

Ethical Controversies of Familial Searching: The Views of Stakeholders in the United Kingdom and in Poland

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Abstract

Familial searching is a technology that detects genetic relatedness. The term is generally used to refer to searches conducted in criminal DNA databases to identify criminal suspects through their connection with relatives. Beyond criminal investigation purposes, familial searching might also be used for the identification of unknown bodies and missing persons. The United Kingdom and Poland are cases that illustrate the variability of familial searching meanings, uses, and regulations. In the United Kingdom, familial searching is regulated by exceptionality and is mainly used for the identification of suspects in serious criminal cases. In Poland, familial searching is regulated within the framework of expanding the scope of its application to the search and/or identification of missing persons. Drawing on interviews with diverse key stakeholders in the United Kingdom and Poland, we

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address the ethical controversies of familial searching in the field of criminal investigation and in the domain of missing persons together. We argue that the views of stakeholders about the ethical controversies of familial searching lead to prescribing specific notions of social risks, public good, and the accountability of the state.

Keywords

familial searching, criminal investigation, missing persons, DNA technologies, United Kingdom, Poland

Introduction

Based on the assumption that DNA is inherited and that members of biologically related families share variable amounts of genetic material, a technique called familial searching has been developed to detect genetic relatedness. Familial searching is a term that generally refers to searches conducted in criminal DNA databases to identify criminal suspects using their genetic connection with biological relatives. Therefore, familial searching usually refers to a process through which a DNA profile that does not match any other profile contained in a criminal DNA database is subjected to a new analysis to determine whether there are close matches (Haimes 2006). If such partial matches exist, it is probable that the profile obtained at the crime scene or from the victim(s) belongs to a close relative of the person in the database—usually parents, children, or siblings.¹ Therefore, this information might generate new investigative leads, extending the reach of police investigative work (Bieber, Brenner, and Lazer 2006; Gabel 2010; Kim et al. 2011; Maguire et al. 2014; Suter 2010).

In addition to criminal investigation purposes, familial searching might be used to search for missing persons and identify unknown bodies. Among several other technologies and strategies—such as dental records, radiographs, and photographic comparisons—procedures that make use of DNA to match unidentified bodies and/or persons with individuals thought to be their biological relatives are increasingly relevant (Haimes and Toom 2014; Schwartz-Marín and Cruz-Santiago 2017; Scully 2014; Smith 2017; Wagner 2008). Although these uses of genetic tests are rarely framed in terms of familial searching, for the purposes of this article, we shall use the term familial searching to describe the use of techniques that infer genetic

relatedness between the missing—whether they are dead, disappeared, murdered, or martyred (Smith 2017)—and their relatives.

The aim of this paper is to consider together the ethical controversies of familial searching in the field of criminal investigation and in the domain of missing persons. In particular, we aim to understand the views of diverse stakeholders about the ethical controversies of familial searching. As empirical examples, we explore the narratives of key stakeholders in the United Kingdom and in Poland about the uses of familial searching in their respective countries. The group of interviewees in the two countries includes forensic geneticists, scholars, members of ethics groups, representatives of cooperative units of international police, representatives of national data protection authorities, and members of civil society organizations.

The empirical cases of the United Kingdom and Poland present pertinent examples to address the specific ways in which the ethical controversies of familial searching either emerge and prevail or fade and end (Schouten 2014; Venturini 2010) in each dimension—criminal investigation and missing persons—and in two very different cultural, social, and scientific–technological settings. The mapping of controversies enables opening, at least partially, some of the black boxes of *science in the making* (Latour 1987), in a process that reveals its flexible structure, dynamics, and contingencies (Schouten 2014, 24). Controversies might display a constant fluctuation between states of solidity and fluidity (Schouten 2014, 24; Venturini 2010). Taking into consideration how controversies are inscribed within a series of elements that transcend its specific field of operation (Barry 2012, 325), exploring the views of distinct stakeholders about familial searching through the concept of controversies implies investigating the continuous construction, deconstruction, negotiation, and reconfiguration of acceptable and nonacceptable uses of familial searching as part of the meaning production process (Schouten 2014; Sperling 2008; Testa 2008). Furthermore, such an understanding of controversies also enables us to interrogate the different elements that compose the social construction of notions such as social risks, public good, and the accountability of the state (Jasanoff and Kim 2015) in United Kingdom and Poland.

Despite the similarity of the technical procedures in the application of familial searching in the field of criminal investigation and in the domain of missing persons, the social science analyses of the implications of the two spheres have thus far been separated and framed differently (Smith 2017). In this article, we go beyond this separation and address the ethical controversies of familial searching in the field of criminal investigation and in

the domain of missing persons together. We guide our study through the following unexplored questions: how are ethical controversies surrounding familial searching in criminal investigation and in the domains of missing persons framed in the two different cultural, social, and scientific–technological settings of the UK and Poland? How do ethical controversies relate to specific notions of social risks, public good, and the accountability of the state?

