Prolonging and extending suspicion.

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Prolonging and Extending Suspicion. Categorization and Police Use of the DNA Database in France.[1]

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Use of DNA databases by the police and justice system has risen spectacularly in many countries, particularly in France with the *Fichier national automatisé des empreintes génétiques (FNAEG)* [National Automated DNA Database]. In this context, this article analyzes the relationships between the categorization of criminal perpetrators and suspects, forms of knowledge, and the inter- and intra-institutional power relations related to this use. Our study is based on in-depth semi-structured interviews (N=24), mainly with police officers and gendarmes directly involved in these practices, and on analysis of documents (legal texts, ministerial reports, press articles, etc.). After having presented the techno-scientific and legislative context presiding over these changes, we show, on the one hand, the porosity between the categories of perpetrators, suspects and potential perpetrators, and, on the other hand, the formation of different kinds of suspect bio-identities. We also show that these processes are informed by four logics: 1) a logic of supposed crime prevention by identifying perpetrators as soon as possible; 2) an inter-institutional logic that favors the police over the justice system; 3) an intra-institutional logic linked to professional performance; 4) a probabilistic logic of elucidation aimed at helping police investigations,

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sometimes based on empathy vis-à-vis the victims. These different logics are interconnected and converge to prolong suspicion and extend the scope of the database.

Key words: DATABASE, POLICE, JUSTICE, DNA, SUSPECT

The idea that the body might be used to detect identity and possible danger is not new. In nineteenth-century physical anthropology, the criminal's body was already viewed as an object of first medical and then biomedical knowledge that could contribute to the search for scientific and legal proof of guilt, whether through craniometry[2] or fingerprinting (Aas 2006). Today, however, technologies of the body and genetic data provide answers to questions about people's biological identity that can be communicated far more easily than in the past. In concrete terms, genetic data—referred to as "genetic fingerprints", by analogy with traditional forms of fingerprinting, and now more commonly called "genetic profiles"—are used to compare DNA left at a crime scene with the DNA of an individual known to the police. The use of these DNA profiles is driven by twin dynamics (which it then also drives in its turn): first, the rapid development of genetic approaches and of information technology (Atkinson et al. 2009; Vailly [2011] 2013; Flichy and Parasie 2013); second, the increasing prevalence of security issues in public action linked partly, since 2001, to issues of terrorism (Robert and Pottier 2004). The use of genetic databases by the police and justice system has risen in a spectacular fashion over the last twenty years in many countries (Hindmarsh and Prainsack 2010). This has resulted in the establishment of a particular form of "government of bodies" (Foucault 1983; Fassin and Memmi 2004)[3], which draws on biological technologies to resolve social problems.

This "government" determines a regime of practices in France, which has resulted in the populating of a National Automated DNA Database (the FNAEG). In quantitative terms, the FNAEG is the second largest database of its kind in Europe after that of the UK. More specifically, in October 2018 a report estimated that the FNAEG included 2.9 million individual genetic profiles (after removing duplicates, i.e. individual profiles registered under different names), and 480,000 unidentified traces.[4] Furthermore, given that the genetic profiles of the people in question are included in the database

[2] Cesare Lombroso, an Italian professor of forensics, tried to detect criminals, believing they belonged to a hereditary class that could allegedly be distinguished based on their physical appearance.

[3] According to Michel Foucault (1983), "government" is defined as a mode of actions upon actions that draws on power relations.

[4] *Rapport d'information sur les fichiers mis à la disposition des forces de sécurité* (2018).

either as convicted offenders or suspects, the system is based on categorizations. In this regard, it is important to underline that, according to the Ministry of the Interior's recurrent official statistics, convicted offenders only make up around 15% of the FNAEG's records, with the much higher proportion of profiles—approximately 75%—concerning suspects who, according to French law, are therefore presumed innocent.[5] The key questions addressed in this article—informed by the sociology of the life sciences and of categorization—can therefore be set out as follows: what roles do social practices of genetics play, in a police or judicial context, when it comes to producing categories for identifying perpetrators and suspects? To what extent is this categorization performative with respect to the identities conferred upon perpetrators and suspects? What are the power relations that have driven these processes and what logics underpin them? In short, our intention is to understand the different relationships between forms of knowledge, inter- and intra-institutional power relations, and categories of identification connected to the FNAEG. More broadly, we shall examine how scientific data transforms social categories.

In a now famous study, Paul Rabinow (1996a) announced the probable formation of new identities and both individual and collective practices based on genetic knowledge. He analyzed the formation of groups of patients around collective identities based on likely susceptibility to a genetic disease, which he called "bio-identities". The older forms of cultural classification (gender, age, race[6]), he argued, would now be "joined by a vast array of new ones, which will cross-cut, partially supersede, and eventually redefine the older categories" (Rabinow 1996a, 103). Since then, moving progressively away from the medical field, certain studies have shown how the life sciences influence classifications and contemporary identity politics, especially in the area of so-called ethnic or racial origin (Schramm et al. 2011). However, despite similarities in the techniques used in the biomedical sphere and in the area of security, the genetic tests used to help establish guilt or innocence differ from those connected to medical practices because they raise very different issues with regard to relationships and forms of belonging: being "predisposed" to an illness, in one case; being identified as part of a criminal procedure in another (Schramm et al. 2011). Rabinow himself had this intuition

[5] Cf. Questions to the Government no. 68468, January 12, 2010, Response of April 6, 2010; no. 6423, October 9, 2012, Response of February 12, 2013; no. 40427, October 22, 2013, Response of August 5, 2014; no.79728, 19 May 2015, Response of 8 December 2015. According to a high-placed official at the Ministry of Justice, these figures should be treated with caution because people's records are entered when they are suspects but not always updated when they are convicted. Nevertheless, the fact remains that the vast majority of people with records in the FNAEG have not been convicted of a crime.

[6] The term race, while broadly used in Anglo-American countries, is less common in other national contexts and has been rejected by the overwhelming majority of geneticists as it does not have biological foundations (Vailly 2017).

insofar as, in a later article, he proposed analyzing "what forms of political analysis, moral reflection and techno-scientific practice are being mobilized by actors (scientists, policy-makers, planners) in shaping—and operating in relationship to—something called biosecurity" (Collier at al. 2004, 3). There is therefore a shift from a medical bio-identity to another, more unexpected, form of bio-identity: from the identity of a person affected by a particular illness to that of a person suspected, or even guilty, of a crime (Keck 2010).

This requires further analysis, however, because, when considered more closely, the term bio-identity can take on several meanings. Paul Ricœur (1990) makes a distinction between two main meanings of "identity", depending on whether it refers to "sameness", the equivalent of the Latin *idem*, used in the case of a comparison (for example in the expression: "two molecules are identical") or to the human self, the equivalent of the Latin *ipse*, used as part of a characterization (for example in the expression: "this person has many identities". However, whereas Ricœur's focus was on the identity of the "self" as a thinking, speaking subject viewed from within, our focus is on the "other" insofar as s/he is classified and viewed from the outside. Unlike Ricœur—and indeed Rabinow—we are not looking at the "I" or the "we" (the speaking subject, the ill patient), but rather at the "you" (the perpetrator, the suspect). In other words, following Richard Jenkins (2000) we are looking not at the "group" recognized as such by its members, but at the "category" ascribed to others that emerges from social practices linked to a form of knowledge/power.

