

# Affected for good or for evil: The formation of issue-publics that relate to the UK National DNA Database

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## Abstract

The United Kingdom has a long tradition of collecting and storing DNA data for criminal identification purposes. The development of the UK National Criminal Intelligence DNA Database has been accompanied by public controversies. Building on recent developments in Science and Technology Studies on public engagement, we elaborate on the concept of emergent and co-produced issue-publics. We explore which different types of issues affect and mobilize publics along the historical development of the National Criminal Intelligence DNA Database, and how publics take shape alongside the institutionalization of regulatory and governance solutions. We identify three related issue-publics: a ‘biological citizen issue-public’ concerned with human and civil rights regarding the collection of biological material; a ‘watchdog issue-public’ that emerges to identify the problems surrounding a lack of civic accountability; and a ‘co-decision making issue-public’, including the stakeholders who advise on decisions relating to the database.

## Keywords

emergent publics, forensic DNA database, issue-publics, the UK National Criminal Intelligence DNA Database

## 1. Introduction

‘I had been wrongfully arrested. When I attempted to take the tube at Southwark station on 2005-07-28, police officers found my behaviour suspicious and decided to stop and search and subsequently arrest me as a potential terrorist’.<sup>1</sup> ... ‘They then took me to Walworth police station. They processed me. They took photographs, DNA samples, fingerprints and palm prints’.<sup>2</sup> ... ‘Policing in London and what happens to innocent individuals when they encounter the police became one of my special interests, and I have researched, written and campaigned on civil and human rights issues such as the National DNA Database and the stop and search powers’.<sup>3</sup>

In 2013, David ‘Panda’ Mery was diagnosed with Asperger’s syndrome, which belongs on the spectrum of autism. On his blog *gizmonaut.net*, he writes that this diagnosis helped him to

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reinterpret the traumatic experience of being wrongfully arrested in 2005 and to understand that his typical autistic behaviour was the reason that he was considered suspicious by the arresting police officers. It was not until September 2009 that the London Metropolitan Police apologized for his wrongful arrest. In the meantime, David 'Panda' Mery became a blogger, writer and activist engaged with human rights issues that relate to the UK National Criminal Intelligence DNA Database (NDNAD).

The United Kingdom has a long tradition of collecting and storing DNA data in a database for criminal identification purposes. The NDNAD, set up in 1995, is the oldest such database in the world. The Criminal Justice and Public Order Act of 1994 established the NDNAD, expanding the type of offence and widening police powers.<sup>4</sup> Cumulative legislation supported expansion of the NDNAD:<sup>5</sup> The Criminal Justice and Police Act of 2001 allowed all samples collected to be retained indefinitely, irrespective of whether the person had been acquitted. Another amendment also allowed samples from volunteers taking part in mass screenings to be retained indefinitely. The Criminal Justice Act of 2003 extended police powers again to allow DNA samples to be taken without consent from anyone arrested in suspicion of any recordable offence, rather than on charge, and to keep this information indefinitely. Widening the scope for police to collect and retain DNA samples from suspects has served the aim of expanding collection of the profiles contained in the NDNAD in order to capture a discrete population of 'active criminals' and place them within a closed circuit of surveillance (Williams and Johnson, 2004). Thus, the NDNAD quickly grew to be one of the most extensive DNA databases in the world, with police powers expanded to create what has become known as the 'maximum surveillance society' (Norris and Armstrong, 1999).

In a country that has traditionally experienced broad public controversy regarding contested technologies, development of the NDNAD did not remain unremarked.<sup>6</sup> The so-called 'S. and Marper' case has become the key reference in the United Kingdom, in terms of what is associated with redefining core human rights in relation to criminal forensic DNA databases. A 19-year-old named in court only as 'S' was arrested for attempted robbery in January 2001 when he was 12, but was cleared 5 months later. Michael Marper was arrested in March 2001 and charged with harassing his partner, but the case was later dropped. Their fingerprints and DNA were taken and added to the NDNAD. After their release, they applied for the removal of their profiles, but their applications were rejected by the British Appeal Courts. The issue of concern was the inclusion criteria of genetic material in the NDNAD, which allowed retention of the profiles of persons who were arrested but not convicted of a crime.

This criminal case was decided by the European Court of Human Rights, which held that holding the DNA samples of individuals who are arrested but later acquitted or who have had the charges against them dropped is a violation of the right to privacy under the European Convention on Human Rights.<sup>7</sup> The S. and Marper case caused a significant public debate about human rights (Downey et al., 2012), and the European court forced the NDNAD to destroy the samples of non-convicted people. Although a single case became the prominent milestone for addressing and stimulating new regulations of the human rights issues relating to the NDNAD, individuals such as David 'Panda' Mery, who became engaged in writing and campaigning about human rights issues, contributed to the articulation of collective public problems. Social groups too became concerned with these same problems, such as Liberty and Privacy International,<sup>8</sup> human rights organizations that had financially and legally supported the defendants in the S. and Marper case.