This article proceeds as follows: in the first part, we briefly outline the debate about ethical controversies of familial searching in the field of criminal investigation and in the domain of missing persons. In the second part, we present details about the different legal, historical, and operational regimes of DNA databases and familial searching in the United Kingdom and in Poland. In the third section of this article, we analyze our interview material and argue that the views of stakeholders about the ethical controversies of familial searching correspond to prescribing specific notions of social risks, public good, and accountability of the state in each country (Jasanoff and Kim 2015).

Ethical Controversies of Familial Searching

Social science debates about the use of familial searching in the field of criminal investigation have critically addressed the far-reaching implications of familial searching for genetic privacy, the reproduction of social inequalities, and dominant notions about the intersections between family and crime (Bieber, Brenner, and Lazer 2006; Haimes 2006; Murphy 2010; Suter 2010; Williams and Johnson 2006). Concerns over the right to genetic privacy have arisen because the relatives of people whose profiles are stored in forensic DNA databases might be involuntarily and unwarily involved in criminal investigations (Epstein 2009; Greely et al. 2006; Thomas 2006). In addition, the threats to genetic privacy relate to the potential of familial searching to conflict with the right to (not) know about the (in)existence of biological ties (Suter 2010).

When addressing the reproduction of social inequalities, some authors have argued that the use of familial searching in criminal DNA databases tends to further aggravate the criminalization of the social groups most affected by the action of the criminal justice system (Epstein 2009; Greely et al. 2006; Kim et al. 2011). Finally, by focusing on genetic relatedness to search for potential suspects, familial searching also risks further aggravating dominant discourses that point to the alleged prevalence of criminality in certain families (Haimes 2006).

A growing body of literature has been explaining how family and victim groups, humanitarian organizations, states, and criminal courts are increasingly calling upon forensic science—particularly DNA technologies—to assist in the identification of and search for missing persons (Haimes and Toom 2014; Wagner 2008). The positive outcomes of DNA identification in this particular context tend to be framed by a humanitarian rationale (Scully 2014). This type of endeavor is generally considered as enabling the “dignification” of both the dead and the living (Gandsman 2012; Garibian 2014; Moon 2013); it also allows forms of making sense and the resignification of past and present-day human atrocities to be constructed (Schwartz-Marín and Cruz-Santiago 2017). In this sense, DNA identification in the field of missing persons tends to represent a mechanism for (re)constituting democracy—that is, certain modes of governance, justice, and accountability—through the biology of the victims (Smith 2016).

As Vaisman (2018) argues, making use of the genetic material of relatives to identify the missing demonstrates “the strong intertwining of persons across generations and within kinship networks” (p. 7). Nevertheless, so far, the debate over the domain of missing persons has been focused mainly on the symbolic treatment of corpses by societies affected by mass violence (Anstett 2014) and on the practical provisions of establishing guidelines regarding appropriate practices when dealing with bones, bodies, victims, and families (Scully 2014). Ethical controversies associated with DNA identification in the civil domain have only recently begun to be explored in the literature. These few contributions have highlighted how the bioethics of DNA-based civil identification should consider incidental findings related to unexpected genetic relationships and/or health risks, criteria of confidentiality and access to DNA databases, and the potential risk of the geneticization of personal identity and that of the family, as well as the kinds of potential repercussions for victims and families (Haimes and Toom 2014; Scully 2014).

Familial searching used in criminal investigation and in the search and/or identification of missing persons and unidentified bodies uses the same technique—in the way that genetic information from family members is used to identify a certain person. However, its actual practices are different and raise different ethical controversies and societal implications. One fundamental aspect for explaining the differences between the two cases is that of consent. In the case of criminal investigations, suspects, those convicted, and other people of interest provide samples for a criminal DNA database due to a judicial/police request/decision (Machado and Silva 2015, 820). On the basis of such a criminal database, the potential suspect could be

identified based on the hypothesis of the relatedness of people created by the use of familial searching. In the case of missing persons, DNA samples are generally voluntarily provided by families to facilitate the search and identification of their missing relatives. There are, therefore, two kinds of different issues related to consent at stake (Holm 2015; Machado and Silva 2009). Firstly, there is an issue from the side of relatives providing their own DNA samples. In the case of familial searching used for criminal investigation, the informed consent about the intended and future uses of the contributed DNA is somehow blurred: did donors willingly consent to the use of their biological materials to prosecute their family members criminally? In the case of missing persons, family members tend to willingly and voluntarily provide samples aimed at searching for their missing relatives. Secondly, the consent of the person identified through familial searching also occurs differently within criminal investigation and missing persons cases and implies diverse consequences. Since the dead do not have rights in the same sense as the living, the implications of identifying a dead missing person have a different ethical weight than that of a living missing person who did not want to be found and/or an unknown potential criminal.

