study, according to information obtained by members of the administration board of each prison establishment.

We obtained a diversified sample in terms of criminal record (number of convictions, type of offence and length of sentence) and socio-demographic profile (age, civil status, education and profession) (see 2.3.).

The interview process followed the procedures established by the Deontological Code of Sociologists and Anthropologists and the prescriptions of the applicable legislation, particularly the laws on citizens' privacy and data protection.

All interviews were recorded after obtaining the interviewees' informed consent, according to two types of procedures:

- An oral and written explanation of the study's objectives and a declaration of the commitment by the team to preserve data confidentiality and to provide all information that might be required by the participants;
- Completion of an informed consent form by the participants.

The interviews lasted 34 minutes on average: the length of the shortest interview was 13 minutes and the longest 120 minutes.

Analysis of the content of the interviews, the interpretation of results and the drawing up of conclusions were based on a qualitative approach which aimed to associate substantive analysis with theoretical development (Becker and Bryman, 2004). Based on the literature on the subject, in particular the similar study carried out in Austria (Prainsack and Kitzberger, 2009), the topics previously established in the interview script and the categories which emerged from the interviews themselves, we were able to identify the central issues and concepts.

The data collected was systematically compared, contrasted, synthesized and

coded according to themes and, within these, into categories, closely following the principles of the *grounded theory* (Glaser and Strauss, 1967), in which the main objective is the emergence of new concepts from the empirical reality studied. From this methodological process, a quantification of the data obtained was carried out for information systematization purposes.

2.3. Characterization of interviewees'

The interviews were conducted with a group of 31 male prisoners from the prison establishments of Guimarães, Braga and Paços de Ferreira.

At the time they were interviewed, the prisoners' ages varied from 21 to 54 years old. The majority of the prisoners interviewed (17 out of a total of 31) were between 25 and 35 years old.

The interviewees were mostly single (22 out of 31), 4 were divorced, 3 married and 2 were widowers. Regarding nationality, all the interviewees were Portuguese with the exception of one Ukrainian national.

Education levels varied between 4 years of schooling – primary level - (6 prisoners) and higher education (only 1 prisoner had a degree). The most common level of education was 6 years of schooling – middle school level– (11 prisoners), followed by 9 years of schooling – lower secondary school– (7 prisoners). The remaining 6 prisoners had completed upper secondary school, but half of this group was at university at the time the interviews were conducted.

As for the type of work the prisoners had been engaged in before being imprisoned, 2 prisoners had worked in the primary sector (mining and agriculture) and 21 in the secondary sector (civil construction and industry), although in this latter group 3 individuals were unemployed before going to prison. In this sample we also found 6 prisoners that had worked in the third sector (commerce and services). There was also 1 student and 1 prisoner with no specific professional activity.

Regarding legal-penal characterization, the prisoners interviewed were mainly first offenders (24 out of 31 interviewed) and the crimes that had led most frequently to their imprisonment were homicide (including attempted homicide), rape, theft and/or burglary and sexual abuse of minors.

Most of the prisoners interviewed had been convicted of homicide (5 prisoners) or

homicide and other simultaneous crimes (6 prisoners). Sexual crimes (rape and sexual abuse of minors) also stood out as a major cause of imprisonment (6 and 2 prisoners, respectively). The remaining interviewees were convicted for burglary and/or other crimes (5 prisoners), or drug trafficking and/or other simultaneous crimes (5 prisoners). There were also cases of prisoners convicted of driving without a legal licence (2 prisoners) and aggravated fraud (1 prisoner).

Concerning the length of the sentences, 2 prisoners were serving less than 3 years, 5 prisoners were given a sentence of 3 to 5 years, 10 prisoners had a sentence of 5 to 10 years, 5 prisoners were serving a sentence of 15 to 20 years and 4 were given a sentence of 20 to 25 years, which is the maximum sentence prescribed in the Portuguese Penal Code.

Table 1 – Socio-demographical and legal -penal characterization of the interviewees

Prisoner	Age	Years of Schooling	Professional Occupation	Primary crime which led to imprisonment	Sentence
David	42	6	Construction/ Manager	Attempted homicide	3 Years and 10 months
João	49	4	Stonemason	Rape, Assault	4 Years, 13 months and 100 days
Carlos	52	4	Auto Electrician	Procurement, Rape, Aggravated rape, Child and drug trafficking, Sexual abuse	7 Years and 6 months
Joel	22	9	Industrial Weaver operator / Unemployed	Aggravated rape	5 Years and 6 months
Joaquim	49	6	Joiner	Severe sexual abuse of minors	6 Years
Amaro	40	4	Agriculture	Homicide and attempted homicide	20 Years
Gaspar	39	9	Bricklayer's assistant / Unemployed	Burglary, Drug use, Theft	5 Years and 6 months
António	26	1	Pastry man	Trafficking and other illegal activities	5 Years
Manuel	27	> 12	Student	Homicide and Drug trafficking	14 Years
Martim	27	4	Ironmonger	Rape, Attempted coercion, Kidnapping	9 Years and 3 months
Mariano	29	6	Plumber	Homicide	17 Years
Jaime	29	6	Construction worker	Homicide	16 Years
Daniel	36	> 12	Bar bouncer	Homicide and attempted homicide, Arson	24 Years
Tomás	28	9	Water-proofing worker	Rape and Homicide	21 Years
Gil	33	7	Businessman	Trafficking and other illegal activities	6 Years
Ovídio	33	> 12	Plasterer/ Businessman	Drug trafficking, Possession of an illegal weapon	8 Years
Amadeu	43	6	Bricklayer's assistant	Homicide, Burglary, Theft	23 Years
Nelson	35	> 12	Security / Vigilance	Sexual abuse of a minor, Burglary, Theft, Perjury	9 Years
Micael	31	10	Undifferentiated worker	Sexual assault with carnal intercourse and use of specially dangerous means and Rape	12 Years and 1 month
Emílio	32	9	Iron worker	Homicide, Sexual coercion, Theft	15 Years
Feliciano	34	> 12	Construction painter	Homicide	12 Years
Artur	38	6	Electrician	Aggravated burglary, Burglary, Attempted aggravated theft	12 Years
Frederico	54	6	Retailer	Criminal association (leader), Extortion, Drug trafficking, Fencing	20 Years
Valter	25	6	Electrician / Unemployed	Kidnapping, Rape, Burglary, Aggravated burglary	18 Years
Luís	26	8	Carpenter's assistant / Electrician	Aggravated burglary, Motor vehicle theft, Trespassing, Fencing	9 Years
Amândio	31	9	Driller	Homicide and attempted homicide, Drug trafficking, Theft, Aggravated Burglary	25 Years
Rúben	31	> 12	Computer Systems Analyst	Aggravated Fraud, Document forgery, Illegal Access to a computer system or network, credit card fraud, Perjury	6 Years
Olegário	31	6	Paver	Theft and Perjury	3 Years and 6 months
Henrique	37	4	Construction blacksmith	Burglary and Forgery	3 Years
Miguel	44	> 12	Auto mechanic	Driving without permit	5 Months
Lucílio	34	10	Construction foreman	Driving without permit	2 Years