The history of the NDNAD provides the research puzzle to our study. The development of the NDNAD was historically accompanied by the evolution of different regulatory solutions to respond to issues previously raised as public concerns (Williams and Wienroth, 2014). The NDNAD's current regulatory embedding – with adjusted legislation and regulatory bodies set up to safeguard genetic privacy – has not only substantially contributed to the perceived success of NDNAD

(Amankwaa and McCartney, 2018), but also structured and maybe limited the way in which public concerns can be raised. The aim of this article is to explore the emergence of and co-production between the articulation of public issues by the people who are affected and concerned about forensic DNA retention and the NDNAD, and the regulatory and governance solutions that evolved to address specific issues. Drawing on an analysis of policy documents and a set of interviews with stakeholders in the United Kingdom, we address the following questions: What issues are articulated as matters of public concern that relate to the NDNAD? How does the formation of such issues of public concern co-evolve with regulatory and governance solutions? As the oldest DNA database in the world, the NDNAD has always been a 'model' for other countries developing DNA databases (Johnson and Williams, 2007). We assume that studying the role 'model' can provide insights for studying forensic DNA databases and their issue-publics elsewhere.

We begin by developing our argument based on a brief literature review of previous studies on the relationship between the public and the NDNAD, and we argue that previous studies apply a limited view of the public. We instead propose to draw on the recent Science and Technology Studies (STS) literature on public engagement, which is dedicated to studying issue-publics. Its focus lies on how collective problems or issues create publics, namely mobilizing the people who are 'indirectly and seriously affected for good or evil [who] form a group distinctive enough to require recognition' (Dewey, 1927: 35). We reconstruct historically how publics accompanying the NDNAD were created by assembling along particular matters of concern and in the interplay with the institutionalization of regulatory and governance solutions dedicated to addressing such issues. We differentiate waves of issue-publics' articulations and the regulatory and governance solutions to address these issues that occur in their aftermath.

### *Moving beyond conventional approaches to the public understanding of forensic genetics*

Previous research on the public understanding of forensic DNA databases and forensic genetics in the United Kingdom has focused on what issues publics perceive as matters of concern. Williams and Johnson (2004) differentiate between the following three types of representations of DNA, which they detect across the UK's societal stakeholders' views: concerns regarding the types of information that are contained in DNA samples and profiles, the governance of research based on these retained materials and the possible future uses to which they may be put. The distinct representations of DNA that are apparent in stakeholders' views affect public evaluations of forensic technologies and DNA databases. By investigating stakeholders, these scholars studied the players who can substantially shape public discourse and demonstrated how diverse views come into being provoked by the same technology; thus, these scholars identified the different fundamental positioning that we can find in the public controversies that accompanied the development of the NDNAD. A snapshot of the perceptions of UK's general population of the place, role and significance of forensic DNA technologies are similar to the stakeholders' fundamental positions identified by Williams and Johnson according to Wilson-Kovacs et al. (2012). Amankwaa (2018) presents the most recent review of studies on public perceptions of forensic DNA retention in the United Kingdom and around the world. He concludes that scant research has been conducted which explores the primary stakeholders who are well informed or directly exposed to the benefits, challenges and risks associated with DNA retention. The author proposes that this lack is in particular interesting, because his review suggests that views diverge between criminal justice professionals and other members of the public, the first in favour and the latter against expansive views on DNA retention. What previous studies have in common is a glimpse into particular populations' views of

forensic genetics – such as lay citizens and stakeholders (Williams and Johnson, 2004; Wilson-Kovacs et al., 2012) or young people (Anderson et al., 2011; Stackhouse et al., 2010). These studies lack a historically sensitive approach which understands publics and their issues, but also how publics are enabled to articulate issues of concerns as situated and dynamically shaped by their respective regulatory context.

Building on the co-production-oriented public engagement research in STS, that is, understanding publics and participatory collectives as relational and systemic within wider technoscientific, social and political orders, we aim in this article to contribute to the academic debate on multiple and contingent publics' understandings and engagements with forensic genetics.

## **2. Studying the emergent 'issue-publics' of forensic DNA databases in co-production with regulatory and governance solutions for these issues**

In this article, we propose to benefit from the conceptual propositions that have been derived from recent developments in STS research on publics and public engagement with science and technology. The 'object-centred' turn and the 'co-production' turn have both contributed to a particular approach to studying the formation of issue-publics (Marres, 2005; Marres and Lezaun 2011; Michael, 2017; Wynne, 2007 see the conclusions section), which has been used to study public engagement, for instance, with energy transition (Chilvers and Longhurst, 2016) or power plants (Asdal, 2011). The term issue-publics serves to describe emergent groupings involved in making an issue of something that is publicly contested. We apply this approach to an empirical field in which little public engagement in institutionalized forms occurs. But as we argue, diverse emergent issue-publics take shape in co-production with the manifestation of specific regulatory and governance solutions that aim to address such issues, which again structure spaces for public engagement.