This article provides the first sociological study of the French National Automated DNA Database. Other studies conducted in Anglo-American countries (Cole and Lynch 2006; Lynch and McNally 2009; Williams and Johnson 2005), while extremely valuable, have not focused on analyzing discourses and social issues among the actual actors applying, using, or contesting the law in the day-to-day. Our intention is not only to examine the construction of suspects allowed by legal texts and public policy, but also to understand the effects of the latter on the discourse and practice of state agents (Harrits and Moller 2011). This will allow us to offer detailed analysis of the bio-identities produced, the power relations in play, and the logics implemented, setting this study apart from others with different aims. In order to examine these issues, we chose to focus here on the practices and discourses of law enforcement agents, both police officers and gendarmes. The former work for the *police nationale*—the civilian law enforcement agency primarily responsible for large cities and urban areas, under the control of the Ministry of the Interior—and the latter for the *gendamerie nationale*, its military equivalent, primarily responsible for smaller towns and rural areas, under the control of both the Ministry of the Interior and

the Ministry of Defence.[7] Our study therefore looks at an intermediate level of social actors situated between the people governing (who established the FNAEG in law and were responsible for its changes) and the people being governed (the people with records in the FNAEG, the victims of crimes for which DNA samples were taken etc.). We begin by outlining the techno-scientific, political, and legislative context that has produced changes in categories of identification linked to genetic databases. We then analyze two categories that fall mainly within the circle of "ipseity" (Ricœur [1990] 1992): the *perpetrators* of crimes and the *suspects* whose profiles are recorded in the FNAEG. We show how older categories (suspects, perpetrators) are combined (or not) with more recent data of a genetic nature and what "jurisdiction effects" are produced (Foucault [1994] 2001, 841), in other words, what effects the FNAEG has in terms of producing or implementing the law by compiling records of a population of suspects. We then move on to analyze a category that falls principally under the remit of "sameness" (Ricœur 1990): the category of *potential perpetrators* revealed by DNA comparison. In doing so, we show the porosity of these categories and the formation of different kinds of suspect bio-identities. Finally, the last three sections of the article show how these processes are linked (in no particular order) with: 1) an inter-institutional logic that favors the police over the justice system; 2) an intra-institutional logic linked to professional performance; 3) a probabilistic logic of elucidation aimed at helping police investigations.

Box 1: Methodology

This study is part of a broader research project focusing on the social issues involved in police and judicial use of genetic analysis in France (Vailly et al. 2016). Between 2015 and 2017, 24 semi-structured interviews were conducted with the main actors involved. Our interlocutors were chosen based on their various positions: police officers and gendarmes (n=11), either directly involved in management of the FNAEG or belonging to the gendarmerie's forensic science department (the *Institut de recherche criminelle de la gendarmerie nationale* or IRCGN); high-ranking officials, senior *magistrats*[8], and data protection officials (n=6), responsible for regulating the FNAEG at the

[7] Another study based on the same research (Vailly and Bouagga 2019) focuses on opposition to some of the uses of this dababase by political activists and their institutional support structures (Syndicat de la magistrature [Magistrate's trade union], Syndicat des avocats de France [French lawyers' trade union], Ligue des droits de l'Homme [Human Rights League]).

[8] In France, a *magistrat* (not to be confused with magistrate in its specific meanings in the U.K. or U.S. systems for example) is a high-ranking civil servant working for the Ministry of Justice who can occupy various different roles within the justice system.

Ministry of Justice, on the FNAEG's Oversight Committee, on the Commission that delivers accreditation to individuals authorized to conduct DNA identification, or in the French data protection agency (the *Commission Nationale de l'Informatique et des Libertés* or CNIL); leading investigators in large police stations (n=5); police trade union officials (n=2).[9] These interviews included 9 collective interviews by members of the FiTeGe project with senior officials from the forensic police (n=5), *gendarmes* from the IRCGN (n=1) and police investigators (n=3). All the interviews were coded using NVivo software with particular focus on categories of identification. Finally, a range of documents such as legal and regulatory texts, ministry reports, and press articles, were also collated, via the interviewees, and analyzed. A typical method for qualitative studies was used, consisting in adjusting analysis as the investigation proceeded (Glaser and Strauss 1967).

Technological and legal developments

A series of techno-scientific developments, along with legislative changes, produced changes in the categories of identification analyzed in this article. The first DNA profiling techniques were used in the United Kingdom at the end of the 1980s following serial rapes and murders. Given that they were time-consuming and painstaking to use, required large quantities of DNA, and produced information that was hard to convert into numerical data, their use was limited to ad hoc comparisons of crime stains with the profiles of suspects identified by the investigation (Williams and Johnson 2005). The aim was to *confirm* that these suspects, who could include a small population of local residents, had left biological stains at a crime scene (Aronson 2007). From 1990 onwards, a new technique called PCR (Polymerase Chain Reaction) made it possible to obtain a DNA profile quickly, based on small quantities of DNA, and also to present the results in numerical form. More than simply transforming "words into numbers", this allowed the number of repeats of small sequences in DNA to be "measured" (Desrosières 2008). Thus, while PCR did not bring about a scientific revolution as such, insofar as it did not provide a solution to theoretical problems, it did substantially transform techno-scientific practices in the life sciences (Rabinow 1996b). The technological conditions were henceforth in place for creating large computerized databanks that could easily be searched based on profiles of individuals or stains left at crime scenes. At a time when genetics was becoming one of the leading scientific disciplines (Keller 2003), enjoying the legitimacy of biomedical science, this

[9] The UNSA was the only trade union that responded to our requests for an interview.

approach brought about a robust, non-modifiable, and embodied form of "primary identity" (Jenkins 2000, 14), founded here on "genetic markers" (small sequences of DNA).

These technological changes made possible, in turn, new legislative and judicial frameworks. In general, in France, the number of records on file—whether for the purposes of intelligence, identification, or administration—is constantly rising, reflecting the number of so-called "security" laws that have been passed (Matterlart and Vitalis 2014). Following the FNAEG's inception in 1998, when it was restricted to offences of a sexual nature, the 2001 law on "everyday security" (*loi de sécurité quotidienne*—LSQ) extended the FNAEG's remit to all crimes against persons, and the 2003 law on interior security (*loi de sécurité intérieure*—LSI) extended it to felonies and misdemeanours against property (intentional attacks on human life, torture and acts of barbarity, intentional violent acts, felonies and misdemeanours that constitute theft, extortion, fraud, destruction, damage, threats to attack property, etc.). This list therefore comprised almost all the offences listed in the Penal Code with the exception of those connected to the law relating to foreigners and unintentional offences against other persons (involuntary manslaughter and injury).[10] In this spirit, in 2008, the Minister of the Interior stated his desire to develop a "Forensic police plan" (*plan police technique et scientifique*—PTS) focusing on genetic profiles and traditional fingerprints.[11] This shift in policy led to mass action: it is estimated that three quarters of court cases can now lead to a genetic profile being registered.[12] Nevertheless, there are some limitations to this extension of the FNAEG's remit because certain forms of economic and financial crime are not included (insider trading, tax evasion, misuse of corporate assets, etc.), although aggravated fraud, money laundering, and handling the proceeds of offences are. In this respect, we can see a system at work that institutes differences "determined by the law or by traditions of status and privilege" between types of delinquency; in other words, a "system of differentiations" that proceeds from power relations (Foucault 1983, 223).

This extension of the number of relevant offences combined with the fact that the FNAEG included not only convicted persons, as already mentioned, but also people simply suspected of a crime who, according to French law, are presumed innocent. Moreover, the law makes a distinction between, on the one hand, "serious or corroborating evidence" that suggests it is likely that someone has committed a crime, allowing that person's file to be recorded in the FNAEG (indicated as an "article 706-54 paragraph 2 suspect" in the FNAEG's requisition form) and, on the other hand, "any plausible

[10] Article 706-55 of the Code of Criminal Procedure.