CHAPTER 3: RESULTS AND RECOMMENDATIONS

This project's main objective was to study the representations and expectations of prisoners concerning DNA databases for criminal investigation purposes and to assess their evaluation of the DNA database's potential to prevent and deter crime and as well as to promote social reintegration. Hence, it was important to understand whether this group of individuals saw benefits or disadvantages in the use of this sort of instrument and what kind of impacts – on the criminal justice system, on potential criminals, and on ways to investigate and fight crime – they thought the use of DNA technology would create.

We asked prisoners about the following topics, and while some were initially predetermined by the research team and included in the interview script (topics 1, 2, 4, 5, 6, 8, 9, 10, 11, 12), others emerged during the course of the interviews (3, 7, 13):

1. Sources of information about DNA and its uses in criminal investigation;
2. Belief in the representations of DNA disseminated in popular culture (media);
3. Evaluation of the criminal justice system and the procedures of the criminal investigation police (if possible, based on the prisoner's own experiences);
4. DNA evidence and opinions about possible impacts on judicial decisions;
5. Comparison between DNA and other types of evidence (e.g. fingerprints);
6. Does the DNA database prevent crime and why?;
7. Could the DNA database increase crime and why?;
8. Do criminals develop strategies in order to avoid leaving DNA traces at crime scenes?;
9. The potential for social reintegration: yes/no, and why;
10. Collection of biological samples: should consent be necessary or not?;
11. Removal of profiles from the database: yes/no, and why;
12. Who should be included in the database?;
13. References to the existence of "informal" databases and illegal practices of profile non-removal.

Result 1: Sources of information and the “CSI effect”⁴

The successful implementation of a DNA database for criminal investigation purposes should take adequate knowledge of its goals and main methodologies into consideration. Hence, one of this study’s principal objectives was to find out the prisoners’ main information sources on DNA and the uses of forensic genetics in criminal investigation.

The main source of information is television, mentioned by 27 prisoners. Only 3 prisoners stated that they did not watch television and one prisoner said his only source of information about DNA and databasing came from a personal experience resulting from a burglary.

Regarding television, fictional criminal investigation series were mentioned (21 prisoners), with specific references to *CSI* (19 prisoners). There was also mention of the importance of news broadcasts and documentaries which describe the application of forensic genetics in criminal investigation (12 prisoners). Other secondary sources of information are the press (7 prisoners), conversations with other prisoners (5 prisoners) and prison guards (1 prisoner), the Internet (1 prisoner), radio (1 prisoner), personal experience (2 prisoners) and school (2 prisoners).

We admit that the “conversations” in prison, as a source of information mentioned by 6 prisoners may be, in fact, a much more relevant source of information than could be deduced from the content of the interviews. However, the brief period of contact with the interviewer was not sufficient to establish a trusting relationship that would make prisoners more willing to report backstage prisoner interactions.

In addition, only 2 prisoners explicitly mentioned personal experience as a source of knowledge about DNA and its uses in criminal investigation, even though 10 individuals stated that they were submitted to biological sample collection.

Reinforcing this type of virtual distancing from the “criminal” and the law abiding stance adopted by several prisoners in their interaction with the interviewers, we also found suggestions, by 7 of the prisoners interviewed, that TV criminal investigation series, namely *CSI*, could act as a source of knowledge and learning for criminals. Moreover, 1 prisoner said that even news broadcasts teach criminals how to avoid

⁴ The “CSI effect” is something which appeared in the North-American media regarding alleged claims by legal professionals that TV series with a strong emphasis on forensic science were affecting the outcome of real life trials. See, for example, “‘CSI effect’ has juries wanting more evidence”. Available on http://www.usatoday.com/news/nation/2004-08-05-csi-effect_x.htm, accessed 4 May 2010.

capture.

In stating that TV series can teach criminals to avoid leaving DNA traces at crime scenes, the interviewees projected a virtual identity, i.e., in terms of Goffman's (1988) concept of identity reconstruction in a prison context, we may have been presented with the exteriorizing effect of what the individual believes to be the socially accepted identity. This sort of behaviour is revealing of the normalization processes through which the imprisoned individual is disciplined into appearing to conform with legal norms.

Therefore, we may be experiencing the possible effect caused by the interviewees' contact with forensic science fiction TV series, reported in the literature on the subject as the "*CSI effect*" – *Police chiefs' version* (Cole and Dioso-Villa, 2007: 452), according to which the series acts as an educational vehicle for criminals or potential criminals, teaching them and encouraging them to eliminate traces from crime scenes and making them more sophisticated – which contributes towards criminals' informal crime scene expertise in the sense of taking the necessary measures to avoid detection (Prainsack and Kitzberger, 2009).

Still on the subject of the so-called "*CSI effect*", the literature points out that the fusion of melodramatic elements with crime fighting, in which forensic science is the protagonist, tends to render the distinction between reality and fiction increasingly difficult for the ordinary viewer. Allegedly, the image is formed and easily disseminated in popular culture, by which criminal investigation, invested with the power of science, lacks the uncertainties and ambiguities of the real world (Cavender and Deutsch 2007, 68-9).

