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The presence and future of the use of DNA-Information and the protection of genetic informational privacy: A comparative perspective

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Abstract

DNA-Information is used to solve a criminal case or to establish a match between the suspect of a particular criminal case and other unsolved crimes. However, DNA-Information on its own is not entirely reliable evidence as this scientific technology produces errors with a certain probability. The use of DNA-Information in criminal proceedings is in conflict with the protection of individual's genetic informational privacy. Although England and Wales, Germany and South Korea have different legal provisions on the use of DNA-Information, in all these legal orders there are similar problems. Therefore, there is a need for appropriate legislative criteria which balance the protection of individual's genetic informational privacy relating to DNA and the effectiveness of the criminal justice system in a society which employs all the available modern forensic technologies.

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1. Introduction: the modern meaning of genetic fingerprinting and DNA-Information

Since Alec J. Jeffreys discovered genetic fingerprinting as a means to sequence DNA loci to determine personal identification with biological materials in 1984,¹ the technique has become

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¹Jeffreys/Wilson/Thein, 1985, pp. 67–73; Jeffreys/Wilson/Thein, 1985, pp. 76–79.

an essential and indispensable method for criminal investigation. Genetic fingerprinting is often used as an equivalent to terms such as DNA profiling, DNA typing, DNA fingerprinting, or forensic DNA testing, even though the meaning of these terms is quite different.² The product of genetic fingerprinting is called DNA-Information or DNA profiles. There is a widespread recognition that DNA-Information contributes to the solution of crimes by detecting criminals through the comparison between crime scene samples and individual profiles in criminal proceedings. For this reason, the creation of a DNA database is considered to be a valuable investigative resource as it facilitates the active use of genetic technology in criminal investigations.³ As it expedites the judicial process, it may help to solve crimes more quickly.⁴ The Prüm Treaty⁵ emphasized the importance of DNA-Information for the identification of criminal traces as it offers unique possibilities to identify a relation between different traces.

However, it is not sufficient to use only DNA-Information as evidence which has a wide impact on informational privacy when it is used for criminal deterrence and for securing convictions.⁶ It is theoretically possible that genetic fingerprinting uses parts of the DNA which have individually unique features and that – apart from a gender test – these areas neither code for any physical characteristic nor allow for a determination of any medical condition.⁷ In compliance with the purposes of DNA analysis, the storage of DNA samples in a DNA database makes it possible to collect private genetic information which is contained in the individual DNA. It establishes a profound interference of the criminal justice system with the individual's private life concerning personal biological materials. It has enormous consequences for self-determination and the protection of intimate private information. From the right to enjoy privacy within a scope of reasonable expectations follows the right not to be subjected to unlawful state surveillance by the means of use, storage and sharing of such information. Basically, DNA-Information should only be employed on condition that its use is consistent with the rights and values of individual privacy, human dignity and other civil liberties and if it was obtained in a due process.⁸ However, in practice, DNA Databases usually contain not only DNA-Information (including DNA samples) but also private information from a broad range of persons, many of whom can hardly be regarded to be part of the active criminal population.⁹ Therefore it is problematic whether the criteria by which this information is created, stored and used pay sufficient respect to the privacy and ownership of the personal information contained in the DNA.¹⁰

This article is premised on the assumption that the use of genetic fingerprinting and DNA-Information (including DNA samples) in criminal proceedings can only be authorized by legal provisions that also provide precise legal limits that correspondingly protect genetic informational privacy of informational subjects.¹¹ The aim of this article is to foster the implementation of legislative criteria that balance both the protection of genetic informational privacy with respect to individual's biological materials and information taken from DNA and the effectiveness of the criminal justice system. For that purpose, the article analyses the legal provisions

²See further, Lee, 2013, pp. 16.

³Williams/Johnson, 2005; Santos/Machado/Silva, 2013, 9:12.

⁴Santos/Machado/Silva, 2013, 9:12.

⁵See further, 2008/615/JHA and 2008/616/JHA.

⁶Santos/Machado/Silva, 2013, 9:12.

⁷Acred, 2013, p. 14.

⁸Rothstein/Talbott, 2006, p. 162.

⁹Skinner, 2013, pp. 978.

¹⁰Skinner, 2013, p. 979.

¹¹See Lee, 2010, pp. 305–325.

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