[11] See the testimony gathered by Arnauld Dingreville and Dominique Rizet "Alliot-Marie met la police technique et scientifique au 1er rang de ses priorités," *Le Figaro magazine*, 22-02-2008.

[12] See Jean-Marc Manach, "La justice simplifie le fichage génétique, " *Le Monde*, 03-07-2007.

reason or reasons" to suspect they have committed or tried to commit a crime allowing their DNA to be compared without their profile being added to the database (indicated as an "article 706-54 paragraph 3 suspect" in the FNAEG's requisition form).[13] For the purposes of this article, we will refer to the former as "paragraph 2 suspects"—sometimes called "formal suspects" ("*mis en cause*" in French) by police and *magistrats*—and the latter as "paragraph 3 suspects". We can already see categories of identification emerging, to which we will return later. Records in these two categories are stored in the FNAEG for different lengths of time: twenty-five years for paragraph 2 suspects and forty years for convicted persons, crime stains, missing persons, and unidentified bodies. These time limits are currently applied to adults and minors over 13 alike, irrespective of the seriousness of the charges. With regard to the DNA samples of identified persons, since the 2003 law, these should be destroyed even though the laboratory keeps a trace of the person's file for potential future checks. Furthermore, French law states that the DNA tests used in DNA profiling must be based on "non-coding" DNA.[14] By definition, this DNA, which makes up 90-95% of human DNA, does not directly produce proteins and, much like traditional fingerprinting, should provide no information beyond the person's identity. This provision of the law is consistent with a form of "genomic minimalism" (Williams and Johnson 2005), that is to say the provision of minimal information about an individual's identity. On an analytical level, Lene Koch and Dirk Stemerding (1994) suggest using the term "regime" to describe the technological, organizational, and societal practices that result from earlier processes of "attunement" between technological options, professional demands, and social acceptability. In France, the "regime" that established a database of sex offenders paved the way for the writing into law and social acceptance of a more extensive database, based on similar technical organization and social interaction. Legislative changes, combined with the technological advances described above, thus transformed the categories of identification found in state workers' practices and discourses. In the following three sections, we analyze three such categories: *perpetrators* of a crime, whose DNA profiles are recorded in the FNAEG whether they were identified using DNA or in other ways; *suspects* whose DNA profiles are recorded in the FNAEG; *presumed perpetrators* identified based on comparison between their DNA and DNA left at crime scene.

Perpetrators of a crime and lasting suspicion

On one level, perpetrators of crimes emerge as a pervasive category in police discourse relating to

[13] Article 706-55 of the Code of Criminal Procedure.

[14] Article 706-54 of the Code of Criminal Procedure.

the FNAEG. As one police officer in the forensic department summarized in an interview: "the aim of the database is to contribute to identifying perpetrators of crimes" (Police Officer 1). However, the logic at play here cannot simply be reduced to the identification of criminals in the manner of Alphonse Bertillon and Francis Galton, the pioneers of the biometrics that emerged in France and then Great Britain in the nineteenth century (Noiriel, 2007) and which had as their aim the identification of criminals as opposed to the prevention of crime. Today, echoing Becker's concept of deviant "careers" ([1963] 1985), the underlying rationale that many of the actors' describe is about keeping the records of people who are on a "delinquent path".[15] More specifically, as the Head of the *Police Judiciaire* (Criminal Investigation Department) stated in a press article: "It is very rare for rapists or serial killers not already to be known to the police for more minor offences (theft, low-level arson, cruelty to animals, etc.)".[16] Similarly, an IRCGN *gendarme* summarized this logic in an interview as follows: "someone who commits a misdemeanor commits a felony, and vice versa" (*Gendarme* 1). In this both retrospective and prospective spirit (Cole and Lynch, 2006), the prevailing logic is that delinquency is characterized by repetition and recidivism and that the boundaries between different forms of delinquency are blurred. In short, *perpetrators of a crime* become *suspects* in other crimes, both past and future, and the two categories are separated by a porous boundary.

This mechanism brings a temporal dimension into play, as it also relates to solving "cold cases" (after the crime) and preventing future crimes (before the crime). This should be connected to the length for which the data of people convicted of a crime is kept on file: as mentioned above, it is stored for forty years, and this long duration is why solving crimes after the event and preventing future crimes become possible. In terms of solving old cases, forensic approaches help because, unlike the first DNA tests, which required fresh, intact DNA, PCR (Polymerase Chain Reaction) technology allows DNA from much older cases to be examined even when it has become partially degraded. As for prevention, this relies on entering perpetrators in the database as early as possible in their criminal careers such that they then become potential suspects in future cases. This approach can be productively related to practices in medical genetics "aiming to take control of the future" (Dew, Scott, and Kirkman 2016, 203) and is rooted in the medical fixation with early diagnosis (Grimes and Schulz, 2002). However, while, in both cases, the intention is to anticipate future events, the timeframes in question are quite different. In the medical model proposed by Rabinow (1996a),

[15] Media reports discuss cases of this type, for example the case of the presumed perpetrator of a murder committed two years earlier and caught after having been entered into the FNAEG's records after a simple police check. See Jean-Michel Desplos, "ADN, l'arme fatale des enquêteurs,"*Sud-Ouest*, November 2, 2013.

[16] See Marion Van Renterghem, "La tentation du fichage génétique de masse," *Le Monde*, 25-09-06.

people carry a genetic modification that *directly contributes* to the onset of a disease. Here, on the contrary, "non-coding" DNA is just a *tracer* that is supposed to be neutral, as with traditional fingerprinting. In this sense, the relationship between biological life and social life (Vailly et al. 2011), constitutive of "bio-identity" (Rabinow 1996a), is not of the same order: in the medical model, it is explanatory (the "mutation" indicates predisposition to a condition), whereas in the penal model, it is correlative (the "marker" serves to trace identity).

Moreover, these markers make this category of perpetrators of a crime accessible on a large scale thanks to databases. They can provide standardized and precise scientific data, drawing on the older categories (perpetrators, suspects etc.) in a different way than in the United Kingdom, which is the country that has been the most studied in this regard. Analyzing the U.K.'s genetic database, David Skinner (2011) brings to light a policy focused on constructing and using racialized data and shows that there has been recurrent debate about the validity and legitimacy of using so-called ethnic or racial categories in genetic profiling in the U.K. "Ethnic" or "racial" data are entirely absent from the FNAEG, however. There is absolutely no doubt that, in France, the combination of criminality/ genetics/record-keeping/so-called ethnic origin would make the database both illegal and highly controversial.[17] It is therefore clear that older categories (perpetrators, suspects) combine (or not, in the case of origin) with new data (genetic markers, which function simply as tracers). It is also clear that the bio-identities resulting from this combination are marked by a correlation between perpetrators and suspects that transforms these categories through the creation of a porous relationship between the two. More specifically, it is bio-identity as "ipseity" that is principally in play here. In relation to the question of temporality, Ricœur ([1990] 1992) suggests that ipseity implies no statement about any allegedly unchanging core of the personality, unlike sameness, which implies permanence in time. Here, in the same way, the ispeity of perpetrators and suspects changes (according to our interviewees, they move from being one to the other) but their sameness (the genetic markers) does not.