We agree with Prainsack and Kitzberger's opinion (2009: 53) that the prisoners' representations of DNA and its uses in criminal investigation cannot simply be explained by the "*CSI effect*", since, in general, the interviewees refuted this. In fact, we must emphasize that the prisoners interviewed revealed a critical distancing from the *high tech* scenario projected by *CSI*. While 5 prisoners asserted that the way in which criminal investigation supported by forensic genetics in this TV series is totally fictional, other prisoners (6) thought that it might correspond to some extent with reality. 5 prisoners believed that *CSI* portrays the reality of more advanced countries, expressing scepticism regarding the feasibility of the *CSI* image in Portugal, which they consider still to be a backward country in terms of the latest technological criminal investigation methods.

Recommendation 1: Communication of information about the DNA database to convicts and official suspects

The public presentation of the benefits of the DNA database has taken place through the media, through political and INML (National Institute of Legal Medicine) official discourses. These discourses reveal great similarities with the image of forensic genetics projected by televised popular culture (belief in the great efficiency of DNA evidence and the swift and automatic identification of suspects). This image potentially contributes towards the formation of notions within public opinion that DNA is, or will in the future be, the “evidence of evidences”.

This type of discourse is not received by the interviewed prisoner population in a totally passive manner. The population is exposed to the popular culture view of DNA, but this knowledge is mixed with information based on personal experiences or shared among peers relating to criminal investigation methods in Portugal and, in some cases, personal experiences of biological sample collection.

Legislation determines that the relevant information must be communicated before a biological sample is collected for the purpose of making a DNA profile to be included in the database (Article 5 of Deliberation no. 3191/2008). However, the items of information provided are written in terms that are probably not comprehensible to a non-expert public.

For the prisoners to have more confidence in the DNA database and its uses, thereby guaranteeing the protection of their individual rights and a greater willingness to submit to biological sample collection without the need to resort to police intervention, we recommend a change in practices during biological sample collection. Thus, we recommend that, in order to adopt good practices in biological sample collection, the effects of entering the DNA profile to be used for criminal investigation purposes should be communicated to convicted criminals and official suspects by specific means: **providing oral and written information (a sample collection form) in a style of language that is appropriate for those with a low level of education.**

This communication process should take particular care to inform the individual that the DNA profile constitutes evidence to be taken into consideration together with other types of evidence associated with the case (Article 2 of Deliberation 3191/2008).

RECOMMENDATION 1	
Result	Recommendation
<p>Main sources of information about DNA are the media (particularly TV criminal investigation series);</p> <p>Conversations with peers and personal experiences.</p>	<p>Provide written and oral information about the database and the uses of samples and DNA profiles, in a style of language that is appropriate for those with a low level of education.</p>

Result 2: Evaluation of the criminal justice system and the police

The successful implementation of a forensic DNA database depends, first and foremost, on a positive evaluation and confidence in the criminal justice system and the police. In Portugal, the creation of the database has been presented as a way of plugging the gaps in the justice system and criminal investigation proceedings, in a manner which involves laudatory discourses about science and is supported by technological determinism – as if the existence of a particular type of technology could, in itself, produce impacts, regardless of the local and social context in which it is used.

The interviewees’ evaluation of the criminal justice operators in Portugal is predominantly negative for the following reasons:

- Convictions of innocent people, or convictions based on weak evidence (5 prisoners);
- Judges ignore details about the case or the lives of defendants that could lead to reduced sentence or a sentence other than prison (1 prisoner);
- Judges ignore the fact that prisons are really “schools for crime” (1 prisoner);
- Judges are guided more by their personal convictions than by the law (2 prisoners);
- Justice is unequal for the rich and the poor and it appears to be affected by political and economic pressures (6 prisoners);
- Justice is slow and incompetent (4 prisoners);
- Judges and attorneys reveal a lack of knowledge in their appreciation of scientific evidence (1 prisoner).

The interviewees' evaluation of the criminal investigation police in Portugal is predominantly negative for the following reasons:

- They make unsubstantiated accusations against individuals who have been the subject of criminal investigations in the past (2 prisoners);
- They use fabricated or illegal procedures to incriminate (6 prisoners);
- They use violence to obtain confessions (3 prisoners) or to collect biological samples (11 prisoners);
- They keep illegal databases with biological samples or DNA profiles (1 prisoner);
- They reveal a lack of adequate training and investigation resources (2 prisoners).

Recommendation 2: Investment in the public image of the criminal justice operators

This purpose of this study is not to develop a characterisation of prisoners' representations of justice and the criminal investigation police, nor does it intend to focus on the reality or otherwise of the dysfunctions that are pointed out. Regardless of the serious attention that should be given to these kinds of problems, we can, nonetheless, elaborate a general recommendation in order to draw some attention to the **need to develop strategies to invest in the public image of criminal justice operators (magistrates and the criminal investigation police)**. This could involve the establishing of communication and interaction protocols with civil society (namely, the media), through the creation of press offices that might work towards building platforms for mutual understanding between judicial operators and the media professionals who specialise in legal matters.

RECOMMENDATION 2	
Result	Recommendation
Negative evaluation of the criminal justice system and the police.	Investment in the public image of criminal justice operators through the establishment of communication and interaction protocols with civil society.

Result 3: Assessment of the value of DNA evidence

The assessment of the value of DNA evidence (belief in its efficacy) constitutes one of the pillars for the successful implementation of a forensic database containing genetic information. Thus, it was important to inquire into the prisoners’ representations of this type of evidence.

Most of the prisoners interviewed gave a very positive evaluation of DNA evidence. The majority stressed the importance of DNA for a successful criminal investigation, pointing out its potential to identify the guilty (24 prisoners) and acquit the innocent (25 prisoners).