The 'object' turn in the STS literature on public engagement follows the focus on 'object-centred politics' (Barry, 2001; Gomart and Hajer, 2003) by suggesting that more attention should be paid to the objects or issues of participation (Marres, 2005). Noortje Marres, who pays tribute to Lippmann and Dewey, proposed that it is issues, not collectives per se, that call a public into being. This proposition implies two consequences: first, no issue and no contestation means that no public is sparked into being; and second, *issues* that affect and mobilize people and *things* can create issue-publics, which address issues that existing institutions cannot accommodate (Marres, 2005).

Marres' notion of issue-publics is similar to what Mike Michael (2009) called publics-in-particular, for example, those publics that have an identifiable stake in particular scientific or technological issues or controversies and which emerge alongside them. Yet, we understand Marres' perspective on issue-publics as distinct with regard to its interest in reconstructing the relations and contingencies of issue formation on one hand and the emergence and evolution of issue-publics as the material implications of issues on the other hand (Michael, 2017).

Thus, public involvement in politics can also serve to settle such issues. For Marres, STS can be normative in calling the political processes that are dedicated to issue formation essential for democratic processes, because established institutions cannot settle issues sufficiently. Therefore, public involvement is needed, but public involvement that is understood in a way that publics are enacted through their entanglement with issues.

The second 'co-productionist' turn in the STS literature on public engagement focuses on the emergent, relational and systemic forms of publics and public engagement. Instead of understanding publics as given, generalized and static and public engagement as discrete 'events' at particular sites, a relational and systemic STS approach differs in at least three aspects. First, this approach

takes inspiration from co-productionist theoretical resources that have been developed across contemporary STS research.<sup>9</sup> Mobilizing a co-productionist perspective then focuses on how publics shape (and are shaped by) technoscientific, social and political orders (Chilvers and Kearnes, 2016: 15). Second, publics are understood as contingent and heterogeneous collectives, which makes them a provisional accomplishment. Third, analytically, co-productionist studies of publics and their engagement have developed the notion of exploring overlapping sites and histories of the co-productions of publics and public reason (e.g. Jasanoff, 2012).

Accordingly, our first conceptual proposition for the study of the publics of forensic DNA databases moves the perspective to the articulation of issues and public matters and how the emergence of issue-publics affected by them contributes to the articulation of such issues. Our second analytical proposition focuses on the contingent forms of emergent and potentially dissolving issue-publics concerning forensic genetics and their co-production with technoscientific, social and political orders. For the purpose of this study, we focus on the co-production of the regulatory and governance solutions that are dedicated to the NDNAD and the retention of DNA data, which evolve according to publicly defined issues. This approach underscores the issues that have created particular publics by articulating them in relation to human rights, governance and the accountability of DNA databases, as well as the social and ethical implications of political decisions concerning the internationalization of DNA databases and technological innovations as collective problems.

### 3. Methods

Our study is inspired by a historical reconstructionist approach which serves to portray waves of public issue articulations and the regulatory and governance solutions to address these issues that occur in their aftermath. The historical approach provided us with indications of co-production, for example, which publicly articulated issues impacted new regulation and governance and themselves caused repercussions on the formation of particular issue-publics. To reconstruct the patterns of diverse emergent (and potentially dissolving) publics, we began with the repertoire of conceptual propositions on issue patterns and the articulation dynamics of the publics relevant to the field of forensic DNA databases, and we underwent an iterative process of pattern matching and abduction to arrive at a stable interpretation (Yin, 2011).

The following empirical analysis is based on interviews and is complemented by an analysis of selected documents. Data include policy documents and legislation, as well as documents from the stakeholder's organizations that are identified as relevant in the way that they configure the role of publics and citizens affected by DNA databases and forensic genetics, such as guides, reports, comments on legislation, and so on. Data from seven semi-structured stakeholder interviews were compared with the documents. Six interviews were conducted between March 2016 and June 2018 during fieldtrips in the United Kingdom face-to-face, one as a Skype interview. Although this is a small sample, its composition is based on the selection criteria of assembling three actor groups relevant to the reflection of NDNAD's emergent issue-publics. Selected stakeholders comprise people who are (a) from regulatory bodies, for example, custodians of the NDNAD who govern and control it (one interviewee), (b) appointed to (ethical or scientific) oversight bodies (four interviewees) and (c) follow forensic DNA databases' developments because they have stakes in specific related public issues, such as civil society organizations engaged with human rights (two interviewees). The sample is assumed to be sufficiently diverse to represent a characteristic variety of views across such groups. For the purpose of this article we selected respondents' reflections on their practical engagements with the NDNAD, its historical evolution and governance, social and ethical dimensions of DNA databases, and affected publics and public debates. The selected materials of quotations were subjected to multiple readings to develop an in-depth understanding of the

interviewees' views on the evolution of public concerns and their relationship with regulatory solutions. Quotes were systematically compared and contrasted and coded by theme and by thematic category in order to find stable patterns for interpretation regarding the development of different issue-publics. In this article, we present the replies that both authors agreed upon as illustrative for particularities of each pattern of issue-publics that emerged from the analysis.

