Chapter 7 DNA Databases for Criminal Investigation

Henrique Curado ESTSP-IPP, Portugal

ABSTRACT

This chapter studies the establishment of DNA databases and their relevance at two levels. On the one hand, as a basis for criminal investigation, they contribute to the protection of the public against potentially criminal behavior. In our societies, mass violence is not a sporadic occurrence and knowledge. When DNA databases allow for preventive action, they may be synonymous with safety. On the other hand, DNA databases pose deeper problems, such as a felon's data are still personal data and as such need to be protected. Any violation of this right is against the law. Therefore, a society that wants to be lawfully protected must first protect. The study is focused on Spanish and Portuguese statutes enforced in 2007 and 2008, respectively, as well as on doctrine and jurisprudence produced in both countries and intended to strengthen cyberspace security and to guarantee access to information.

INTRODUCTION

Any attempt to conceptually map the theories and thoughts of different authors produces a network of notions whose intersections inevitably refer to the issue of human dignity. Such a mapping leads to questions about four main topics. Firstly, the reason why DNA databases have been created despite all the controversy around them. Secondly, the scope and range of the law. Thirdly, the analysis of their repercussions, that is to say, the problems posed by the collection of personal data, which constitutes a sensitive matter and makes us vulnerable before the society and diverse stakeholders. Lastly, the issues concerning information security.

DOI: 10.4018/978-1-4666-6324-4.ch007

It must be pointed out that the analysis of all these aspects also reveals a fundamental concern with the human person, particularly the protection of the personality. For this reason, this paper has been structured in subchapters dealing with the first three aspects mentioned above. Information security, which, as we will see, is at the core of the matter, will be approached in future research work. An introductory subchapter intends to contextualize these aspects and articulate them with the central issue of human dignity.

When its related concepts are analyzed needs, repercussions, legal aspects and security, they all eventually lead to the main concern of human dignity, particularly the protection of the personality. It is necessary then to understand the significance of personal data collection and storage in databases of which citizens do not know when, how or to what purposes they are accessed by third parties. In fact, "knowledge management has not generated a consensus basis, leading to questions related to privacy and its compatibility with public interest" (Curado *et al.*, 2011, p. 32).

In addition, it is important to understand the reason why DNA databases have been created; in other words, why humankind needs databases containing information about a few members of the community. The answer is twofold. Collectively, people need to keep society safe. As recent events of mass violence have shown, profiling potential criminals may lead to higher levels of security. Individually, for personal or humanitarian reasons, people may choose to register their DNA profiles in order to determine kinship or to be used in catastrophe situations (CNECV, 2007, p. 3), not forgetting regenerative medicine, which must be ruled according to the values of fairness and solidarity (Nunes, 2013, p. 121-3), particularly equal and fair access (Nunes (Relat.), 2006, p. 14). The creation of databases, however, is not a problem in itself, since privacy is not seized by society, but results from individual availability, as "the right to privacy may be considered available, only requiring the consent of the person holding that right" (Greco & Braga, 2012, p. 163).

In order to understand the scope and range of the law, the legislation in force in both Spain and Portugal has to be analyzed. On the one hand, the specific regulations on DNA profiles and databases may be found in the Spanish Organic Law 10/2007, dated 8 October, dealing with police DNA databases, as well as in the Portuguese Law 5/2008, dated 12 February, which approved the creation of a DNA database for purposes of civil and criminal identification. On the other hand, information protection is regulated in Spain by Organic Law 15/1999, dated 13 December, for the Protection of Personal Data, and in Portugal by Law 67/98 for the Protection of Personal Data,

dated 26 October. Before the enforcement of these statutes, both the Spanish (Guridi, 2008, p. 5) and Portuguese (Court's ruling No. 0546541, 2006) legal frameworks already allowed for certain latitude in the interpretation of fundamental rights.

Another aspect to be considered is that DNA databases have legal repercussions at two levels, regarding the methods of sample collection and the possible invasion of privacy. In fact, if a person does not consent to the collection of his/her DNA, samples may be taken against the person's will (Kappler, 2008, p. 76-92), which may lead to a possible invasion of privacy. Also, DNA sampling makes us vulnerable when obtained by "would-be employers", as it "may exclude individuals from the labor market and even deprive them of a decent life if found out to have a genetic predisposition to develop certain diseases" (Doneda, 2000).

It has become clear by now that this paper tries to find a point of balance between two apparently conflicting interests, such as the protection of privacy and the creation of databases of DNA profiles for criminal investigation. Therefore, the next subchapter contextualizes the issues of privacy and the need for DNA databases. On the subchapter torn between two types of fear the third issue will be discussed with the study of Spanish and Portuguese frameworks and their consequences, as well as of the well-founded fears felt before the above-mentioned regulations were enforced. On the same subchapter we will study the repercussions of DNA databases. Our fourth question shows us some limitations. So we ask: are we facing an imperfect method?

CONTEXT AND BACKGROUND

Though resulting from a comprehensive social debate, the creation of a DNA database is mainly a political decision, based on the belief in its many advantages for society. Other, ethical and philosophical, aspects, while not completely neglected, do not receive too much attention (Machado,

15 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/dna-databases-for-criminal-investigation/115751

Related Content

Al-Powered Behavioral Analysis in Digital Investigations

(2025). Exploring the Cybersecurity Landscape Through Cyber Forensics (pp. 189-222). www.irma-international.org/chapter/ai-powered-behavioral-analysis-in-digital-investigations/370613

Performance Evaluation and Scheme Selection of Shot Boundary Detection and Keyframe Extraction in Content-Based Video Retrieval

Lingchen Gu, Ju Liuand Aixi Qu (2017). *International Journal of Digital Crime and Forensics (pp. 15-29)*. www.irma-international.org/article/performance-evaluation-and-scheme-selection-of-shot-boundary-detection-and-keyframe-extraction-in-content-based-video-retrieval/188359

Calm Before the Storm: The Challenges of Cloud Computing in Digital Forensics

George Grispos, Tim Storerand William Bradley Glisson (2013). *Emerging Digital Forensics Applications for Crime Detection, Prevention, and Security (pp. 211-233).*www.irma-international.org/chapter/calm-before-storm/75674

Efficient and Reliable Pseudonymous Authentication

Giorgio Calandrielloand Antonio Lioy (2012). *Cyber Crime: Concepts, Methodologies, Tools and Applications (pp. 571-586).*

www.irma-international.org/chapter/efficient-reliable-pseudonymous-authentication/60969

A Model Study on Hierarchical Assisted Exploration of RBAC

Wan Chen, Daojun Han, Lei Zhang, Qi Xiao, Qiuyue Liand Hongzhen Xiang (2022). *International Journal of Digital Crime and Forensics (pp. 1-13).*

www.irma-international.org/article/a-model-study-on-hierarchical-assisted-exploration-of-rbac/302871