However, only a small number of individuals said that DNA is “totally irrefutable” evidence (3 prisoners). Some stated that DNA, in itself, “proves nothing” (4 prisoners), while other interviewees mentioned the possibility that DNA traces might be “planted” at crime scenes (6 prisoners). Furthermore, 4 prisoners referred to the possibility of error, by the laboratory (1 prisoner), in the sample collection process (3 prisoners), or in the interpretation of results (2 prisoners).

The great majority (26 individuals) revealed knowledge of what DNA is and were able to state with precision what sort of biological materials are suitable for DNA collection. 22 prisoners indicated at least one of the following biological materials as containing DNA: hair, blood, skin, fingernails, and saliva. There were also references to sweat (3 prisoners) and teeth (1 prisoner).

Several interviewees established a comparison between the reliability of DNA evidence and fingerprint evidence. DNA was said to be more reliable than fingerprints (15 prisoners) and only 3 prisoners said that fingerprints might be more trustworthy. There were also some who had no opinion on the matter (2 prisoners) and some who

could not see any differences between the two types of evidence (2 prisoners stated that it depended on the circumstances of the crime, and 2 others said that the difference lay in the greater amount of time it took to interpret a fingerprint):

One interesting aspect lies in the suggestion that professional criminals can manipulate fingerprints more easily, either because it is easier to avoid leaving fingerprints at the crime scene (11 prisoners); or because fingerprints can easily be altered with the use of chemicals, surgery, or even third-party fingerprint “theft” (7 prisoners).

Recommendation 3: Generalise the use of DNA evidence in criminal investigation

The use of DNA profile technology for the identification of individuals has been generalised in Portugal since the mid 1990s. However, this technology has been used mostly to verify biological paternity when ordered by the courts in paternity suits. Although there are no published studies in Portugal about the uses of DNA in Portugal and their impact on judicial decisions, information provided by members of the criminal investigation police to the first author of this study reveal that the use of DNA for the production of evidence admissible in court is still minimal. Therefore, we recommend a **widening or generalisation of the use of this type of evidence in criminal judicial proceedings, insofar as it is a technology which is ascribed great credibility by the scientific community, as well as by judicial operators and actual convicted criminals.**

RECOMMENDATION 3	
Result	Recommendation
Positive assessment of the value of DNA evidence.	Generalisation of the use of DNA evidence in criminal judicial proceedings.

Result 4: Reduced value of the database in crime prevention or deterrence

Around the world, the creation of forensic DNA databases has been presented by political decision-makers and forensic researchers as having great potential in terms of crime prevention or deterrence.

The dominant opinion in the group of individuals we interviewed was that the effect of crime prevention or deterrence is questionable or reduced. 14 prisoners claimed that it does not prevent crime, 7 prisoners said they believed that it may prevent crime and 5 prisoners said that it may or may not reduce crime. Some reasons were given to justify this opinion, namely the prevalence of crimes perpetrated irrationally or on impulse (9 prisoners) or because the interviewees believed that many criminals do not care about or even consider the possibility of being caught (5 prisoners).

There were also those who claimed that the existence of a DNA database might even lead to an increase in “professional crime”, because it favours premeditation or better organization of criminal activities (8 prisoners), it may alert the criminal to take measures to avoid leaving traces at the crime scene (13 prisoners) and also because it could foster more violent crimes as a strategy to clear traces from crime scenes (1 prisoner).

Recommendation 4: Investment in crime prevention

It is yet to be proven that the operation of forensic DNA databases has a relevant impact on the prevention and deterrence of crime (Nuffield Council on Bioethics, 2007). In addition, the system for criminal policy in Portugal favours prevention in terms of general reintegration and individual particular socialisation (Moniz, 2002). **We recommend greater public investment in concrete crime prevention measures**, namely preventive socialisation, social reintegration and support for vulnerable individuals and potential victims.

RECOMMENDATION 4	
Result	Recommendation
Doubts regarding the value of the database in crime prevention and deterrence	Greater public investment in concrete crime prevention measures.

Result 5: Little or no potential in the DNA database for social reintegration

Unlike other countries, where the removal of profiles from the genetic database for criminal investigation purposes is not allowed, Portuguese legislation has sought to safeguard the possibility that each and every individual may take their place in society “free” from any official record that might directly identify them as the author of a past crime. Given this context, it became fundamental to evaluate, from the prisoners’ point of view, the following:

1. The database appears in legislation subordinated to the principle of social reintegration insofar as it stipulates the removal of profiles (in order to erase a past that may hamper a new start). What are the prisoners’ perspectives regarding the potential for “social reintegration” predicted by the legislator?
2. Throughout the world, the creation of DNA databases has been largely legitimated by the “promise” of crime prevention and its deterrent effects on crime. What do prisoners think about this?

The data indicates that **prisoners do not believe the DNA database has a potential for social reintegration**, and this opinion appears to be combined with a low level of trust in the role played by the justice system in promoting the individual’s reintegration into society. In other words, the lack of belief in the system’s ability to provide opportunities and conditions for social reintegration is generalised and is not the exclusive or specific result of the assessment of the DNA database’s lack of potential to provide conditions for social reintegration.

The prisoners’ expectations of social reintegration are instead associated with matters relating to employment and the sort of social networks they will find on the

outside. The following factors were mentioned by the prisoners interviewed as making social reintegration “impossible” or at least “very difficult”:

- Social reintegration programmes do not work, either because of excessive bureaucracy, lack of human resources, or the insufficient training of the social reintegration staff (11 prisoners);
- The prevalence of the ex-convict stigma, which is an obstacle in finding a job and makes relationships with other people difficult (13 prisoners);
- The maintenance of the criminal record, which makes finding a job difficult (6 prisoners)

Recommendation 5: Changes in social reintegration policies

Prisoner social reintegration policies tend to ignore the existence of adverse social conditions and are based on the myth that the responsibility for social reintegration is primarily, in a relatively concealed way, a matter for the individuals’ family and community (Carlen, 2007; Cunha and Bastos, 2007). The reasons for the relative inefficiency of social reintegration policies are often attributed, by political, institutional, and social workers, to psychological factors mostly ascribable to the individuals in question, in addition to frequent complaints about the scarcity of resources and the inadequacy of the arrangements and facilities in prison establishments (Gomes *et al.*, 2003: 205-454).