To sum up, the debates on the use of familial searching within the fields of criminal investigation and missing persons have been framed and discussed in a variety of ways. In this article, our aim is to consider the ethical controversies of both uses of familial searching together. Different ways of reasoning help us to interrogate more clearly the views about the ethical controversies of familial searching that are presented by different stakeholders in the United Kingdom and in Poland.

Familial Searching in the United Kingdom and in Poland

The United Kingdom is considered a pioneer in the application of familial searching in the domain of criminal investigation. The use of familial searching follows a long tradition of collecting and storing DNA profiles and samples in a database for forensic purposes. Established in 1995, the United Kingdom National Criminal Intelligence DNA Database (NDNAD) is believed to be the oldest national forensic DNA database. According to the latest data available, it holds 8.8 percent of the population of England and Wales (Reed and Syndercombe-Court 2016). In 2002, the United Kingdom was the first country to implement familial searching for criminal investigation purposes using the NDNAD (Haimes 2006; Prainsack 2010). According to the NDNAD Strategy Board Annual Reports, 210 familial searches were conducted between 2009 and 2017.²

As a nation-state that holds one of the world's largest DNA databases, the United Kingdom has been dealing systematically with the societal effects triggered by various ethical controversies concerning the massive social implications linked to the size and scope of the criminal DNA database (Human Genetics Commission 2009; Nuffield Council on Bioethics 2007; Skinner 2013). These experiences have stimulated the development of stricter regulation to protect citizens' rights and, by extension, have also motivated particular governance forms aimed at responding to certain needs for stronger public accountability (Jasanoff 2005).

Nowadays, the system of oversight of the NDNAD is formed by a partnership of boards and appointed experts, including (but not restricted to) the NDNAD Strategy Board³ that provides governance and oversight over the operation of the NDNAD and the National Fingerprint Database; the UK NDNAD Ethics Group that provides independent advice on ethical issues; the Biometrics Commissioner whose role is to keep under review the retention and use by the police of DNA samples, DNA profiles, and fingerprints; and The Forensic Science Regulator that ensures that the provision of forensic science services across the criminal justice system is subject to appropriate scientific quality standards.

The initial absence of an anticipatory governance approach (Harvey and Salter 2012) to the uses of familial searching in the United Kingdom led to an open debate that introduced wrenching legal, social, and ethical questions (Nuffield Council on Bioethics 2007, 78-79) such as the following: when is it ethically acceptable to use the NDNAD to conduct familial searches? Which system of oversight should be implemented? How can the criminal justice system address such questions in an ethical, accountable, and responsible way? In other words, the regulation of familial searching in the United Kingdom had to find a balance between what might, in certain circumstances, constitute contradictory demands: to ensure that the right to individual genetic privacy would be protected and respected while also mitigating social risks—that is, the question of proportionality that tends to transverse most debates over the use of technologies in criminal justice systems (Nuffield Council on Bioethics 2007, 34).

The Association of Chief Police Officers, the Home Office, the Information Commissioner, and representatives from the Human Genetics Commission have agreed upon the circumstances in which familial searches should be performed and the way in which those results should be integrated into existing investigative procedures (Williams and Johnson 2006). However, the details of this decision are described as “operationally sensitive”

and are, therefore, not available in a public document (Nuffield Council on Bioethics 2007, 78).

The available information about the search and identification of missing persons through familial searching in the United Kingdom is very sparse. The UK Missing Persons Bureau is the point of contact for all missing persons and unidentified body investigations. In addition to providing support and advice to police forces, this Bureau has operated and maintained a Missing Persons DNA Database since May 2010. According to official sources (UK Missing Persons Bureau 2017), the Missing Persons DNA Database holds DNA profiles obtained from personal items belonging to missing persons, as well as profiles gathered from unidentified bodies and body parts. Such profiles are held in the Missing Persons DNA Database that is separated from the NDNAD for criminal purposes. The Missing Persons DNA Database is used solely for checking potential matches between missing persons and unidentified bodies at the request of the police.

According to the UK Missing Persons Bureau (2017), on November 1, 2017, the National Missing Persons DNA Database held 1,922 DNA profiles, 1,625 relating to missing persons and 297 relating to unidentified individuals. The same Bureau reports that since November 20, 2012, of the notified 528 cases, 371 have since been resolved. The information does not clarify, however, which cases have been solved through the National Missing Persons DNA Database nor, more specifically, through the use of familial searching for identifying missing persons and unknown bodies.