Suspects on file and "jurisdiction effects"

As we have also stated, perpetrators convicted of a crime are not the largest category in the FNAEG (around 15%). The FNAEG includes far more records of suspects and as such the latter stand apart from the general population (Williams and Johnson 2005) because their DNA will be systematically

[17] For a study on the sensitivity around this issue and its legal framework in France, regarding other practices engaged in by the police and criminal justice system, see Vailly (2017).

compared in every single case in France involving DNA, i.e. on a daily basis, in exactly the same way as convicted offenders. They therefore discreetly remain suspects for the twenty-five years that their data is stored. The police officers we interviewed provided several arguments supporting the construction of this category.

The first is connected to the question of the FNAEG's efficacy and thus to the objective at hand: solving cases. It is important to note that the vast majority of matches between DNA found at a crime scene and an individual on file concern suspects (76%) rather than convicted offenders (22%).[18] One police officer in a position of responsibility in the management of the FNAEG stated in an interview:

> "We argued for extending the FNAEG to other crimes and to suspects. That's for sure. Because [by doing so], we added possibilities for solving cases that didn't exist before" (Police Officer 2).

The second argument for constituting this category is linked to prevention. One gendarme interviewed explained that several years elapse between someone being arrested and standing trial, during which time a criminal can continue to offend. Similar to "patients in-waiting," awaiting diagnosis of an illness in uncertain cases (Timmermans and Buchbinder 2010), these "suspects in-waiting" (awaiting trial) can prove to be the perpetrators of further crimes. A third argument makes a sub-distinction within the "suspect" category depending on the legal outcomes. One of our interviewees was an officer with the criminal investigation department (*officier de police judiciaire* or OPJ) in charge of training in genetic sampling at the police academy and also a permanent union representative. She spoke of the lasting suspicion weighing on people who had not been convicted after a case was closed without further action:

> "It's not because a case has been closed without further action that the person isn't guilty. It can just be that we don't enough proof, it can also be because the offence isn't sufficiently proven by the facts. Non-convicted does not necessarily mean innocent. Recognized as innocent by the justice system, [19] but is it really the case? There are some cases where you can ask

[18] In 2013, there had been a total of 107,966 matches since the creation of the FNAEG, including 95,803 between DNA left at a crime scene and an individual's DNA of which: 73,139 between DNA left at a crime scene and the DNA of a paragraph 2 suspect, 21,230 between a crime stain and a convicted person; 1,247 between a crime stain and a paragraph 3 suspect; 187 between a deceased person and an identified person. *Source*: National Automated DNA database, *Activity Report*, 2013, French National Police, Central Directorate for Criminal Investigations and Forensics.

[19] From a legal point of view, this observation is incorrect: when a case is closed without further action, no decision has

yourself that" (Police Officer 3).

In short, here the legal categorization is contested and replaced by a police categorization. This reveals a certain "malleability" of categories (Jenkins 2000) depending on the circumstances in which the case was closed, with an implicit shift from non-convicted to suspect. In general, as Geoffrey C. Bowker and Susan Leigh Star (1999) have stated, categories does not always prove mutually exclusive, when there is disagreement or ambiguity surrounding a case: here, the police and the criminal justice system disagree concerning the category into which a person falls following the closing of a case without further action.

In conclusion, this categorization produces what Michel Foucault ([1994] 2001, 841) calls "jurisdiction effects"—in other words, the FNAEG has effects in terms of producing and implementing the law. On the one hand, the FNAEG can be described as a database that helps investigations, allowing comparison between DNA profiles and thus contributing to solving crimes and providing proof for legal proceedings. On the other hand, it can also be said to produce a majority category that constitutes an intermediate group between innocent and convicted persons: people who have been formal suspects in a crime and who thus remain on file but were not convicted. The fact that this category represents 75% of the data on file lends force to the argument that there has been a shift from suspect individuals in a criminal case to suspect populations more broadly (Cole and Lynch 2006). This very broad category relies, first, on records being put on file irrespective of the judicial outcome of the case, given that most of the people with FNAEG records have never been convicted of anything, unlike in some other countries (in Portugal, for example, suspects are not included in the database). It also relies on systematic comparison: once a person is on file, his/her profile is systematically compared with new crime stains as is the case for criminals (Williams and Johnson 2005; Tutton and Levitt 2010; Skinner 2011). This reveals not only the porous boundaries outlined above between perpetrators and suspects, but also those between someone who is a suspect in one particular case and someone who is a suspect in the much longer term. Once their records are in the database, perpetrators and suspects all remain suspects caught in a sort of "electronic trawl" (Lynch et al. 2008). In point of fact, their "bio-identity" and their "ipseity" merge in the database, becoming in both cases the "bio-identity" of long-term or lasting suspects (twenty-five or forty years, depending on how long their data is stored). This reinforces the idea that what is in play here is not simply the

been handed down as this outcome does not have the same authority as a court judgment. We are grateful to Élisabeth Fortis for this remark.

management of neutral markers, referred to as "tracers", but also the porous and changing nature of categories and the more general formation of bio-identities of enduring suspects. We appear to be witnessing the exponential growth of the apparatus initially conceived at the end of the 1990s for sexual offenders.

When possible perpetrators have to "explain themselves" after a DNA match

In the circle of "sameness" (Ricœur [1990] 1992), DNA profiles can be compared so as to identify a potential perpetrator. Indeed, in certain cases—and this is the aim—the DNA of either a suspect (in the traditional sense of the term), a perpetrator, or a suspect on file "*matches*" (a neologism used in French by the police officers) the DNA found at a new crime scene. More specifically, the relationship between that DNA and the person who left it is established based on statistical comparison between the genetic evidence available; a comparison which has the full force of scientific authority behind it. It is also important to note that DNA can, on the contrary, not "match", thereby helping to prove the suspect's innocence and removing the person in question from that category.[20] According to Katja Franko Aas (2006, 151), DNA comparison puts an end to all debate due to the power of its identification: "Not only do [biometric forms of identification] minimize the need for verbal communication, they almost completely eliminate the possibilities for doubt and negotiation". It is important to specify, though, that while in the most simple cases DNA comparison leaves little doubt about the identity of the person who has left a crime stain, this does not *necessarily* imply that the person is the perpetrator of the crime (he or she could have left the trace by simply passing through the room, etc.). In connection with the PCR mentioned above and because a tiny stain, or even a single cell, now suffices to provide analyzable DNA, the defense can advance all sorts of arguments for why this small quantity may have been present at the crime scene, unlike situations where larger quantities of bodily fluids are present and are much harder to justify (blood, semen, etc.). In other words, while the suspect's body establishes a form of truth and "does not lie" (Aas 2006), it is not alone in "speaking"—there is still room for other voices. As a chief of a large police station in the Parisian area, and former investigator, stated in a collective interview: "If we find a trace of a person's DNA at a crime scene […], the person will have to *explain themselves* regarding why this trace is present" (Police Officer 1). In a completely different field, just as medical experts must connect what tortured bodies reveal with what refugees recount in their narratives when they apply for asylum

[20] This is especially true in the United States where the Innocence Project initiative has removed several hundred people from the category of suspects or offenders. See: *https://www.innocenceproject.org/cases/* accessed 11-10-2017.

(Fassin and d'Halluin 2005), so police officers and judges must connect what suspects' DNA reveals with what they state about their past, during a criminal case. In point of fact, genetic analysis appears in the police officers' discourse not as proof of guilt but as an *element of proof* that they then have to consider in the broader context of the investigation, by differentiating between situations (rape, burglary, felony, etc.), so as to understand how it came to be at a crime scene. Thus, suspects who have to "explain themselves" because of a DNA match become "potential perpetrators" who move closer to the category of perpetrators but do not fall into that category until they are found guilty.