The motivation for social reintegration is a fundamental element in the successful return of ex-convicts to life in civil society. However, the prisoners interviewed did not feel motivated because of their perception that it would prove very difficult to access the necessary resources for proper integration into general society.

We agree with other authors (Gomes *et al.*, 2003; Neves, 2007; Visher and Travis, 2003) on the need for **change in social reintegration policies**, which might involve greater public investment in essential links between the prison system, health, education and employment sectors, the development of less defensive institutional practices that are better linked to the real world and focus on the restrictive living conditions to which prisoners return after their imprisonment.

RECOMMENDATION 5	
Result	Recommendation
Little or no belief in the potential of the DNA database for social reintegration	Changes in social reintegration policies

Result 6: Non-removal of profiles

The Portuguese law on DNA databases establishes the mandatory removal of DNA profiles from the database at the end of judicial proceedings or at the end of the maximum statutory limit for criminal proceedings stipulated in the Penal Code.

When asked for their opinion on this legal provision, **the main emphasis in the interviewees' discourse was favourable to the non-removal of DNA profiles**: 20 prisoners argued that profiles should never be removed, 6 prisoners stated that DNA profiles should be removed, 3 prisoners said that it would depend on the type of crime, and 2 prisoners did not answer the question.

The group of 20 prisoners who stood for the non-removal of profiles presented different arguments for this option: 6 prisoners justified it by the potential of the database to “exonerate”, 4 prisoners claimed that the removal of profiles would be a hindrance to criminal investigation, 7 said that removal would limit the possibility of identifying re-offenders, and 7 prisoners indicated that only the criminal record should be erased (in order to allow for more job opportunities).

The group of 6 prisoners who argued for the removal of DNA profiles under the conditions established by law claimed that it could facilitate new opportunities and eventually help conceal the stigma of being an ex-convict. Within that group, 1 prisoner believed that, in cases of repeated offences, the profiles should not be removed.

Finally, a group of 3 prisoners argued that the DNA profiles should not be removed only in cases of sexual crimes and particularly violent crimes.

Recommendation 6: Non-removal of profiles

The idea for the removal of DNA profiles from the forensic database was founded upon the principle of re-socialization, in accordance with the humanitarian tradition of the Portuguese penal system which dates back to the 19th century. From the interviewees' point of view, contrary to the legislator's intentions, this principle may have adverse effects.

The prisoners indicated that the removal of the profiles is an obstacle to the success of criminal investigations and that it might contribute towards ex-convicts always being seen as "eternal suspects". Profile non-removal could, from the prisoners' perspective, facilitate criminal investigation and also prevent the authorities from suspecting the "wrong person" whilst proving the innocence of many others.

This study produced unexpected and important results that are should be considered, not only in terms of the way the database is implemented, but also for what they reveal about the general relationship of this population with the justice system. Specifically, instead of a defensive and apprehensive posture towards certain aspects which could eventually become more problematic, such as the non-removal of profiles, this population tends to view them not as increasing and tightening up control in which they would be the main target, but as a shield that would protect them from the systematic and aprioristic suspicion which, in their point of view, prisoners are subjected to by the human actors in the justice system – either because of their status as a convicted criminal and the presumption of guilt that this generates, or because of the low social standing of most prisoners.

Combining the prisoners' perspective – which is, as a matter of fact, rather similar to the stance of the forensic scientists and the police in Portugal (Machado and Silva, 2010) – on the effectiveness of criminal investigation, with the need to defend individual rights, we recommend that **the possibility of not removing DNA profiles from the forensic database should be considered**, always with the assurance the database is only accessed according to criteria that are appropriate for the stated purposes and by an independent entity (never by a criminal investigation agency). Even so, additional measures may be needed in order to guarantee greater confidentiality and security regarding access to information.

RECOMMENDATION 6	
Result	Recommendation
Preference for maintaining DNA profiles in the database.	Consider the possibility of the non-removal of profiles, in view of the protection of individual rights, whilst reinforcing confidentiality and security measures regarding access to information.

Result 7: Permanence of “stigma”

From the interviewee group, 5 prisoners explicitly stated that they did not believe that DNA profiles are “actually” removed, justifying this opinion with references to the fact that they know that the police and the courts are able to recover information from the criminal record even after the period when, by law, they should have been deleted. 1 prisoner claims that the police maintain illegal DNA databases.

This sort of perception about the non-official permanence of DNA profiles is seen as a way of perpetuating the stigma of being an ex-convict. In this sense, 11 prisoners said they feel that they will always be the “first suspects” in any investigation of crimes that are similar to the ones they committed, whereas 2 said that the database would perpetuate inequalities because only some – the poorest – are kept on records (officially or otherwise).

Recommendation 7: Non-removal of profiles

The perception that DNA profiles may never be effectively removed is linked to the data previously presented (result 6) concerning the distrust of the uses of the DNA database and doubts about the criminal investigation efficacy, in a context in which the law imposes the removal of profiles. Therefore, we recommend, as before (result 6) that **the possibility of not removing DNA profiles from the forensic database should be considered**, always with the assurance that the database is only accessed according to criteria that are appropriate for the stated purposes and by an independent entity (never by a criminal investigation agency). Even so, additional measures may be needed in

order to guarantee greater confidentiality and security regarding access to information.

RECOMMENDATION 7	
Result	Recommendation
Permanence of “stigma” and disbelief in the “actual” removal of DNA profiles.	Consider the possibility of non-removal of profiles, in view of the protection of individual rights, whilst reinforcing confidentiality and security measures regarding access to information.

Result 8: Expansion of the criteria for insertion in the database

Portuguese law establishes that individuals convicted for serious crimes punished with an effective prison sentence of 3 years or more is a criterion for inclusion in the database. When asked for their opinion on this criterion, **the main emphasis was set on the discriminatory potential of the criteria for insertion in the DNA database.**

The solution found by 12 of the prisoners interviewed to end discrimination between “those who are in the database and those who are not”, and also as a way of increasing the efficacy of criminal investigation, would be to create a universal database, i.e. one which would include the whole population.