#### 4. Empirical analysis

##### *Reframing proportionality: Human rights of the biological citizen at stake*

The first emergent issue-public that we portray here constitutes persons directly affected due to having their biological material in the database. The prominent *S.* and *Marper* case, outlined earlier, serves as this issue-public's signifier. The case has been covered broadly in both the media<sup>10</sup> and the literature<sup>11</sup> and has significantly contributed to the reconsideration of the principle of proportionality. Thus, *S.* and *Marper* is the biggest achievement of this issue-public and has added legal authority to its claims which regulators could no longer ignore. The public debate and legal dispute shaped how the human rights issues relating to forensic DNA databases became widely understood in the United Kingdom. The extensive growth of the NDNAD raised issues regarding privacy, the retention of the DNA profiles of minors, and potential discrimination against minority and vulnerable groups. The latter have accused the police of racial profiling that has resulted in an overrepresentation of Black people in the database.

Permanent retention of DNA from children was rejected. Civil society organizations such as Genewatch objected to this retention. Genewatch campaigned against an over-emphasis on genetic explanations that relate to criminality and downplaying of social and cultural factors. Also objecting to the retention of children's DNA were the civil rights group Liberty, Black Mental Health UK, a lobbying group concerned about Black families and mentally ill people in the database, Action and Rights for Children, NO-ID, a group that opposes ID cards and Privacy International, which campaigned for the right of privacy and data protection. Slogans such as 'Reclaim your DNA' were used to mobilize the potentially affected publics.<sup>12</sup> The opposition between calls for universal databases, and a Human Genetics report that identified 'disproportionate' retention of the DNA of innocent people, resulted in a month of intense media coverage of the database in September 2007 (Downey et al., 2012).

Only the final ruling in the *S.* and *Marper* case and its subsequent implementation in the Protection of Freedom Act in 2012 as a regulatory response served as its conflict resolution. Since then, UK law has clarified that people who have been arrested for but are not charged with imprisonable offences must have their DNA profiles removed from the NDNAD within 3 years.<sup>13</sup> Furthermore, conditions for the destruction of stored samples were regulated, and profiles of non-convicted individuals were removed. In addition, conditions for the retention of DNA profiles of children were further clarified.

The *S.* and *Marper* case provided a landmark to orient the possibilities and limitations of using forensic DNA, as the following quote of a professional within the Forensic Services illustrates:

Certainly, about DNA, we know about that [responding to the interviewer's question about challenges to human rights by forensic DNA databases] more in the UK through the *Marper* case than anyone. [...] I mean, this is a balance between protecting society and the rights of the individual. (D01)

As a civil society actor quoted below suggests, publics became sensitized to critical human rights issues that relate to the inclusion criteria of the NDNAD in a particular context of



deconstruction and demystification of the government's selling promises regarding security and justice. The window of regulatory opportunity is perceived as occurring due to the work of civil society organizations, which had shaped the emotional setting of political expectations:

So, the [S. and] Marper case is so far, of course, very significant, but it took place in a context [...] where the government had assumed that they would be able to say, by the time of the case, that they had solved lots of crimes [...] and that there was massive public support for the expansion. But in reality, we've managed to demonstrate in government figures that they had not solved more crimes, and there was a lot of public disappointment. So, that helped creating the political space also to [...] the decision to implement because, as you probably know, the UK doesn't always implement a decision of the European Court. (D04)

Extensive media coverage of the S. and Marper case brought the topic of human rights and the principle of proportionality that relate to the NDNAD into the minds of people not directly affected. In a time of increased deliberative citizen engagement experiments regarding emerging technologies and controversial policy issues in the United Kingdom (Voss and Amelung, 2016), initiatives occurred to invite mini-publics to reflect on the challenges that were posed by forensic DNA databases. In 2008, a citizens' jury conducted a mock trial of the NDNAD in Wales at the Cardiff Crown Court (Anderson et al., 2011; Stackhouse et al., 2010). During the same year, a citizens' inquiry into the forensic use of DNA and the NDNAD was commissioned by the Human Genetics Commission, the Department for Innovation, the Universities and Skills' Sciencewise programme, the Wellcome Trust, the Economic and Social Research Council, the Council Genomics Policy and Research Forum, and the Policy, Ethics and Life Sciences Research Centre (PEALS). The Citizen's report derived from this inquiry recommended a response to the public's demand for more information on the functioning and goals of the UK's database (Murtuja et al., 2008).

Rights of suspects became configured distinctly from the rights of convicted offenders whose DNA retention in the NDNAD became widely seen as legitimate (Nuffield Council on Bioethics, 2007; Parry, 2008). In contrast, retention of DNA samples and profiles of non-convicted individuals had been controversial, because there was little data to justify retention (Human Genetics Commission, 2009). By focusing on the regulations of the inclusion criteria, which are primarily determined by policing activities, the NDNAD configures specific affected publics; that is, the NDNAD is discriminatory towards specific types of crimes and particular groups of suspects. This discrimination caused some public debate on the non-proportionate representation of Black people in the database (Skinner, 2013). The decision in favour of the deletion of samples from the database also caused resistance and rejection among criminal investigators and the police (Walker, 2008).