There are other ways of further describing this category. It includes certain variants: potential perpetrators can be *confirmed* as such by their DNA, when this is congruent with a set of clues provided previously by a traditional investigation, or they can be *revealed* through their DNA. One area particularly affected by the latter practice is burglary and all types of theft by breaking and entering. Thanks to PCR techniques, genetic analysis on small quantities of DNA, as mentioned above, allows analyses of minute stains left behind during a burglary. According to official data, this type of crime has risen considerably,[21] with a strong rate of repeat offending, a low rate of solved cases, and, most of the time, without any suspects being identified by traditional investigations. One police officer responsible for DNA comparisons at the FNAEG stated in a collective interview:

> "The FNAEG allows us to conduct investigations in cases where we didn't before. […] If the forensic unit wasn't there, more generally, in these crimes [in the case of burglaries] [the colleagues on the ground] would be relatively powerless because these aren't crimes where we're likely to have […] the testimony of a victim who can describe the suspect. In general, a burglary takes place when the house is empty, no one sees anything, and we have no particular leads other than traces" (Police Officer 2).

The actions that might lead to police intervention are therefore constantly evolving and the idea that theft will lead to no police action unless the person is caught red-handed (Favre 2009) needs to be rethought in light of the work of the forensic police. Contrary to the wide-spread image relayed in the media of DNA only being used as a "genetic witness" (Aronson 2007) in the most serious of crimes, the distribution of matches between a crime stain and an individual according to type of crime

[21] The number of burglaries rose by 18% between 2008 and 2012. The number of burglaries recorded in *police* and *gendarmerie* zones were 367, 437 in 2012 and 390,828 in 2016. See the *Circular of November 29, 2013 on the fight against burglaries and other forms of theft* and *Finance Bill 2015 and 2018,* 176 (French National Police); 152 (French National Gendarmerie).

(see table 1 below) reveals the prevalence of theft and property offences in these matches.

TABLE 1: ***Percentage of the total number of matches between DNA traces or between a DNA trace and an individual, according to type of offence, as of December 31, 2013***

Offences	Percentage of the
Aggravated theft	53
Simple theft	11.5
Property offences	10.8
Armed robbery	7
Sexual offences	5.4
Other (offences against other persons, homicide, drug	12.3

Source: National Automated DNA database, *Activity Report*, 2013, French National Police, Central Directorate for Criminal Investigations and Forensics, Data as of December 31, 2013, calculated since April 2007.

According to certain interviewees, while the clearance rate for burglaries is low (around 11% in 2013 and 2014), the small proportion of cleared burglary cases are relatively often solved, thanks to genetic analysis.[22] This claim is difficult to verify as it is impossible to know whether matches concern different cases or the same case, what proportion concern people not already identified in the investigation (i.e. the clearance is genuinely due to the FNAEG), and what the outcomes were for cases in which matches were found (conviction, acquittal, etc.).[23] To paraphrase Alain Desrosières (2008) who distinguishes between the use of statistics as a "tool of government" (to direct the conduct of others) and as a "tool of proof" (to convince), the use of figures as a tool to prove effectiveness has its limitations.

Today, the FNAEG is therefore used more for burglaries than for felonies, given their respective frequency, despite the fact that this was not its original aim. Moreover, in the case of burglaries, or,

[22] A Ministry circular indicates that match rates with DNA profiles via the FNAEG doubled for aggravated theft between 2011 and 2012 (6,726 matches in 2011 and 13,693 in 2012), *Circular of November 28, 2013 on the fight against burglaries and other forms of theft.*

[23] The police officers who deal with the administration of the FNAEG only rarely hear back from investigators about the cases for which their assistance has been required.

more generally, offences in which traditional investigative clues are absent, DNA is used and sometimes seems to play the leading role in the investigation (Table 1) even though, as we have seen, match rates do not equate to clearance rates. Therefore, if "databases [allow] the storage and processing of *structured* information, that is to say *classified*[24] according to predetermined criteria and made accessible" (Flichy and Parasie 2013, 11), they also contribute in and of themselves to producing certain changes. We can see changes in categories—here between suspects and suspects required to "explain themselves"—and changes in bio-identities—from suspects to suspects who could be described as "solid".

Table 2 summarizes the data from the three categories analyzed. It illustrates the porosity of the different categories (between perpetrator and lasting suspect, between one-off suspect and long-term suspect, between suspect and "solid" suspect). Except in the case of a negative match after DNA comparison the linkage of genetic markers and the older categories of perpetrators and suspects generally creates bio-identities that make people appear more suspect. We shall refer to these people as suspects by re-offending, suspects by extension, or suspects by positive match.

TABLE 2: ***Categories of identification, the porosity and transformations of categories and bio-identities***

Categories of identification	**What does the FNAEG or DNA**	**Porosity and Transformation of**	**Bio-identity**
Perpetrator falling under the FNAEG's	Records kept for 40 years	From perpetrator to lasting suspect	Suspect by re-offending after conviction
Suspect falling under the	Records kept for 25 years	From one-off suspect to	Suspect by extension
Suspect (or non-suspect) by DNA	Positive (or negative) match	From suspect to suspect who needs to	"Solid" suspect by positive match

Having outlined these three categories, as well as their changes and effects, it is now necessary to try

[24] Our emphasis.

better to understand the factors behind these changes and their underlying logics.

Extended police prerogatives

How, more specifically, does the categorization between paragraph 2 suspects *registered* in the database and paragraph 3 suspects *compared* with the database actually function? As we have seen, the former are often referred to by the police as "formal suspects" ("*mis en cause*"), in line with a definition linked to "serious or corroborating evidence" that they have committed a crime. The latter, referred to as "simple suspects" by the actors, are often groups of people asked to provide their DNA—that will not be retained in the database—simply because they found themselves close to a crime.[25] This process leads to a fairly loose categorization of "suspects" that can involve several hundred or thousand people whose connection with the crime is only very circumstantial and whose "suspect" nature is radically different from that of the previous category because it remains transient (their data are not recorded in the database). The process is often not very effective, because it consists in carrying out tests almost in a blind fashion, and is therefore used relatively rarely even though, by definition, it concerns a large number of people.

One police officer in the forensics department explained in an interview that during the first five months of that year (2015), the proportion of paragraph 3 suspects *compared* was 1 for approximately every 70 paragraph 2 suspects *registered* in the database. In order to understand this figure, we first have to understand *who* is responsible for the categorization and this is linked to the "institutional order" (Jenkins, 2000). Since the 2003 Act, *officiers de police judiciaire* or officers with the criminal investigation department (OPJ) can add a profile to the FNAEG on their own authority as well as by instruction from the prosecutor or investigating judge.[26] A gendarme who was involved in setting up the FNAEG explained in an interview:

> "It was just impossible to do it any other way, the *magistrat* was too snowed under, so the OPJ initiative [i.e. the population of the FNAEG by the OPJ] allowed samples to be taken from suspects and comparison with a certain number of suspects too, so all of that changed for the better to populate the database and make it into a database that had all the necessary

[25] Among the most well-known examples, there is the case of a rape committed in a high school in La Rochelle in which, in 2014, more than 500 DNA samples were taken and the case of the rape and murder of a young girl in Pleine-Fougères that led to more than 400 DNA samples being taken in 2017.

[26] Article 706-56 of the Code of Criminal Procedure created by Act n°2003-239 of March 18, 2003 for domestic security.

functionalities to be effective as well as the legislative arsenal to be effective" (Gendarme 2).