Moreover, on the matter of the discriminatory potential of the DNA database, 9 prisoners claimed that in order to avoid inequalities, everyone who is found guilty in court should be included in the database, regardless of the crime committed, the length of the sentence, or even if there is no effective prison sentence. 4 individuals stated that the insertion criterion should also include suspects.

3 individuals declared that the criterion for insertion should be based on the type of crime (entry in the database would be for the authors of sexual and/or violent crimes) and in the case of re-offenders. Only 1 individual said that he was in total agreement with the insertion criterion established by the Portuguese law.

Recommendation 8: Expansion of the criteria for insertion in the database

The restrictive nature of the legislation, which only admits the insertion of profiles from individuals convicted for serious crimes with effective prison sentences of 3 years or more, following a dispatch from a judge ordering sample collection and profile insertion, limits the efficacy of criminal investigation and, from the prisoners' point of view, fosters inequalities among convicts. The idea of potential discrimination created by a judge's decision on who belongs in the database is based on the notion that this possible arbitrariness will be subjective and unequal.

The argument presented by the prisoners is supported by studies related to the discriminatory potential of DNA databases. On the one hand, the over-representation of certain ethnic groups in police databases has been systematically noted in literature on the subject (see, for example, Cole, 2002; Williams and Johnson, 2008) and also in genetic databases for criminal investigation purposes (Nuffield Council in Bioethics, 2007).

Moreover, several commentators have pointed out that the expansion of the criteria for insertion in the DNA database may help soften the discriminatory potential of databases (Connor, 2003; Haddow, 2008; Kaye and Smith, 2004). This has fuelled the debate surrounding the need to reconfigure the issue of the threat to individual rights potentially generated by the expansion of the criteria for insertion, and it would therefore appear necessary to continue discussing the matter, whilst, as far as possible, making the debate open and accessible to all.

According to the results presented and the brief consideration of the matter, we recommend **wide diffusion of the objectives and modes of operation of the database among magistrates**, which may contribute towards providing the necessary information for fair and equal decision-making.

We also recommend that the database is seen not only as a means of identifying criminals but also as a guarantee of better protection of individual rights. In view of this double potential, the possibility of **expanding the criteria for the insertion of DNA profiles in the forensic database for all convicts could be considered**. Nonetheless, while ensuring that the database is only accessed according to criteria that are appropriate for the stated purposes and by an independent entity (never by a criminal investigation agency), additional measures may still be needed in order to guarantee greater confidentiality and security regarding access to information.

RECOMMENDATION 8	
Result	Recommendation
Potential discrimination in the criterion for inclusion in the DNA database.	Wide diffusion of the objectives and modes of operation of the database among magistrates. Expansion of the criteria for the insertion of DNA profiles in the database to include all convicts, in view of the protection of individual rights and to ensure confidentiality and security in accessing information.

Result 9: Acceptance of sample collection

Most interviewees (17 prisoners) favoured mandatory submission to the collection of biological samples within the context of criminal investigation, provided that it was ordered by a judge. This opinion was justified by the notion that those who are innocent have nothing to fear. 8 prisoners considered that individuals should be allowed to refuse the collection of a biological sample. Some individuals considered the possibility that the collection of a biological sample may represent a threat to individual rights: 1 interviewee declared that compulsory collection would constitute a violation of individual freedom, 1 interviewee argued that the privacy and confidentiality of the database is not guaranteed, and 2 interviewees indicated that individuals should be allowed to refuse if the collection was carried out intrusively in a way which might threaten physical integrity (for example, blood samples).

There was also a group of 11 individuals who stated that, in the event of refusal, the police would collect the biological sample by force, without showing any apparent signs of disagreement with this.

Recommendation 9: Institution of better practices for collecting biological samples

The regulation regarding the operation of the DNA database (Deliberation no. 3191/2008) establishes the conditions related to consent for sample collection, stipulating the mandatory requirement of “free, informed and written” consent in the act

of sample collection from volunteers and families of missing persons (Article 4). The regulation of the DNA database does not mention the terms of consent regarding sample collection from official suspects and convicts. Although one could assume that the collection of samples can be carried out without the individual's consent if there is a written order by a judge demanding that the exam shall be made under those circumstances, according to no. 1 of article 172 and no. 2 of article 154 of the Penal Process Code, we believe that a clarification of the regulation concerning mandatory submission to sample collection is advisable, insofar as to reduce possible ambiguities and uncertainties. The matter of consent by official suspects and convicts is only detailed in article 6 of the regulation regarding the operation of the DNA database, concerning the "Authenticity of identification", which stipulates that consent is necessary in order to have their picture taken.

In the interviewees' discourses we were able to understand the motives for submitting to biological sample collection. However, as mentioned above, the prisoners presented a negative image of the police, specifically in terms of the way in which they collect samples: some prisoners mentioned that the police use violence to obtain confessions (3 prisoners) or to collect biological samples (11 prisoners). This distrust of the police could be overcome if **the collection of biological samples was carried out by certified personnel only and was always done with respect for the individual's physical and moral integrity** (what the prisoners called "collecting samples with manners").

RECOMMENDATION 9	
Result	Recommendation
Acceptance of compulsory biological sample collection.	Sample collection to be carried out with respect for the individual's physical and moral integrity and only by certified personnel

SYNTHESIS OF RECOMMENDATIONS

We present below a list of recommendations resulting from the findings in this study:

- Individuals to be submitted to biological sample collection within the context of the DNA database for criminal investigation purposes to be presented with oral and written information regarding the purposes of the database and the uses of the sample and DNA profile, in a language adapted to a low level of education;
- Investment in the public image of the criminal justice operators through the establishment of communication and interaction protocols with civil society;
- Generalisation of the use of DNA evidence in criminal proceedings;
- Greater public investment in concrete crime prevention measures ;
- Changes in social reintegration policies;
- Consideration of the possibility of non-removal of profiles, in view of the protection of individual rights, whilst reinforcing confidentiality and security measures regarding access to information;
- Wide diffusion of the objectives and modes of operation of the database among magistrates;
- Expansion of the criteria for insertion of DNA profiles in the database to include all convicts, in view of the protection of individual rights and ensuring confidentiality and security in accessing information;
- Collection of samples made with respect for the individual's physical and moral integrity.

