Sharing data in the control of crime

Forensic DNA databases are an important tool for enhancing transnational cooperation in the control of crime, yet European nations have different approaches to regulating, gathering, using, and sharing forensic DNA data. We spoke to **Professor Helena Machado** about the Exchange project's work in investigating the ethical, social, political and operational issues around transnational sharing of DNA data in the EU

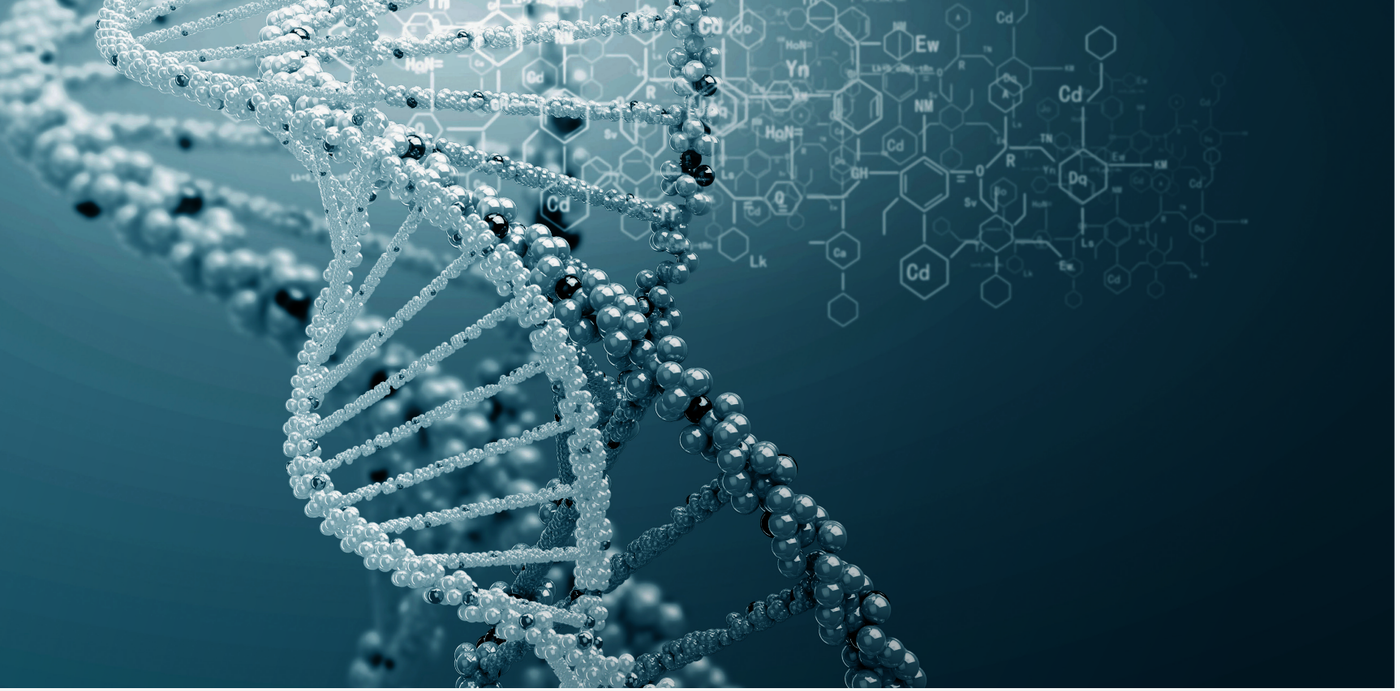
The Prüm convention is a central pillar of efforts to strengthen police and judicial cooperation across Europe in the fight against terrorism and cross-border crime, enabling signatories to exchange DNA profiles and other information from national databases. However, while DNA databases can play an important role in identifying, exonerating and convicting suspects, countries may have very different approaches to gathering, storing and using this data. "For example, the French DNA database has grown quite a lot in the past five years, and around 70 percent of the profiles stored in their national DNA database are from suspects. By contrast, the national DNA database in Portugal cannot hold profiles from suspects – it can only hold profiles from individuals convicted of a crime and who are serving a sentence of three years or more," explains Professor Helena Machado.