This explains the fact that today, 93% of individual records (and 96% of stains) in the FNAEG are added at the request of an OPJ and 7% at the request of a *magistrat* (4% for stains).[27] In other words, more often than not—except in the case of minors or controversial cases—the police officer is the only person who judges what constitutes "serious or corroborating evidence", thus suggesting that, in the overwhelming majority of cases, responsibility for inclusion in the database has shifted from the justice system to the police. In the same vein, the FNAEG is under the responsibility of the Central Direction of Criminal Investigations (DCPJ) at the Ministry of the Interior, which is responsible for its technical management.[28] It is also monitored by two committees: the FNAEG's Inter-ministry Technical Committee, headed by a *magistrat* from the Office of Criminal Affairs and of Appeals, made up, in particular, of police officers, gendarmes, experts from the police and gendarmerie, and IT experts in charge of the technical aspects of the database; the FNAEG Oversight Committee, run by a *magistrat* from the public prosecutor's office acting ex officio with the help of another *magistrat*, a geneticist, and an IT expert. Our investigation showed that this *magistrat* in charge of the Oversight Committee had very limited human and financial resources available (he continued his professional activities alongside running the committee, and his remits within this oversight were not very precise meaning that, in practice, the oversight was limited). Additionally, records are added to the database regardless of the legal outcome of cases and suspects who are not convicted have to file a request in order to be removed: this therefore minimizes the impact of the justice system's decision not to convict them.

The three factors mentioned above (records added by an OPJ, peripheral role played by the Oversight Committee, and retention of records of non-convicted suspects) all have important consequences in terms of power relations. To a large extent, the creation of a database grouping together perpetrators and suspects has given both power and investigative means to the police. More generally, the ways in which classifications are established, on the one hand, and the relationship between these categories and the social order, on the other, inform the social and moral order (Bowker and Star 1999). Inter-institutional power relations seem decidedly to favor the police over the justice system or the appellant. In this sense, the remark, made in a different context, that "the prerogatives

[27] Figures provided by the forensic police.

[28] At the time of our study, the specialist staff working in the FNAEG management comprised 15 scientists (three engineers, including one contract worker, four technicians, and eight specialist officers from the forensic police). The FNAEG is based in the town of Écully in the Rhône region.

of the police are expanding, most notably in terms of identity checks" (Fassin et al. [2013] 2015, 100) is also applicable to the present case.

Institutional requirements and performance objectives

In addition to these inter-institutional logics, professional logics also come into play. Although a IRCGN gendarme stated that a "person held for questioning is not necessarily a suspect" (Gendarme 2), one police officer from the forensics department nevertheless explained in an interview:

> "Basically, if we had ten people held for questioning, then data had to be fully collected for all ten people [they had to be "*signalisé*" in French], so the photo, the fingerprints and the DNA profile […]. If someone's being held for questioning because we have reason […] to think that, well then these reasons are the same as for taking a DNA profile" (Police Officer 3).

A memorandum from the Directorate for local security in the Parisian region (*Direction de la sécurité de Proximité de l'agglomération parisienne*) states: "Fingerprint and genetic data collection [*signalisation*] alike […] concern *all persons held for questioning or suspected* [of an offence] […]. It should **systematically** [in bold and underlined in the text] be implemented in order to ensure the efficiency of the large national databases, the FAED[29] and the FNAEG". In point of fact, many people are recorded in the FNAEG because they were held for questioning. And yet people can be held for questioning based on "plausible reasons",[30] which is a far broader notion than "serious or corroborating evidence".[31] In practice, therefore, there is a continuum between being held for questioning/the existence of serious or corroborating evidence/being added to the FNAEG, even though, at the time at which the facts are established, the evidence is not always sufficient to be described as serious or corroborating. There is therefore, once again, a porous boundary between different overlapping categories—in this case, between people being held for questioning and suspects being kept on file.

Moreover, in an "audit culture" (Strathern 2000) or a culture "of results" (Desrosières 2008),

[29] Automated fingerprint database.

[30] A person can be held for questioning if there is any plausible reason or reasons to suspect they have committed or tried to commit a crime or offence punishable by a prison sentence (and not by a simple fine). See: *https://www.service-public.fr/particuliers/vosdroits/F14837* (accessed November 24, 2017).

[31] *Circular of July 9, 2008 from the Ministry of Justice CRIM-PJ n°08-28.H5.*

regimes of suspect categorization also depend upon the policies in place to assess state actors themselves. For several years now, the different Finance Bills have cited an index for police performance based on a rate at which biological data is collected (the ratio between the number of people whose biological samples are collected and the number of suspects) with the objective of exhaustively adding DNA profiles to the FNAEG. This rate is ever-increasing and in 2016 stood at approximately 84% for the police (it is slightly lower for the gendarmerie, but still rising).

TABLE 3: ***Rates of biological data collection by the national police and gendarmerie between 2012 and 2016 (%)***

	2012	2013	2014	2015	2016
Rate of biological data	64.0	68.8	74.7	82.2	84.4
Rate of biological data entry to the FNAEG (gendarmerie)	49.0	56.3	51.4	66.5	74.7

Source: Finance bills 2015, 2016, and 2018. Program 176: French National Police; Objectives and performance indicators 2015 (French national gendarmerie); Annual performance plan, appendix to 2017 Finance Bill.

It is important to note that officers in the Police Judiciaire are given grades, which affect their career progression and are based, in particular, on fixed objectives that include collecting suspects' biological data (obtaining their fingerprints and DNA profiles). This is reflected in the fact that the administrative form "Professional Interview—Police Officers" includes the following headings: "Actions for implementation and, where relevant/applicable, recorded indicators deadlines, recommendations: fingerprints and genetic data collection [*signalisation*]". This is how, as Desrosières (2008) has pointed out, "performance indicators" that shape social life direct actors' conduct. Their superiors also have objectives to meet and their bonuses are contingent on a performance indicator that often includes complete data collection as a criterion. At headquarters, statistics are compiled to know how many of the people questioned have had their data collected. Actors in the field therefore also face constraints as a result of national directives. The objective of developing the PTS to solve cases requires the FNAEG to be populated and is framed in numerical terms, leading certain actors to refer to a "culture of target-setting". This shows the extent to which the "conventions" underpinning this quantification (Desrosières 2008) result in record-generation

where, in purely statistical terms, it is more fruitful to arrest three cannabis smokers than one dealer, for example. It also becomes clear that genetic data are transformed into data of a different nature, in terms of quantified performance, and confirm the link between categorization and regimes of quantification (Bowker and Star 1999; Desrosières 2008): in order to quantify identifications, it is first necessary to assign individuals to categories (suspects, etc.). As we have seen, in this field statistics do not always constitute a "tool of proof" but they do play the role of a "tool of government" (Desrosières 2008) in which power relations are played out: the inter-institutional power *held* by the OPJ who decide to enter records in the FNAEG and the intra-institutional power *applied* to these same OPJ and their superiors based on numerical targets. Furthermore, this also offers an understanding of the important role played in these practices by the probabilistic logic of cases being solved, as we shall see in the following section.

Expanding categories based on probability of solving cases

The two categories of perpetrators and suspects on file are differentiated, as we have seen, by the length of time for which their data is retained, but also by their rate of expansion, as represented below (Figure 1).