COMPARISON OF RESULTS: THE AUSTRIAN CASE

The comparison of the results we present in this study and the conclusions of the study developed in Austria (Prainsack and Kitzberger, 2009) reveal many similarities. However, we must point out that, unlike Portugal, the Austrians have had a fully operational DNA database since 1997, which is one of the largest in the world in terms of the proportion of the population included, and that its legislation can be characterised as much more permissive in terms of profile inclusion and removal criteria. For example, whereas Portuguese legislation orders the removal of profiles after the judicial proceedings or at the end of the maximum statutory limit for criminal proceedings stipulated in the Penal Code, in Austria the profiles from convicted offenders are removed only in particular circumstances, such as when the originator of the DNA profile has reached a certain age.⁵ Furthermore, the Austrian entry criteria is extended to all convicted offenders as well as to all suspects of serious crimes and even those suspected of minor offences referred to by the authorities as potential re-offenders, based on the type of crime or the personality of the offender (Prainsack and Kitzberger, 2009: 54). The profile entry criteria for offenders in Portuguese legislation are restricted to individuals convicted of serious crimes punished with effective prison sentences of 3 years or more.

There are strong similarities in both cases regarding the interviewees' sources of information about DNA, with the media playing an important role in the construction of representations about the power and certainty of DNA, as well as in providing knowledge about the sort of biological traces that may lead to identification. Television series and movies, in particular *CSI*, are referred to by the overwhelming majority of the prisoners interviewed in both countries as sources of information. Nonetheless, the general opinion in both groups is that what is projected by the media does not entirely correspond to the reality of DNA.

⁵ The conditions under which the data stored in the database must be deleted are listed in § 73.1 of the Security Police Act (*Sicherheitspolizeigesetz*, SPG): First, when the originator of the DNA has reached 80 years of age, if s/he has not undergone any examination for forensic identification purposes in the previous five years; second, if the originator of the DNA had been a minor at the time of the provision of the material for forensic identification and if s/he was not examined for forensic identification purposes in the previous five years; third, five years after the death of the originator; and fourth, if the originator of the DNA is no longer suspected of having committed a dangerous assault. In these cases, data deletion on the authorities' own initiative is mandatory unless the authorities' retention of the data is necessary due to concrete circumstances indicating that the person will commit further dangerous assaults (two more cases apply only in specific circumstances: see § 73.1, points 5-6). The subsequent paragraph, §74 SPG, pertains to the deletion of stored DNA profiles on request of the originator. This is the case if the original suspicion against the originator no longer exists, or if the deed has been found to be not unlawful. In addition, in all cases where authorities are obliged to delete the *data* stored in the database, the physical *samples* must be destroyed as well (§ 67.3 SPG).

In addition to the media, there is also the exchange of information between prisoners, which provides the potential for informal learning of methods and techniques for avoiding leaving traces at crime scenes, as well as ways to prevent detection and identification. The sharing of information about DNA among prisoners is something that is not openly admitted in Portugal and Austria, except by a small group of interviewees. Generally, conversations about DNA result from discussions about errors and mistakes that ultimately led to conviction, providing learning opportunities about techniques to avoid leaving traces at crime scenes (Prainsack and Kitzberger, 2009: 60).

DNA is perceived as having an almost absolute power in terms of identification and uniqueness and is considered by the majority of interviewees as a technique that is far superior to fingerprints. According to statements in both of the groups interviewed, the latter can easily be falsified or altered, while certainty and neutrality is predominantly ascribed to the former (it can be used to identify the guilty and acquit the innocent). However, in both groups, the “truth of DNA” is not taken to be absolute. Human factors – the police, courts, and people with bad intentions – are mentioned by some interviewees as causes for concern over the possibility of abusive and improper use of DNA evidence against them. In other words, the interviewees expressed strong suspicions that the police or people with malicious intention may deliberately “plant” their biological samples at crime scenes in order to incriminate them, or that the authorities will make use of alleged DNA evidence to elicit confessions.

Another common aspect relates to the types of crimes in which the database can benefit society. Amongst the Portuguese interviewees, several mentioned homicides and sexual crimes as those where the usefulness of a DNA database could be maximized. Equally, for Austrian interviewees, one of the benefits of the DNA database is to help find the “*truly bad guys*” (rapists, paedophiles and murderers) (Prainsack and Kitzberger, 2009: 68). This distinction seems to be based on the notion of a hierarchy or even a moral barrier – and its associated principles and values – among the prison population.

The hierarchy of “professional” criminals and “lower class criminals” appears to be reflected in the Portuguese and Austrian interviewees’ perceptions of the database’s potential to prevent and deter crime. On the one hand, the DNA database represents a greater probability of detection, identification and conviction for “lower class criminals”, insofar as these will supposedly not have the experience and “selective gaze” of “professional” criminals (Prainsack and Kitzberger, 2009: 58), nor will they

worry about leaving traces at crime scenes. On the other hand, “professional” criminals will have to be more careful and take measures in order to avoid detection and identification as part of the risk management and control associated with the planning of a crime.

Thus, although the matter of crime prevention and deterrence was not selected, at least not directly, as a topic of analysis in the Austrian study, it may be said that the results obtained in both groups indicated that DNA databases are not perceived as having any particular value and usefulness in terms of crime prevention and deterrence.

The Portuguese interviewees’ notion of the DNA database’s contribution to criminal investigation is supported by perceptions of the advantages of automation and the speeding up of investigative procedures. For this group, the neutrality and efficacy provided by technology is seen as protection, insofar as it transfers decision-making powers in a relationship between criminals and authorities which is perceived as being deeply hierarchical and where the possibilities of negotiation for the former are very much reduced.