Exchange project

As the Principal Investigator of the Exchange project, Professor Machado is probing deeper into the issues around sharing DNA data, including concerns that collecting more data on citizens will lead to the erosion of civil liberties, as well as understanding the role of DNA evidence in the criminal justice system. This work is built on two different yet at the same time complementary approaches. "One part of our work involves conducting interviews in all the EU member states connected to the Prüm network," outlines Professor Machado. The Prüm convention was initially signed by seven EU Member States in 2005 and currently 24 member states are operating in the Prüm network. "We have almost finished our empirical study: we have already conducted interviews with Prüm national contact points in 22 EU Member States," says Professor Machado.

A number of interviews have also been conducted with different stakeholders related to the uses of DNA technologies in the criminal justice system, including representatives of the police and judiciary, as well as forensic geneticists and legal specialists. This formed the basis of a comparative study looking at Germany, the Netherlands, Poland, Portugal and the UK, assessing the views of professionals involved in criminal investigations about the risks and benefits of the Prüm convention. "We're looking at views on the value of DNA in criminal investigation. One interesting point we've found is that professionals working in forensic laboratories tend to have more positive expectations about the impact of DNA evidence in criminal investigation, than the criminal investigators themselves," says Professor Machado.

The staff from national contact points were typically more cautious about the potential impact of the uses of DNA profiles as evidence in an investigation. The individuals from contact points tend to see DNA profiles more as a source of intelligence than evidence. "In general, criminal investigators tend towards the view that traditional forms of criminal investigation are still more important than DNA profiles," explains Professor Machado. While DNA evidence may be just one piece of the picture, forming part of a case, it is often the most heavily highlighted by the media. "If there is a line in the criminal investigation involving DNA evidence, then the media will tend to emphasise that. There is often a much



more complex and nuanced scenario in which other pieces of evidence were assembled and used," says Professor Machado.

There are however other cases in which Professor Machado says DNA evidence can be particularly crucial. "DNA can be very important in certain criminal cases where there is a clear picture of biological samples left at crime scenes, or on victim's bodies like in the case of sexual crimes," she outlines. A well-maintained, rigorous DNA database might help police rapidly identify the perpetrator in these kinds of cases, yet the expansion of data collection, storage, and analysis that enable the rapid sharing of resulting information must be balanced with concerns around protecting individual privacy and the rights of citizens. "Sometimes there is a tension between security and the values of individual privacy and the presumption of innocence," points out Professor Machado. "This is related to the issue of social control and the technological apparatus involved, which holds important implications for our current understanding of genetic privacy and citizenship."

Researchers in the project have also looked at the level of public engagement in discussions around the risks and benefits of the Prüm convention, and the debate about the use of technological systems to monitor citizens. Public legitimacy is essential to the use of DNA databases, a topic central to Professor Machado and her colleagues' work in the project. "In our empirical work we investigated the different national positions in relation to the public debate about forensic DNA databases and public engagement," she outlines. This is a pressing issue in some countries, as governments seek to improve security while also protecting personal privacy. "Citizenship was addressed in terms of public engagement and public trust on the one side. Then on the other, we considered the balance between privacy and security in different jurisdictions," says Professor Machado.

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Privacy and security

The relationship between privacy and security varies according to the legal traditions in different European countries. For example, if the criminal DNA database in a specific country is under the aegis of the police, and in another it is regulated by the judiciary, then they will have different rules and conventions around sharing data. "For example, Belgium is more restrictive in sharing data than France. In recent years, France has moved to a position in which police forces are very active in investigating cross-border crime," explains Professor Machado. "Some of our interviewees claim that the police will exert pressure to get information as quickly as possible, while the judiciary has a tradition of collaboration, which is much slower and which has more safeguards with respect to the exchange of data."