Categorizations into perpetrators and suspects with records on file persist because the dominant logic of expansion governing the FNAEG is echoed by practices relative to the deletion and retention of data. In terms of removal from the database, suspects' DNA profiles are deleted on instruction from the public prosecutor either automatically—although this is rare—or at the request of the individuals when retention of the profile no longer seems necessary given the aims of the database.[32] In 2015, the number of profiles deleted from the FNAEG on this basis was quite low, standing at only 160 per year.[33] From the point of view of the police, one reason for this relates to the general logic underpinning the database and the types of investigations in question. One of the police officers quoted above explained in an interview:

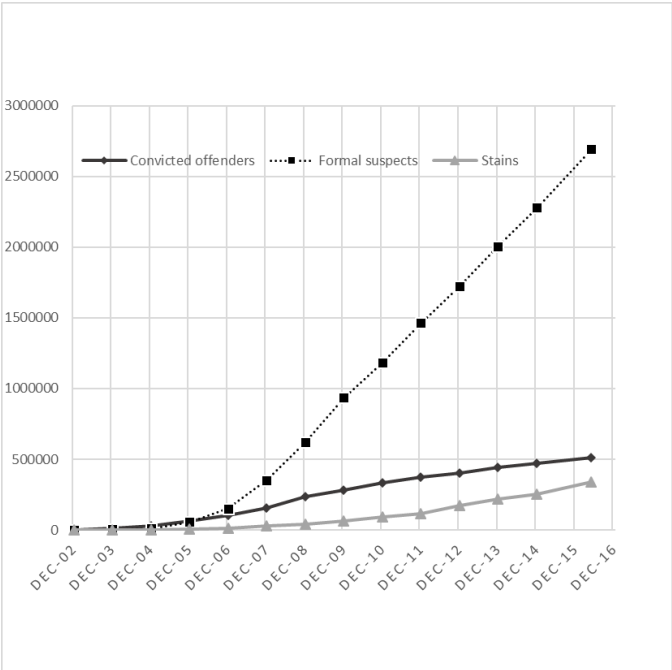
> "It's a bit complicated to say to ourselves: we're going to ask for So-and-So to be deleted because he wasn't convicted, because there wasn't enough proof. And to say to ourselves, 7 or 8 years later, he committed a crime and we could have caught him with that profile" (Police Officer 3).

[32] Article 706-54 of the Code of Criminal Procedure.

[33] *Source*: Personal communication from a high-ranking official at the Ministry of Justice.

People are not notified that they can request to be removed from the database and are therefore unaware of this. Furthermore, to do so, they must seek the help of a lawyer to file a request with the prosecutor, which therefore comes with a cost. Although, in France, a range of administrative or recruitment processes routinely require people to provide an *extrait de casier judiciaire*—a document that shows whether or not they have a criminal record—the same is not true when it comes to their status in the FNAEG and this contributes to the sense that the stakes are not high (Vailly and Bouagga 2019). In short, for most people with records on file, the FNAEG is easily forgotten. It is entirely possible, in fact, for them not to be aware that they belong to a particular category or even that such a category exists. This all converges to confirm two points: first, the bio-identity in question in this article concerns "others" rather than "self"; second, the easier a system of categorization is to use and the broader it is, the more invisible it is (Bowker and Star 1999). According to Armand Mattelart and André Vitalis (2014, 194) "a great portion of the power and efficiency" of record-keeping "lies precisely in this invisibility".

FIGURE 1: ***Changes in the number of DNA profiles recorded in the FNAEG (data for December 31 each year, except May 2016)***



Source: Questions to the government, answers published in the *Journal officiel* on the 06-04-2010, 12-2-2013, 05-08-2014 and 08-12-2015, and personal communication from the forensic police.

Regarding the long periods of data retention, in 2010, the Constitutional Council expressed reservations, while nevertheless ultimately finding the FNAEG to be constitutional.[34] In June 2017, following a complaint lodged by a farmer who was convicted for refusing to give a DNA sample after being arrested at a trade union demonstration, the European Court of Human Rights (ECHR) found France in violation of the Convention of Human Rights for the first time in relation to the FNAEG. It found that there had been "a disproportionate infringement of [the plaintiff's] right to respect for private life" holding that the law in regard to taking DNA samples did not differentiate according to the nature and gravity of the crime.[35] At the time of writing, a planned decree on the FNAEG, still under discussion, would adapt the length of time for which data is stored according to the seriousness of the crime and the age of the perpetrator. This category of suspects was also key in the debates and decisions made around a case of European jurisprudence: S. and Marper v. the United Kingdom at the ECHR (Williams and Johnson 2005).[36] This judgment received much attention because it led the United Kingdom to remove 1.7 million DNA profiles of adults (who would be described as formal suspects, or *mis en cause*, in France) and minors from its database.[37] To return to France, the porosity and "malleability" (Jenkins 2000) of the categories, discussed above, also combine with a hardening of the categories of perpetrators and suspects on file, due to the length of time for which data is stored

[34] According to the Constitutional Council, "given the aim of the database", rule-making authorities "should make the length of time for which information is stored proportional to the nature or seriousness of the crimes in question, while also adapting these provisions to the specific situation of juvenile delinquency". Decision n°2010-25 QPC of 16-09-2010.

[35] Case of Aycaguer v. France, June 22, 2017, 8806/12, ECHR (Fifth section).

[36] European case law indicates that, in terms of state intrusion in people's private lives, the general and undifferentiated lifelong retention of suspects' DNA profiles and samples—as in the U.K. before the ECHR judgment runs counter to the requirement for proportionality between the offence and the need to take a DNA sample. The case was connected to the retention of the DNA samples and profiles of two people, including a 12 year-old boy, who were accused of an offence eligible for entry in the British database, but who were not convicted (so who were only suspects). It is worth recalling here that in France, individuals' DNA samples are not stored.

[37] This has not changed the number of matches produced by the database for murders, rapes, or other offences. In the second quarter of 2014, there were 37 matches to murder, 127 for rapes, and 6,111 to other crime scenes; in the same quarter in 2013, before the profiles were deleted, the rates were 37 to murders, 103 to rapes, and 6,141 to other crime scenes. *National DNA Database Strategy Report, Annual Report*, 2013-2014, Home Office. See: *https://www.gov.uk/government/publications/national-dna-database-annual-report-2013-to-2014* (accessed October 9, 2017).

and the low number of profiles deleted from the FNAEG: once the categories have been transformed, as analyzed above, they tend then to be enduring.

While many interviewees regretted that financial crime did not fall under the database's remit, and therefore did not subscribe to this particular aspect of its differentiation between forms of illegality, all the law enforcement officers we interviewed expressed satisfaction with the extension of the database's scope. First, they considered that finding a "solid" suspect through a DNA match could help move forward investigations that might otherwise have remained unsolved without a potential name to connect to the case. Second, they also often explained that, according to the logic of probability, a massive expansion of the database would increase the chances of DNA matches. As a chief at a large police station stated during a collective interview:[38]

> Police officer 1: "The larger the database, the more profitable it is to use. Although, that's just my opinion"
> *Us: "Because it allows perpetrators to be identified?"*
> Police officer 1: "Yes."
> *Us: "And is this what you've seen in your work?"*
> Police officer 1: "I know it's worked".

In short, not only did the law enforcement officers we interviewed unanimously view the FNAEG as an essential tool to help their investigations, but they also assumed that the larger the categories of perpetrators and suspects, the larger the category of "solid" suspects would be. Moreover, as though echoing the position of the Minister of Justice who contributed to developing the PTS, quoted in the press as saying the aim was "to bring justice to the victims by finding those who caused them harm," [39] a union representative for the forensic police stated in an interview:

> "People who are victims of a crime, morally we have to be able to answer them and dig further to do our utmost to try and solve – or at least to help the investigator solve the case. […] Someone whose car is stolen, someone whose home is burgled, when we go back and say we've found the person responsible for the burglary […] we provide a social response that is also useful for victims of a wrong that isn't as serious, obviously, but who are still victims

[38] A similar position has been described among police officers in the United Kingdom (Cole and Prainsak, 2015).