Because of the emergent issue-public that advocated a reconsideration of the human rights under threat by the NDNAD, the framing of the issues at stake had shifted. The proportionality between individuals' personal rights to bodily integrity, privacy and data protection compared with society's right to obtain sufficient protection from potential criminals was redefined (Tseloni and Pease, 2011; Wienroth et al., 2015: 101). In addition, the police's suspected arbitrary use of DNA data collection and their accused misconduct in criminal investigations – which particularly affected Black men – was explicitly targeted (Downey et al., 2012).

The NDNAD, thus, developed from disagreement and politicized conflict as the following quote of an interviewee illustrates:

The evolution of that database is a reflection of the way that new technologies have often been implemented. You know, something is introduced, there is a challenge to it on one ground or another, the court says: 'Ok, you probably cannot do that', and the government then tries either to comply to the rule or find a way around it. So, contentions, I suppose, would be one good word to sum up the evolution of it. (D07)

Advocates for the right of self-governance for the ‘biological citizen’ in the context of criminal investigation enforced biological citizenship rights as integral to the canon of human rights. This in turn shaped how issue-formation related to the NDNAD has since been referred to. After opening up a controversy by adjusting regulations, issues were resolved for the time being.

### *Calling for watchdogs to ensure public trust: The matters of civic accountability and transparency*

The NDNAD’s contribution to possible miscarriages of justice and the ethically contested status quo of legislation also raised issues concerning the accountability and transparency of institutions within the criminal justice system. Single calls to control the institutions of the criminal justice system in general and calls to control the retention, collection and use of forensic DNA data in particular began to be heard in the early 2000s. Voices from academic scholars, independent expert commissions and parliamentarians – which we call here a ‘watchdog issue-public’ – articulated the need for accountability and transparency. Williams and Johnson (2008) outlined in a differentiated manner their view on the necessity of following contemporary principles of governance. They refer to civic accountability in the context of the custodianship and governance of the NDNAD to propose structures and processes that are open, transparent and responsive to the wider civil society within which they operate. These scholars emphasize the following:

While issues of civic accountability have not been ignored, they have occupied a marginal role in structuring and informing the organization and uses of the database. (p. 136)

The proposal to strengthen civic accountability quickly became synonymous with the organizational idea of installing an oversight body, which was recommended by various commentators. The House of Lords Select Committee on Science and Technology (2001: para 7.66) suggested: ‘the government should establish an independent body, including lay membership, to oversee the workings of the National DNA Database, to put beyond doubt that individuals’ data are being properly used and protected’. The Human Genetics Commission (2002: 153) called for establishing an ‘independent body, which would include lay membership, to have oversight over the work of the National DNA Database custodian and the profile suppliers’.

At stake was finding a new balance among different institutions such as the Home Office, police and state, and private providers of forensic services, and installing control mechanisms to make them publicly accountable. In 2007, the Nuffield report, which aimed to address the ethical issues of the forensic use of biometric information, made a clear statement that called for a governance and ethical oversight system to address these issues. Such a regulatory system should tame, among other pressing challenges, the privatization of the Forensic Science Services and rapid growth of the private forensics market (Nuffield Council on Bioethics, 2007: 91; Williams and Johnson, 2008: 139).

The ‘watchdog issue-public’ differs from the ‘biological citizen issue-public’ not only in its constituents but also by the means through which it assembles as a joint issue-public. The constituents are expert commentators, who have closely observed the development of the NDNAD over time and are thus informed about its progress. They constitute a joint issue-public by articulating their views in policy reports and academic writings and thereby refer to one another’s statements to echo their relevance and multiply their audiences. Their outreach targets the insider community of policymakers, public administration managers and police forces, on one hand, and scholars who are interested in forensic genetics and DNA databases, on the other. They advocate for considering ethical and social implications as a part of civic accountability and thus argue for openness,



transparency and the inclusion of lay public members in the oversight of the governance of the NDNAD.