A very different scenario regarding the uses and the regulation of familial searching is presented in Poland. The available documentation about the uses of familial searching in Poland is very limited, and most of our data were obtained through interviews with diverse stakeholders. The Polish forensic DNA database, established in 2007, holds 0.12 percent of the population and is managed by the Central Forensic Laboratory of the General Headquarters of the Police (Reed and Syndercombe-Court 2016). Poland does not explicitly regulate familial searching for criminal investigation purposes, but it allows its use for the identification of unknown bodies and missing persons. In this regard, a significant legislative change occurred in 2014. The Police Act of June 26, 2014, established the possibility of introducing DNA profiles of the relatives of missing persons in the national DNA database.⁴ These profiles are stored in a catalogue separated from the DNA profiles for criminal investigation purposes. Before such an amendment to the law, when families were looking for a missing person and wanted to find out if his or her DNA profile was stored in the national DNA

database, the DNA profile would be compared with the DNA database based on a single search. DNA profiles of relatives' data could not be added to the system permanently. The 2014 amendment, however, allows DNA profiles of families to be entered into the database, to be compared permanently.

Based on that amendment, the Foundation ITAKA—Center for Missing Persons—coupled with the Central Forensic Laboratory in Warsaw and with Agencja Interaktywna Esencja Studio established the GeNN *consortium* (<http://www.projektgenn.pl/o-nas/>) that aims to search for long-lost persons and identify unknown buried bodies. Profiles of missing persons are obtained through the genetic material provided by the families of those people who disappeared before the January 1, 2004, and inserted into the catalogue of the national DNA database for missing persons. Such a *consortium*—started in January 2015 and expected to finish by May 2018—aims to tackle the high number of missing persons in Poland and solve some cases. According to the statistics of the Central Police Headquarters, on January 1, 2013, there were 3,628 bodies that were buried without identification. In addition, the number of missing persons, that is, people whose families have reported them as missing and about whom there is no information on whether they are dead or alive, is around 4,400.

Method

This article is based on a larger project that explores the societal, cultural, ethical, regulatory, and political impacts of the use of DNA technologies in the European Union (EU). This study utilizes a multimethodological approach including the collection and analysis of legislation and documentation related to familial searching. Interviews with twenty-five stakeholders in the United Kingdom and Poland were also conducted. The interviewees included forensic geneticists, scholars, members of ethics groups, representatives of cooperative units of international police, representatives of national data protection authorities, and members of civil society organizations. The interviews were conducted under the protocols and procedures of the European Research Council's ethics regulations. Participants were identified by accessing public documents and by using privileged informants. Participants were recruited by e-mail, letter, and telephone.

The script of the interviews covered the following themes: the organization of the provision of forensic genetics services in the country, views and experiences regarding the transnational exchange of DNA data in the

EU, representations of public engagement, and perceptions about the technological development and innovations of DNA technologies such as familial searching. For the purposes of this article, we explore interviewees' views only about familial searching.

Prior to the interviews, all interviewees signed a written informed consent form and agreed to be audio-recorded. The majority of the interviews occurred in the workplace of the participants. The interviewers took notes to help to guide questions in the interview and for reflection after the interview. When the interview was completed, the authors of this paper reviewed their notes and made annotations about issues and items that could be addressed in subsequent interviews and/or analysis. Whenever necessary, an editing process was carried out after the initial transcription to avoid repetition and eliminate interferences that did not add analytical value. The editing was performed without ever undermining the original meaning of the narratives or suppressing the individual voice of the narratives of each interviewee (Poirier, Clapier-Valladon, and Raybaut 1983, 65).

To avoid narrowly framing ethical controversies that center on familial searching, we refer to the term "familial searching" but also identify others that appear to be used synonymously such as "relationship testing," "kinship analysis" (Haimes and Toom 2014), "partial DNA matching" (Thomas 2006), "low stringency search" (Gabel 2010), or "genetic proximity testing" (Prainsack 2010, 29) for the purpose of the analyses. Quotations relevant to the different uses, meanings, and regulations of familial searching were coded and subjected to multiple readings to develop an in-depth understanding of the prevalent notions of ethical controversies in the United Kingdom and Poland. These quotations were systematically compared, contrasted, synthesized, and coded by theme and by thematic category following the principles of grounded theory (Charmaz 2006) and interpreted using a qualitative content analysis approach (Mayring 2004). In this paper, we analyze the replies that were considered by the two authors as illustrating the thematic category that emerged from the content analysis.

Empirical Analysis

The United Kingdom: Regulating through exceptionality. The use of familial searching in high-profile criminal cases is not typically contested currently in the United Kingdom, but the scenario during the early stage of the use of this investigative technique was quite different. The first uses of familial searching in the United Kingdom occurred without prior debate involving

stakeholders outside the operational context of police work (Williams and Johnson 2006). One of our interviewees, a member of a civil society organization, described how the lack of accountability increased concerns that were publicly voiced by several stakeholders about familial searching in the United Kingdom at the time this technique was initially implemented:

When it [familial searching] was first introduced, there weren't any guidelines on when the police could use it, and so they got criticized because of the potentially arbitrary nature of deliberately found out familial relationships. (...) So, I think the first lesson maybe is having a debate about the techniques, think about when it's to allow their use, if at all. (05)

The most salient aspect that emerges in the interviewees' views in the United Kingdom is how they describe the passage from the emergence of controversies around familial searching to its fading and ending (Schouten 2014; Venturini 2010). According to participants, such a transition was mainly anchored on the operation of what we call "regulating through exceptionality." Taking into consideration that the circumstances under which familial searching are conducted are described as "operationally sensitive" and are, therefore, not available in a public document (Nuffield Council on Bioethics 2007, 78), on the basis of key stakeholders' narratives, we define the meaning of exceptionality in terms of three main dimensions: seriousness of the crime, assessment of resources, and mandatory oversight.