[39] See the testimony gathered by Arnauld Dingreville and Dominique Rizet, "Alliot-Marie met la police technique et scientifique au 1er rang de ses priorités", *Le Figaro Magazine*, 22-02-2008.

nonetheless" (Police officer 3).

It is about signaling to victims of all kinds that they have been heard, that their point of view has been taken seriously, with all the available means, including scientific ones, and also about avoiding releasing suspects due to insufficient evidence. The approach studied here cannot be reduced to a technical tool deployed by the police and criminal justice system: it is also a form of duty to show interest in the victims, informed by an ethos and sometimes an empathic logic.

While our aim here is not to quantify the actors' respective positions, it is nevertheless interesting to note that certain variants can be detected in France. The objective generally foregrounded was for the database to reach a stable size that corresponded, roughly speaking, to what one gendarme from the IRCGN already cited earlier called the "suspect population"—in other words the population associated with "risk management" (Castel 1981), in this case the danger posed to other people.[40] This fosters a form of "social triage", in order easily to distinguish between populations at high and low risk of committing a crime (Aas 2006). Sometimes, more rarely, there was also the idea of including the whole French population in the database to help identify perpetrators of crimes. During an interview, one police officer, a scientific advisor to the division of the forensic police, cited the example of a particularly sordid case of rape and murder with the same kind of empathy for the victim as that mentioned above, concluding:

> "If we'd had all the DNA profiles of everyone [in France], we'd have found the culprit straightaway" (Police Officer 4).

This perspective extends the category of suspects even further, such that ultimately every citizen is viewed as a potential criminal. In other interviews, the position taken was more legalistic, for example with this union representative for the forensic police:

> "Is it sufficient, is it excessive, is it insufficient? I don't necessarily have an opinion on the matter. That's a choice that was made by legislators, […], the question's not up for discussion" (Police Officer 3).

[40] However, the management of risks we are talking about here is of a different order: although, according to Robert Castel (1981), the old forms of face-to-face surveillance are being replaced by the projection of risk factors, here there is no loss from sight of the individual as such.

Others foregrounded the regulations in place, for example this OPJ union representative:

> "It's real progress. But then of course it's necessary to have a framework, things that are really strict, to make sure there aren't any abuses with this" (Police Officer 3).

In short, the successive laws passed after 1998 considerably extended the types of offences for which DNA sampling was possible and allowed for the sampling of people who were only suspects. These changes were also combined with government circulars state that data collection should be systematic. The law enforcement officers we interviewed generally subscribed to this logic of extension including an increasing number of suspects in different forms. This prevailing viewpoint can be understood in terms of how closely most of our interviewees were involved with despicable crimes and victims in serious difficulty.

In summary, the database's objective, in the eyes of the actors on the ground, is to include as much data as possible within the framework defined by the law so as to improve its efficiency. This creates a strong link between, on the one hand, adding people to the categories of perpetrators and suspects on file, and, on the other, solving cases. When combined with the balance of power relations tipping in favor of the police, as analyzed above, there are consequences to this situation. The mechanism that the police have established involves wider inclusion in the database, based on the probability that this will result in more cases being solved. It is also founded on empathy with victims, with the assumption being that the more information is available to the law, the better off everyone will be, collectively speaking. Henceforth, the "risk" of only including a smaller proportion of people in the database is not (or is no longer) considered acceptable, regardless of the price: the latter is considered worth paying, because some suspects would otherwise slip through the net. These practices can therefore be understood as related to a new "construction of the intolerable" (Fassin and Bourdelais 2005) expressed here as intolerance of the risk of missing out on a conviction. Pierre Favre (2009) explains that in a context of multi-facetted violence, some forms of which are increasing while others lessen and transform, the decreased threshold of public tolerance for violence leads to a parallel increase in requests for police intervention. This has taken us from a logic of targeted identification of certain individuals to a logic of widespread record-keeping based on holding part of the population in suspicion.

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Techno-scientific advancements and legislative dispositions have extended the ways in which

DNA samples can be taken by police and then compared and stored in the database. This article has considered category construction in terms of the encounter between public policy and actors in the field (Harrits and Moller, 2011), looking closely at the latter (*policiers* and *gendarmes*) to examine how they put these mechanisms into both practice and discourse. Unlike other studies, which are more distanced from practice and focus on other national contexts (Cole and Lynch, 2006; Lynch and McNally, 2009), this investigation has allowed us to show, in particular, what happens when actors on the ground appropriate the categories laid out by the law. Contrary to what is expected of the supposedly fixed disciplines of genetics and statistics, the example of the FNAEG shows that the categories produced by these scientific approaches and legislative dispositions can be dynamic and have porous boundaries, with the result that this extends suspects' bio-identities, except in cases where DNA proves someone innocent. More generally, here, bio-identity is the product of a combination of genetic tracers, on the one hand, and policies, laws, and practices, on the other, which it then shapes in return. It lies at the intersection of sameness and ipseity (Ricœur [1990] 1992), as part of a legal and practical identity in which the Other is framed both as a unique individual (by DNA comparison revealing uniqueness, at the level of sameness) and as a member of a group (of perpetrators and suspects on file, at the level of ipseity). This offers a novel perspective in that it allows two intersecting aspects of bio-identity to be identified and differentiated. While our data confirm the still exploratory intuition expressed by Rabinow and his colleagues regarding "something called biosecurity" (Collier at al. 2004, 3), they also allow us to go further still, showing the specifically political stakes of bio-identity when it is ascribed to others as part of knowledge/power. This takes us beyond the somewhat idealized vision of voluntary adhesion to a group of sick people, connected to their biological and social lives by a genetic mutation, towards the idea of a mode of categorization, inscribed within the sovereign power of the state, of people either suspected or convicted of a crime connected to their biological and social lives by their genetic tracer.

The old categories of perpetrators and suspects have been transformed and bio-identities have evolved in ways that are connected to different logics: *a logic of prevention,* i.e. the supposed prevention of crime; *an inter-institutional logic* that works more in favor of the police than of the criminal justice system; *an intra-institutional logic,* connected to professional performance; and a *logic of probability,* aimed at giving police investigations the best chance of success. These are all imbricated and converge in ways that prolong suspicion and extend inclusion in the database. It is as though, from the point at which lawmakers—and thus politicians—chose to extend the database's remit, it became perfectly natural for the police to make more intensive and extensive use of a tool that could help them, technically, to move their investigations forward. Two dynamics therefore combine here: the extensive and pragmatic use that the actors we encountered are making of a

technical tool also draws on a political desire to develop this tool (evidenced by the laws passed since the end of the 1990s), linked to social and political perceptions of insecurity and terrorist threats. This helps explain why France is in the process of developing the largest database in Europe and why, compared to other countries facing the same context of terrorist threats (Lazer and Meyer, 2004; Hindmarsh and Prainsak, 2010), it finds itself amongst the most prolific users of genetic analysis. In a context where these uses are not going to decline, we hope that this study will encourage further research on the social stakes inherent to genetic testing beyond the medical sphere, but also to record-keeping more generally. More broadly, it is also designed to invite further study of how socially performative scientific data transform social categories.

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