Governance responses to public demand occurred iteratively as the following interviewee, a spokesperson of a civil society organization, recalls: 'The evolution over time has kind of added more oversight, really, as things became controversial, so, a little bit later and not in a very organized way' (D04). Over time, what is expressed in the following quote of an interviewee who was involved in the oversight system became the common view:

I don't think there's ever going to be a consistent public view. But what people, those that are suspicious, require is at least the feeling that the issues are being addressed and that there are some limits being put on things, and some proper oversight, that I believe firmly. (D03)

The development of oversight must be understood in the aftermath of the emergence of the previously introduced biological citizen issue-public, contextualized by the repercussions of the S. and Marper case. In 2009, The UK government published a consultation document in response to the S. and Marper decision (Home Office, 2009). The document reported that participants in the consultation showed strong support for the destruction of all DNA samples after profiling and criticisms of the insufficiency of the data available on the efficacy or effectiveness of the NDNAD. The government sought to balance public interest and civil liberties by establishing an extensive governance system with oversight bodies and reporting procedures. The NDNAD Strategy Board, the Ethics Group of the NDNAD, which reports to the Strategy Board, and the Biometric Commissioner were created by a Home Office initiative. The Ethics Group was created in 2007 as a response to previously mentioned calls for civic accountability (Lynch et al., 2008: 143). The Ethics Group's purpose, as stated in their terms of reference, is 'to advise Ministers on ethical issues concerning the NDNAD'.<sup>14</sup>

The prior aim of the Forensic Regulator, a role created in 2008, was to ensure the scientific quality of the forensic science service provision in response to concerns over the technical reliability of the NDNAD and changes and problems in the provision of forensic science services<sup>15</sup> (Nuffield Council on Bioethics, 2007; Williams and Johnson, 2008). Furthermore, the Forensic Regulator's objectives include '[m]aintaining and enhancing public confidence in the quality and reliability of forensic science in the CJS [criminal justice system]' and therefore 'to deal with complaints from stakeholders and members of the public in relation to quality' (Forensic Science Regulator, 2010). The Commissioner for the Retention and Use of Biometric Material (the 'Biometrics Commissioner') plays an oversight role for the police and reports to the Home Office. Although this role was mentioned in the earlier Protection of Freedom Act, it was formally established only in 2013.

As oversight bodies, the above institutions were installed to address accountability and transparency issues. As 'independent' expert authorities, the Biometric Commissioner and the Forensic Regulator shall contribute to advising the Home Office (2016: 14). The NDNAD Ethics Group was installed to report to the NDNAD Strategy Board (Home Office, 2016). Their reports shall inform 'the public' for transparency reasons, and Parliament receives the Biometric Commissioners' annual report. These institutions shall serve as intermediaries between the government and what is often conventionally conceptualized as 'the general public' or 'civil society', an idea of the citizenry or lay publics distinct from or antagonistic towards government and the state. Terms such as 'transparency', 'public confidence' and 'public trust' accumulate in explanations of the missions to which these new bodies are assigned. They oversee the technical and legal compliance within police forces of their use and retention of biometrics (the Biometric Commissioner), ethical implications that relate to the NDNAD (the Ethics Group of the NDNAD) and accuracy of the conformance to scientific forensic standards (Forensic Science Regulator). Ethical issues that relate to

transparency and accountability became stepwise delegated to oversight bodies, which were introduced to provide juridico-scientific, administrative and, to a certain degree, civic accountability.

### *Co-deciding on DNA technologies: The rise and institutionalization of an unusual issue-public*

Once installed, the oversight institutions developed a life of their own and have come to constitute a distinguishable third issue-public. Established as a consequence of the issue articulations of the two previously introduced publics and respective regulatory and governance responses, authorized by appointment and with a predefined mandate, we portray an exclusive and professionalized ‘co-decision-making issue-public’. This issue-public addresses issues derived from ongoing policy agendas shaped by actors from government and actors interested in technology innovation of forensic genetics. The particular approach of oversight institutions to such political and technical issues is not only to represent and anticipate public concerns but also to stimulate the wider public debate through reports and statements. Topical developments at stake for this issue-public include the political debate to opt in or out from the transnational automated European DNA data exchange (McCartney, 2013; Wilson, 2016), regulations under the Prüm Decisions and recent technological innovations in forensic genetics such as phenotyping, familial searching or Massive Parallel Sequencing.

Referring to the stakeholders who advise government as an issue-public may challenge the conventional understandings of publics, since they may be perceived as not clearly distinguishable from state authorities. Nevertheless, we argue that as ‘independent’ installed oversight institutions with a commissioned responsibility for the issues that relate to accountability and transparency towards the public, they have the authority to co-decide and negotiate what ‘counts’ as public matters. For instance, the government’s rationale behind the governance of oversight entities puts the role of the Forensic Science Regulator clearly in the context of transparency and accountability due to the intended ‘process of independent assessment [that shall provide] an accountable and transparent process that strengthens public trust’ (Home Office, 2016: 14). Furthermore, the Home Office emphasizes the independence and public responsibility of the Regulator: ‘Although sponsored by the Home Office, the Regulator is a public appointee and operates independently of the Home Office (2015), on behalf of the criminal justice system as a whole’ (p. 1).