The first criterion of "exceptionality" explores the particular circumstances of the crime, that is, the type of crime and kind of social risks it generates. Based on the idea that familial searching cannot be used in *any* criminal case, there was a need to determine which criminal cases would be considered "exceptional enough" to be potential candidates for the use of familial searching. According to one member of an international police force, familial searching is currently operational in the United Kingdom precisely because its use is restricted to criminal cases that are considered to be serious social risks:

The familial searching works; it works in very limited circumstances in which the law allows it to happen—and those are the most serious cases including murder, rape, serious sexual assault. It works. (04)

According to the interviewee quoted above, familial searching therefore "works" in a responsible manner, that is, restricted to serious criminal cases. This view is anchored by the assumption that this investigative technique is

proportional, inasmuch as professionals are forbidden from using it in an unregulated way (Sperling 2008), that is, in any kind of criminal case. As simply stated by another participant, a forensic geneticist, “familial searching is not an everyday event” (10).

However, the criterion of exceptionality does not imply that every serious criminal case will immediately be considered a potential candidate for familial searching. The seriousness of the crime must be linked to a second criterion, which involves a detailed process of assessing resources by justifying the need and by committing to the pursuit of the criminal investigation. In this sense, besides being a type of crime that is demonstrably serious, the criminal investigators must also have explored other possible criminal investigation methods as far as possible, and those must have proved to be unhelpful for that particular criminal case. Criminal investigators must also commit their availability and willingness to spend time and human and economic resources reviewing the list of potential candidates that familial searching may generate. In other words, to be considered exceptional, the criminal case must target a serious crime, lack any other viable approaches to criminal investigation, and be conducted with an awareness of the resources it might require. As one provider of forensic services summarized:

In the United Kingdom, there’s a very detailed process of justifying the need but also justifying that he would have a benefit. (...) You’ve got to be prepared to demonstrate, if you search [the NDNAD] and you get back a thousand names, you’ve got to do something with a thousand names. So, Chief Officer asks to sign to “this is an investigation that is resourced and sufficiently serious that a familial search should be undertaken.” (01)

Although these criteria might first seem to be objective categories, the “seriousness of the crime” and the process of “assessment of resources” are fluid notions. To control this, each time a familial searching is commissioned, it requires individual permission. According to a member of an ethics board, the individual assessment allows familial searching to be positioned as ethically robust, through case-by-case decision-making instead of being an automatic procedure:

Given the individual decision making rather than the automated processing (...), I think there’s always a tendency of concern when one moves from individual judgement to automated decision making. (02)

All of these criteria for eligibility to use familial searching in criminal investigation converge on the third dimension of the operationalization of exceptionality: the obligatory oversight system. Such a system is in line with the regulations that also examine and regulate other uses of the NDNAD through a combination of boards and appointed experts. In addition to ensuring individual decision making, this system serves two other main interrelated purposes: one is connected to the need to ensure a democratic procedure, as different professionals and stakeholders might provide their expert opinions and bring a variety of skills, interests and arguments to the debate (Venturini 2010). In this sense, the regulation of this investigative technique in the United Kingdom was constructed to be representative of variable contributions. In this regard, the NDNAD Strategy Board was believed to be able to represent diverse interests and to scrutinize the decision-making process (Nuffield Council on Bioethics 2007, 78).

The second reason to implement a system of oversight relates to the need to provide a formal response to governance structures involved in public accountability. Besides allocating the decision-making process to a diverse set of professionals, the NDNAD—as an oversight body that reviews the applications for familial searching—also guarantees that the process is transparent to accommodate potential public interest. In this sense, the NDNAD Strategy Board annually publishes the number of familial searches conducted in the database (for more information, see, <https://www.gov.uk/government/collections/dna-database-documents>). This “open” positioning aims to reinforce the responsible governance of information, trust, and transparency in ways that (re)build the public trust and credibility of institutions (Hedgecoe and Martin 2003). According to the following interviewee, who was professionally associated with data protection regulation, familial searching does not constitute an ethically problematic issue provided that some type of supervision and systematic oversight is guaranteed:

[Familial searching] it's not an area which causes me huge and immediate concern. (...) I do think the retention of information and the supervision and care with which you actually supervise and regulate databases is absolutely vital. (03)