The Austrian interviewees said that DNA forces the police to carry out more rigorous investigations, obliging them to abandon practices of suspicion and arrest based on criminal profiles or previous convictions. Similarly, and as stated by Portuguese interviewees, the DNA database provides the potential advantage or benefit of providing an opportunity to prove innocence.

In fact, some Portuguese interviewees, when asked about the rule concerning the removal of profiles, expressed concerns about illegal databases maintained by the authorities. Therefore, in their point of view, keeping profiles in the database would not only be a way of proving innocence, but could also serve to protect convicts and ex-convicts against other surveillance mechanisms used by the authorities.

Nevertheless, there was a differing perception between both groups regarding the effects of DNA technology in relation to the power gap with the authorities. We saw earlier that the Portuguese interviewees believe that the degree of automation involved in identification by DNA profile might favour them because it renders strategies of negotiation and resistance with the authorities unnecessary. In the case of Austrian interviewees, DNA appears to be perceived as an adverse factor, insofar as it is inscrutable for many. Thus, DNA technologies and databases are seen as widening the power gap between those who are subjected to it and do not have any kind of control over it, and those who use it, i.e. the criminal justice system.

The Portuguese interviewees' concerns regarding the potential discrimination associated with the division between those who are in the database and those who are not should also be mentioned. In other words, these are concerns associated with the perception of tighter control and surveillance enforced by the division between "delinquent individuals" and "law abiding citizens" and also with a reduction in the efficacy of criminal investigation and the probability of social reintegration.

The experience of the stigma associated with inclusion in a DNA database is different in the two groups. In Austria, the DNA database not only added, but deepened the somatic dimension associated to the stigma of being a convicted criminal. In other words, the fact that the state holds a record based on something which is extracted from the body of a convict is seen by some Austrian interviewees being marked for life (Prainsack and Kitzberger, 2009: 70). This may result from the actual experience of being included in the database, but also because the Austrian legislation does not allow for the removal of profiles, except in cases of where a suspect is acquitted, if the suspect applies for removal (ENFSI, 2009).

In the Portuguese case, the experience of the stigma associated with inclusion in a DNA database has a prospective character, given that the database was not operational at the time of the interviews. Nonetheless, these prospective experiences are likely to be founded upon previous contact with the authorities' practices directed towards known criminals and ex-convicts having trouble with social reintegration, although the Portuguese interviewees also mentioned being "marked for life" in association with the stigma of being an ex-convict.

Perhaps the most notable difference between this study and the one conducted in Austria has to do with the interviewees' opinions regarding database inclusion and removal criteria. Although some Portuguese prisoners favoured a universal database, the majority were of the opinion that all individuals convicted for any offence, or even mere suspects, should be included in the database. Furthermore, the general majority agreed with the non-removal of profiles from the official database. On the one hand, the Portuguese interviewees considered that non-removal of profiles represents a benefit for criminal investigation. On the other hand, it could also be an advantage in terms of future social reintegration and protection against police surveillance, seen as the maintenance and use of unofficial databases.

The results of the Austrian study stated that the idea of a universal database is seen as an erosion of the boundaries between public and private space and as the

ultimate state intrusion into the lives of citizens. For this reason, the Austrian interviewees were against a universal database. Paradoxically, from Prainsack and Kitzberger’s point of view (2009: 70), expanding the database to include the whole population could effectively contribute towards minimising the stigma, besides reducing the probability of convicts being investigated or convicted for crimes they did not commit. However, the justification presented by the Austrian interviewees was connected with the notion that the surveillance and stigma they are already subjected to is so intrusive that they do not want it to be enforced on the rest of society, namely on their families and friends, since everyone would then be subjected to permanent suspicion.

Table 2 – Comparison of results

Portugal	Austria
<i>Sources of information</i>	
Media (mainly television) Contact with television series about crime: “CSI effect” associated with personal experiences or sharing of information with peers Criminals as experts in avoiding leaving traces	
<i>Evaluation of the police and the criminal justice system</i>	
Negative evaluation (Unequal justice for the rich and the poor, convictions based on apriorisms, slow judicial and police work)	
<i>Assessment of the value of DNA evidence</i>	
Positive assessment (belief in the efficacy of DNA evidence, whether in identifying criminals or exonerating individuals) Its value or meaning is not taken as absolute because it is susceptible to incriminatory practices	

Portugal	Austria
<i>Reduced value of the database in crime prevention and deterrence</i>	
<p>Irrelevant for “lower class criminals”</p> <p>Irrationality and impulsiveness of the criminal act;</p> <p>More “professional” crime</p>	<p>Not a relevant factor in criminals’ risk analysis;</p> <p>Makes criminals more “professional”</p> <p>Bad for “lower class criminals”</p>
<i>Little or no potential in the DNA database for social reintegration</i>	
<p>Disbelief and lack of confidence in social reintegration programmes</p>	<p>Database could help reintegration as it prevents wrongful conviction in the future</p>
<i>Non-removal of profiles</i>	
<p>Preference for maintaining DNA profiles in the database</p>	<p>Not analysed</p>
<i>Permanence (or even increase) of “stigma”</i>	
<p>Constant suspicion due to previous record</p> <p>Perception that information is always available for the police and the courts, even after official removal of profiles</p>	<p>Accentuated somatic dimension of the stigma of delinquency – body/DNA associated with a “mark” for life</p>
<i>Criteria for insertion in the database</i>	
<p>Favourable to a universal DNA database or expansion of the criteria for insertion to include all convicts:</p> <p>Discriminatory potential of the present profile insertion criterion</p>	<p>Disagreement with a universal database:</p> <p>Threatens the individual/state boundary</p> <p>Threatens ordinary citizens</p>

Portugal	Austria
<i>Submission to sample collection</i>	
<p>Acceptance of mandatory submission to sample collection and negative view of the practices of sample collection when conducted by the police.</p>	<p>Not analysed</p> <p>Note: Sample collection criteria are defined by the police.</p>

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