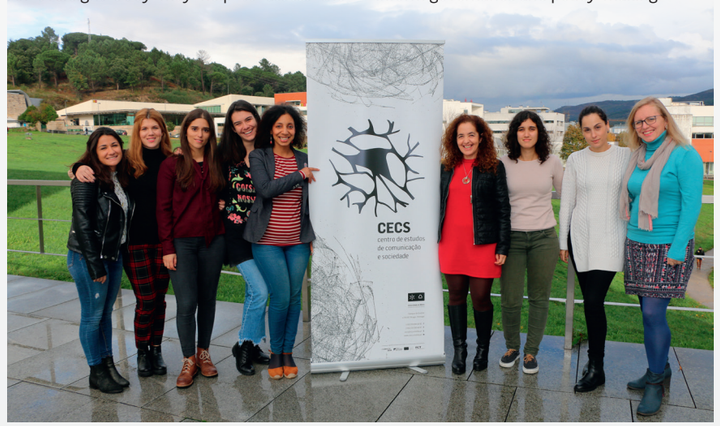
There is a tension here between different traditions and professional cultures, while the political circumstances are another important consideration. For example, in countries where terrorism is a major domestic concern, there may be more of an emphasis on sharing information rapidly. "They will make more effort to speed up information sharing processes and accelerate investigations of serious crimes," says Professor Machado. The police in some countries have also acquired new investigative tools, partly in response to growing concerns around the level of serious criminality. "One clear example is the use of forensic DNA phenotyping. This is a technology that has the potential to allow scientists to infer physical appearance from DNA samples and to provide intelligence to the police about the probable externally visible characteristics

of the suspect – like hair, skin, and eye color," explains Professor Machado.

The use of forensic DNA phenotyping is highly controversial in many countries, as observers argue that it represents a serious risk of discrimination against vulnerable ethnic groups when they generate statements about the likely race or ethnicity of criminals. However, it is in use in some jurisdictions and this represents a significant shift in forensic genetic technologies, says Professor Machado. "This is just one instance of the differing positions of stakeholders across European countries on the type of data that can be held on citizens and the way in which it can be used," she says. There are also many other points of divergence. "Stakeholders across European countries have different positions and priorities in relation to the fight against crime. They also have different levels of economic resources, different institutional arrangements related to the incorporation of science at the service of justice, as well as diverse traditions related to regulation, protection of data, and ethical oversight of criminal DNA databases," stresses Professor Machado.

A trans-national oversight body may be required to deal with the complexities and differences arising from the way data is shared between countries under the Prüm convention, believes Professor Machado. An oversight body may help to assess the efficiency and efficacy of the data exchange, but also could be approached in situations of irregularities which affect data-subjects – those individuals whose data is exchanged. It is up to each country to decide the basis on which they will share data automatically; however, tensions between countries may emerge once a match has been identified. "When there is a DNA match then a case proceeds according to national legislation and judicial practices. Some tensions may arise between countries which are more eager to have quick information exchange – and countries that do not necessarily prioritise exchanging data for those trans-national cases," outlines Professor Machado.

The project will make an important contribution in these terms by helping to build the foundations of shared practices at a trans-national level. National police and judicial forces need to share information to deal with cross-border crime and terrorism, underlining the wider importance of the project's work. "It is absolutely essential to establish trans-national practices and regulations with respect to the best practices to conduct this kind of sharing and exchanging of data," stresses Professor Machado. "It is really important to continue with this dialogue between different professions and disciplines. In the project we hope to obtain results that inform governance and policy-making."



EXCHANGE

Forensic Geneticists and the Transnational Exchange of DNA data in the European Union: Engaging Science with Social Control, Citizenship and Democracy

Project Objectives

The EXCHANGE project seeks to address the challenges to citizenship, democracy and social control posed by technological systems of surveillance and control of criminality and terrorism. The EXCHANGE project focus on the particular role of forensic genetics technology in the implementation of an 'area of freedom, security and justice' in the European Union.

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Contact Details

Professor Helena Machado
University of Minho
CECS (Communication and Society Research Center)
Institute for Social Sciences
Campus de Gualtar
4710-057 BRAGA
Portugal
T: +351 253 601 752
E: hmachado@ics.uminho.pt
W: http://exchange.ics.uminho.pt

Professor Helena Machado

Helena Machado is Full Professor of Sociology at the University of Minho, Portugal. Her research critically engages sociology and social studies of science and technology to explore the challenges emerging from the uses of genetics in contemporary modes of management and control of crime. Helena's current work focus on the transnational surveillance operated by sociotechnical systems for exchange of forensic DNA data and intelligence information in the EU. She is author of more than 180 academic works. In 2015, she was awarded a Consolidator Grant from the European Research Council (ERC).

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