As intermediaries between (civil society) publics and state authorities, oversight institutions have the means to channel and moderate public issues. The following quote of an actor within the oversight landscape emphasizes his interest in conflict resolution and achieving consensus as a major motif of his role:

So, I have a longstanding interest in how conflicts [...] are resolved in public space and how the values of society are articulated to government. [...] Within that [our meetings], supporting from the critical environment [...] enables us to come to full consensus – which we do, strangely enough, on main areas of activity in the past. (D02)

As a ‘co-decision making issue-public’, these actors have privileged access to the insights into the routine work of executive powers of the police and regulators. Installed as public representatives, these actors must anticipate public security and individual privacy and data protection rights. For instance, the role of the Biometrics Commissioner is partially dedicated to exploring ethical aspects of the NDNAD and its use by the police. An important task of the Biometrics Commissioner is to respond to individual requests concerning the lawfulness of particular cases of retention. As an oversight institution to the police, the Biometrics Commissioner also facilitates a function that

helps to gain public acceptance of police activities and to counter public scepticism and suspicion as the following quote illustrates:

As the time has passed the police have become both more accepting of the new regime but also actually more accepting of the role of somebody overseeing it. Because, I think, they [police forces] feel [...] that the fact that they can say ‘Well, look, we are actually being overseen by someone [referring to the Biometrics Commissioner role] who’s entirely independent’ makes it easier for them to deal with public criticism and so on. (D03)

Single actors of this issue-public indicate the capacity to self-organize of wider publics based on the available public information on the NDNAD, as the following example demonstrates:

So, those who are interested can be informed, and there is sufficient information out there. I think most of the public do not really want to get into the detail, but they would if somehow they were affected by it. And if so, there is the information out there in the public domain. (D06)

Alternatively, these actors also partly reject greater responsibility for public engagement and refuse to comment on the available information, to avoid public concern, as the following quote clearly illustrates:

And do I think that we have a bigger obligation than we already do, that we are already exercising to engage the public in discussions on topics? I think no, because I don’t think we need to be.... [...] Well, almost everything we do that is not classified, and most of the stuff we do is not classified, it’s online, if somebody has an interest, he can get all information. [...] And in a way, I think if people are not concerned, they shouldn’t be told they should be concerned. (D05)

We can see that wider publics are perceived as being unengaged. Accordingly, this final issue-public can be characterized by a certain alienation from the ethical and social issues that were addressed by the previous issue-publics. By being commissioned and authorized to accompany selected policy agendas, such specialist oversight bodies have gained a monopoly on negotiating and configuring the publics’ affectedness of the more complex and demanding issues. They have consequently contributed to marginalizing what counts as matters of concern. Thus, the empirical analysis closes with the observation that the institutionalization of issue-publics in this case serves to structure, professionalize, but also to select and channel how issues can be addressed and discussed as public matters.

## 5. Conclusion

In this article, we sought to answer the following questions. What issues related to the NDNAD are articulated as matters of public concern? How does the formation of issue-publics co-evolve with regulatory and governance solutions?

We have identified three waves of issue-publics. The first is a ‘biological citizen issue-public’, concerned with human and civil rights that relate to retention of DNA in the NDNAD and consisting of the people who are directly affected because their biological data is held in the database. The second wave is the ‘watchdog issue-public’ that emerged to identify the problems of a lack of civic accountability and transparency in the criminal justice system. The watchdog issue-public has called for a governance solution that installs oversight bodies to accompany criminal justice institutions in charge of operating the NDNAD. The third wave is a ‘co-decision-making issue-public’ that developed as a consequence of the other two issue-publics and is made up of those engaged in

advising and counselling on decision-making that relates to the NDNAD. The ‘co-decision-making issue-public’ includes the people placed in ‘independent’ positions to oversee NDNAD-related activities and consult state bodies in their governance of forensic genetics and the NDNAD. They articulate issues that relate to the social and ethical implications of recent technological innovations and the political agenda.

An examination of the history of the database indicated that the public articulation of issues impacted the development of new regulatory and governance solutions, which themselves had repercussions for the formation of certain issue-publics. Regulatory and governance responses evolved from the articulations of earlier issue-publics. These responses either settled issues through new legislation, which resolved the problem and resulted in the dissolution of the issue-public in its existing form, or passed the issue-formation to newly installed oversight institutions for the police, state and science institutions. The latter form of professionalization and institutionalization restricts the articulation of issues to a predefined arrangement of stakeholders restricted by their mandate. We saw how each of the three issue-publics use different ways to structure issue-formation and articulate issues as public matters. They either (a) open up and politicize issue-formation by using legal means to enforce positions, (b) problematize the status quo and circulate solutions by reiterating alternative regulatory accounts or (c) channel and de-politicize issue formation by selecting issues to be finally resolved on demand of the appointed authorities.

Approaching the co-production of issue-publics and governance responses in the context of the NDNAD in the United Kingdom demonstrates how vivid and meaningful issue-formation through issue-publics has been in creating and adjusting socially and ethically robust regulatory solutions for the NDNAD. Yet, this study also demonstrates how the effects on issue formation of differently institutionalized issue-publics potentially limit public issue-formation by structuring and channeling how issues can be addressed as public issues.