The current regulatory framework of familial searching in the United Kingdom is perceived by different stakeholders—ranging from police officers to members of ethical commissions—as a trustworthy resolution in line with the priorities of the criminal justice system, democratic decision-making, and public accountability. In particular, these regulations ensure

that public goods—such as citizens’ safety—are protected, social risks are mitigated, and state accountability is guaranteed. As the following quotation from a member of an ethics group explains, the current lack of debate on familial searching is perceived as an outcome of the fact that the controversies surrounding it faded out in an ethically robust manner:

I think that familial searching at the moment is not being really discussed because I think it works very well. (...) The very few cases where it is used, it’s used with caution, it’s used well. And, I think that for this reason we don’t have a debate about it at the moment. (06)

Familial searching is therefore described as occurring under strictly circumscribed conditions overseen by a diverse set of professionals and within a transparent framework. Therefore, the scenario of what we call “regulation by exceptionality” that emerged from initial ethical controversies separates what is serious enough from what is not, what could be solved through other investigative leads from what cannot be, and from what is generally ethically acceptable and what is not. In other words, this regulatory framework defines the stipulated limits of privacy, confidentiality, equality, and (the presumption of) innocence within the bounds of a particular criminal case, thus fading and ending controversies surrounding the use of familial searching for criminal investigation purposes.

While the use of familial searching for criminal investigation is widely acknowledged by the several stakeholders interviewed in the United Kingdom, its application in the field of missing persons tends to be scarcely referenced. As the following quotation from a forensic geneticist explains, while the possibility of using genetic technologies to identify the missing is acknowledged, there is an overall uncertainty about its concrete operational use:

My understanding is that there is a capacity now for [searching] missing persons on the DNA database (...) it is something that has been spoken about on numerous occasions but never actually sort of materialized. (...) Every police force finds dead bodies. (...) And there was an initiative to have this sort of set on the database. (...) So, I do not know how far it has got. I know that in the past, it was started but never really got anywhere. (10)

Among our interviewees, there is, therefore, a widespread lack of information about the Missing Persons DNA Database, established in May 2010 and managed by the UK Missing Persons Bureau. Interviewees hardly refer

to it and generally have little knowledge regarding its practical application and uses. Among our interviewees, the use of familial searching in the domain of missing persons therefore tends to emerge as a less relevant issue in the cultural, social, and scientific–technological UK situation. By contrast, by framing serious crimes as imminent social risks, the resolution of criminal cases through familial searching is displayed as a matter protecting the public good and responding to pressing national concerns. In addition, the fading and end of controversies around the use of familial searching for criminal investigation purposes is perceived as dependent on a policy and regulatory framework accountable to the state. Such a type of regulation is conceived as a characteristic of the UK’s nationhood (Jasanoff 2005) and is therefore translated into concrete forms addressing the familial searching regulatory framework in the United Kingdom.

Poland: Regulation through expansion. Interviews with stakeholders in Poland reveal that although there is familiarity about the risks and potential benefits of familial searching for criminal investigation, the general feeling of the interviewees is that there has never been any controversy. Familial searching for criminal investigation purposes is considered to be a nonissue in Poland. In other words, it is a controversy that has not been initiated (Venturini 2010). As explained by one forensic geneticist: “We didn’t even have a discussion about this [familial searching in criminal investigation] in Poland, so I don’t think there is a problem, really.” (01)

Other respondents consider that the use of familial searching for criminal investigation is a nonissue in Poland mainly because there has not yet been a public debate about it. As one legal scholar explained:

This [familial searching in criminal investigation] is really, probably the most important, or most difficult problem to solve. Because it is very useful, it helps the police. On the other hand, we can use this information to link some other people who are not suspects and sometimes they wouldn’t agree to that. (. . .) This is rather a problem of ethics (. . .) I think that, so far, it hasn’t been a problem here in Poland (. . .). Perhaps, when we have more cases, perhaps it will cause some dispute or discussion. (02)

While stakeholders in Poland see the use of familial searching in criminal investigation as a controversy that has not yet begun, its application in the field of the search and/or identification of missing persons was widely acknowledged and referred to during interviews. In this regard, several interviewees referred to the implications of the legislative change in

2014. This change facilitates the inclusion of the DNA profiles of families looking for their missing relatives into the DNA database in a catalogue separated from the one dedicated to criminal investigation. A forensic geneticist directly working with the identification of missing persons explains:

Before 2007 we did not have a database. Our database is very young. (...) Before this [law amendment] we could not register these profiles [from relatives], and in 2014 our law changed, and we currently register the [profiles of] missing persons and the [profiles of] relatives in our database, and this is the reason why now the missing person and the relatives are our routine work. (...) This is a very important, big difference. (11)

According to participants, such legislative change opened the possibility of reducing the significant number of missing persons and unknown buried bodies in Poland. This situation is perceived and described in most interviews as a particular issue in this country. As explained by a member of a civil society organization, the possibility of storing relatives' DNA profiles into the national DNA database and the use of DNA technologies to search for the missing might increase the number of identifications:

But I also hope that this change of the DNA database will help. (...) Because the DNA identification will work really well and we will not have in Poland so many unidentified corpses, because that number is enormous—it was close to 4,000 bodies but each year new ones come. (...) So, I hope this law changes, with the storage of DNA marks it will solve this big problem in Poland, because it's really huge—like, when I was talking to people with other countries, they do not have this problem with unidentified bodies. (03)

Despite being perceived as a beneficial initiative toward the identification of missing persons and unidentified bodies, such a scenario is not exempt from ethical controversies. In cases regarding the identification of missing persons—that is, persons who, voluntarily or not, have disappeared—doubts might remain concerning the situation that led to a certain person's disappearance. This creates a context prone to ethical controversies in the domain of the uses of familial searching for the identification of missing persons. As the same interviewee previously quoted explains, the reasons behind being missing could range from being the victim of a crime to voluntarily and deliberately cutting social relations with family, friends, and acquaintances. Therefore, the interviewee reflects on how uses of

familial searching for the missing might pose ethical controversies due to the lack of consent of the persons who are being searched:

The only issue is that some of them don't want to be found. And, some of them made the decision because of bad circumstances in their families. (. . .) We are publicizing a lot of personal data, [which] in some cases, could cause some problems for that person, especially if this person is not willing to have contact with the family. (03)

Despite recognizing how certain ethical controversies related to the non-consent from the person being searched might emerge, the search and identification of missing persons through DNA technologies—such as familial searching—is perceived by most participants as having mostly positive outcomes (Scully 2014). According to the majority of our interviewees, this kind of endeavor enables the “dignification” of both the dead and the living (Moon 2013) because relatives are no longer uncertain about the whereabouts of their missing loved ones. The identification of the missing—whether they are dead, disappeared, murdered, or martyred (Smith 2017)—allows (re)connecting living persons and bodies with their social relationships and identities (Schwartz-Marín and Cruz-Santiago 2017) in ways that put an end to families' liminality of uncertainty (Haimes and Toom 2014). Such kinds of positive outcomes are outlined by several interviewees, as the quotations from two forensic geneticists directly involved with missing persons cases describe:

It is very important for us that families that are looking for relatives will have the answer for their question, that for many years they have lived without information about their relatives. (11)

They [team of forensic experts] took the samples and there was the identification with the families. So, DNA technologies, I think, in that case was put in the point that it is good and helpful. (01)

With such a humanitarian rationale (Scully 2014), the use of familial searching through DNA therefore offers a faster and more efficient identification of people, especially if they are found dead. According to a representative of a civil organization: “Quite often—fifteen to twenty percent—of missing persons are found dead. And sometimes, in a lot of cases when they are found dead it's not possible to identify them by other means. Just DNA.” In the perspective of this participant, ethical controversies of

familial searching in the domain of missing persons thus balance the risk of surveillance against the benefit of identification of missing persons:

There is always a discussion about if it is ok to store somebody's data in a database. Some [people] say that it's excessive control of citizens. For us, there can be only good things from this because they [DNA technologies] are really efficient to end the searching [for missing persons] and to solve it. (03)

Poland offers a provocative and telling example of the different *rationales* underlying criminal investigation and missing persons and the respective negotiation of ethical controversies regarding the application of familial searching in these two distinct fields. On the one hand, the use of familial searching to identify criminal suspects is considered to be a nonissue in Poland. It is a controversy that has not yet emerged. On the other hand, identification of missing persons through familial searching is framed as representing a public good that might overcome the potential ethical controversies. Consequently, there is an implicit and explicit intent to expand the scope of this tool by using it increasingly to assist in the identification of missing persons.

In a country such as Poland, which has been historically affected by the disappearance of its people (Colls 2016), familial searching offers the promise of identification. Suggesting that biological samples and bodily remains can help the identification of missing persons and unidentified bodies and end families' uncertainty provides DNA technologies, particularly familial searching, a particular meaning and moral worth (Testa 2008). The ethical controversies of searching for someone who does not want to be found and/or the social risks of increasing citizens' surveillance through the expansion of the use of familial searching are mitigated by the possibility of providing a sense of closure to relatives searching for their missing family members (Haimés and Toom 2014; Schwartz-Marín and Cruz-Santiago 2017) and by the aim of reducing the number of missing persons—whether they are dead or disappeared—in Poland. The confidence in the power of DNA to disclose identity thus offers an attempt to respond to pressing national concerns and alleviate complex social–historical problems such as identifying misidentified corpses and guaranteeing relatives “the right to know” (Garibian 2014). DNA technologies, and particularly familial searching, are thus framed within an “architecture of repair and reconciliation” (Ferrándiz 2013) that contributes to the resignification of both the past and the present (Moon 2013). In the particular case of Poland, the identification of the missing has an overall political appeal and is

conceived as a characteristic of the nationhood of Poland. In this sense, a DNA-led approach to the identification of the missing is imagined as a kind of science that serves the public good and contributes to the establishment of a democratic and accountable state (Smith 2016).