Our findings also serve to problematize and emphasize the limits of an institutionalized oversight system – manifested by the co-decision-making issue-public – as the focus of an institutional design that instrumentally assists policymaking actors. Dedication to providing a means to reach weak or strong justifications for decision-making implies a commitment to closing down plural public views. Thus, this type of issue-formation opposes forms of issue-formation dedicated to substantially opening up the debate to alternative reasonable solutions. The issue-formation enforced by the biological citizen issue-public and the watchdog issue-public called for substantive changes to the status quo.

Our analysis should not be misunderstood as a fundamental critique of particular issue-publics and types of issue-formation surrounding the NDNAD. Instead, it should be seen as a recommendation not to privilege one or the other, but to attend to the diverse enactments of publics. This means to pay attention, first, to the pluralism of publics of forensic DNA databases and forensic genetics, plural regarding their social values, disciplinary perspectives and stakeholder interests. Second, it means to address how academic analysis and discussion, as well as policy practice, can more symmetrically attend to issue-formations that serve closing down and opening up.

The pattern of issue-publics found in the context of forensic genetics could stimulate further research on issue-publics across jurisdictions and across political cultures. Furthermore, our insights on emergent issue-publics, what mobilizes them, and how the interplay of different issue-publics with regulatory responses can result in the dissolution of problems as public issues might contribute to the academic debate on emergent publics more broadly, since the publics identified here can be seen in many situations, and not only in forensic genetics.

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## Notes

1. David 'Panda' Mery (2015).
2. David 'Panda' Mery (2009).
3. David 'Panda' Mery (2015).
4. The Act changed the rules around collecting tissue samples by reclassifying saliva samples and mouth swabs as non-intimate and changing the circumstances in which a non-intimate sample could be taken without consent. The Act also gave police the power to speculatively search the database for matches between DNA profiles. It changed the rules around the type of offence, from any serious offence to any recordable offence, which greatly widened the pool of suspects. The law stated that if a person was subsequently found guilty, their information could be stored on the database and their sample kept indefinitely; if they were not charged or were acquitted, the data and the sample had to be destroyed.
5. Cumulative legislation supported the continuous expansion of the NDNAD, namely the Criminal Procedure and Investigations Act of 1996, the Criminal Evidence (Amendment Act) of 1997, the Criminal Justice and Police Act of 2001, the Criminal Justice Act of 2003, the Criminal Justice (Northern Ireland) Order of 2004, the Serious Organized Crime and Police Act of 2005 and, finally, the Counter-Terrorism Act of 2008 (Nuffield Council (Williams and Johnson, 2008; on Bioethics, 2007).
6. One case which attracted public attention was that of teacher Philippa Jones, who was arrested in 2005 following allegations of assault. Ms Jones launched a high-court action for a declaration that the taking of her fingerprints and DNA – after the Crown Prosecution Service decided not to prosecute – was unlawful. In March 2006 the High Court decided that she won the right to have her DNA sample and fingerprints destroyed. She should have been released expeditiously once this was the case and so her continued detention to obtain samples was unlawful, and thus the samples were taken 'without appropriate authority'. Had they been taken before the decision not to prosecute, the samples would have been lawful and retained as normal under the rules at the time.
7. In 2008, the European Court of Human Rights asserted that the retention of fingerprints, cellular samples and DNA under the circumstances of the *S.* and *Marper* case was contradictory to Article 8 of the European Convention on Human Rights, the right to respect privacy and family life.
8. Several civil society groups have campaigned on issues that relate to the NDNAD as portrayed later in this article.
9. These resources include actor network theory (Callon, 1986; Latour, 1987), assemblage theory (Irwin and Michael, 2003) and studies of the constitution of social and political orderings (Jasanoff, 2004).
10. For a comprehensive study of the media coverage that accompanied the NDNAD, see Downey et al. (2012).
11. Regarding the *S.* and *Marper* case's impact on the legal interpretation of the 'principle of proportionality', see, for instance, Tseloni and Pease (2011) and Wienroth et al. (2015); regarding its impact on the human rights that were granted in the following retention regime in the United Kingdom, see McCartney (2012).
12. The initiative is briefly portrayed by the Metamorphosis Foundation for Internet and Society. Available at: [http://metamorphosis.org.mk/en/arhiva\\_arhiva/reclaim-your-dna-from-the-uk-database/](http://metamorphosis.org.mk/en/arhiva_arhiva/reclaim-your-dna-from-the-uk-database/) (accessed 26 April 2018).
13. Home Office (2013): Protection of Freedoms Act 2012: how DNA and fingerprint evidence is protected in law.
14. The NDNAD Ethics Group's role changed in 2016 with the new National Forensic Science Strategy, which defined a wider role for the Ethics Group as part of an enhanced governance of the forensics system. It was replaced by the Biometrics and Forensics Ethics Group in 2017.

15. A government-owned company in the United Kingdom, the Forensic Science Service (FSS), provided forensic science service to the police forces. The UK government announced the closure of the FSS in December 2010, citing monthly losses of up to 2 million pounds as justification. The FSS closed on March 2012. Forensic work is now contracted out to the private sector or carried out in-house.

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