Conclusion

Based on the collection and analysis of legislation and documentation related to familial searching and on a set of interviews conducted with key stakeholders in the United Kingdom and Poland, this article explores the ethical controversies of familial searching in the fields of criminal investigation and missing persons. By making use of the notion that controversies might be flexible and dynamic and might also display a constant fluctuation between states of solidity and fluidity (Venturini 2010), two major inter-related dimensions were outlined.

The first relates to the variability of the meanings of familial searching, uses, and regulations across different sociopolitical contexts. Data show that in the United Kingdom, familial searching is considered to be an “exceptional” investigative technique mainly associated with the identification of criminal suspects. In Poland, the uses of familial searching are mainly regulated by expansion, which aims to extend the scope of the application of this technique in the identification of the missing and restitution of closure to families. The differentiated use of familial searching across different domains and for various purposes thus demonstrates the extent to which this investigative technique holds transformative potential and is constructed by multiple ethical rationalities.

Our data also show how familial searching prescribes particular notions of social risks, public goods, and accountability of the state (Jasanoff and Kim 2015). The elements that coproduce the different ways of perceiving ethical controversies about familial searching entail the following aspects in a fragmented and complex way: the weight of sociohistorical and technological backgrounds, the influence of distinctive forms of state accountability, and the contingent and circumstantial character of what is considered in each society to be the socially legitimate uses of genetic technologies. In the United Kingdom, a country with one of the world’s largest criminal DNA databases that has been dealing with controversial societal implications, the focus is on regulating familial searching to be used in exceptional criminal cases that cause great social harm. Regulations that frame citizens’ safety as a public good to be protected prescribe that this investigative technique should be used only in criminal cases

considered serious, difficult to solve by other investigative means, and selected and overseen by a regulatory body accountable to the state to reinforce the public trust.

By contrast, in Poland, a nation historically affected by the disappearance of people and one that only more recently has begun to invest in the establishment and consolidation of a criminal DNA database, the main focus of familial searching is centered on missing persons. The identification of the missing is framed as an ethically uncontested public good. Acts that identify the missing are accepted as state interventions that result in modes of governance and justice that are aligned with the establishment and the consolidation of an accountable state. These concepts contrast with the uses of familial searching for criminal investigation purposes. Although considered by the interviewees to be potentially useful for criminal investigations, this investigative technique remains an ethically unresolved issue in Poland.

Framing the ethical controversies of familial searching in its multiple iterations through a binational comparison thus outlines important tensions and juxtapositions. In the United Kingdom, public good is best understood as addressing exceptional criminal cases and, in Poland, as addressing the societal issue of missing persons and the related historical traumas. By extension, in these two uses of familial searching, the benefits and risks for those contributing DNA are quite different: a family member who agrees to a missing persons search does so voluntarily and receives a direct benefit; in a criminal context, contribution is often coercive, and the benefit is not direct or can even harm the family through stigma and criminalization. Looking at both kinds of familial searching and conducting cross-national comparison reveals that an forensic DNA database and its attendant technologies aren't uniform across sites. The prevailing notions of social risks and public goods around the use of a DNA database are dependent not only on national context but on the multiple kinds of uses to which it is put.

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Notes

1. In addition to familial searches conducted using preexisting criminal DNA databases, genetic relatedness between individuals can be inferred on the basis of DNA profiles collected in massive screenings—or DNA dragnets (Thomas 2006). In brief, massive screenings are exceptional procedures that involve collecting DNA samples from "volunteers" who are members of a certain population to search for potential suspects among that population's members. For a critical perspective of the uses of this technique, see Ossorio and Duster (2005).
2. National DNA Database documents available here: <https://www.gov.uk/government/collections/dna-database-documents> (last accessed on January 3, 2019).
3. The Strategy Board comprises representatives of the National Police Chief's Council, the Home Office, the DNA Ethics Group, the Association of Police and Crime Commissioners, the Forensic Science Regulator (or her representative), the Information Commissioner's Office, the Biometrics Commissioner (or his representative), representatives from the police and devolved administrations of Scotland and Northern Ireland, and such other members who may be invited.
4. There is also one other genetic DNA database in Poland: the Polish Genetic Database of Victims of Totalitarianism (www.pbgot.pl), created in 2012 and supported by the Pomeranian Medical University in Szczecin and the Institute of National Remembrance—Commission for Prosecution of Crimes against the Polish Nation. The aim of this database is to identify the remains of unidentified victims of Communist and Nazi totalitarian regimes. This is an autonomous database—not connected to the Polish forensic DNA database mentioned in the article—that contains genetic information on material collected during exhumations, genetic information from relatives of victims of totalitarian regimes, and historical and archaeological data (Ossowski et al. 2016). The empirical findings of this article do not correspond to this database.

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