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Personal identity and science: the genetic approach regarding the case of appropriated children during the most recent argentinian dictatorship from a pluralistic perspective*

Identidad personal y ciencia: el enfoque genético respecto de la apropiación de niños durante la última dictadura argentina desde una perspectiva pluralista

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ABSTRACT

The philosophical problem of personal identity –the issue of finding the necessary and sufficient conditions for a past or future being to be a certain present being– has been treated by analytical metaphysics mostly. In this framework, plenty of references to thought experiments can be found, but they exhibit no connection to practical problems and scientific outcomes. Our purpose is to involve philosophy of science in that debate, since a *genetic* approach regarding identity can be considered supported by contemporary scientific knowledge. In order to do that, we will focus on the Argentinian case of the approximately 500 children who were *appropriated* during the most recent dictatorship (1976-1983). The appropriations deprived them, precisely, of their

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identities, but some of them managed to be recovered thanks to *Abuelas de Plaza de Mayo* (APM) and genetics. Our final purpose is to argue that a pluralistic perspective in philosophy of science, according to which values contribute to the very constitution of ontology science aims to describe and explain, will allow us to defend APM strategy but reject, at the same time, a reductive conception of identity.

Keywords: personal identity; genetics; appropriation of children; Argentinian dictatorship (1976-1983); pluralistic perspective.

RESUMEN

El problema filosófico de la identidad personal –hallar las condiciones necesarias y suficientes para que un ser pasado o futuro sea el mismo que determinado ser presente– ha sido abordado especialmente por la filosofía analítica. En este marco, encontramos múltiples referencias a experimentos mentales, que exhiben poca conexión con problemas prácticos y con recientes desarrollos científicos. El propósito de este trabajo es involucrar a la filosofía de la ciencia en el debate, dado que podría afirmarse que el conocimiento científico contemporáneo fundamenta un enfoque genético de la identidad. Para ello, se analizará el caso de aproximadamente 500 niños que fueron apropiados durante la última dictadura argentina (1976-1983). Las apropiaciones privaron a los niños, precisamente, de sus identidades, pero algunos de ellos lograron recuperarlas gracias a *Abuelas de Plaza de Mayo* (APM) y a la ciencia genética. El objetivo final del trabajo es argumentar que una perspectiva pluralista en filosofía de la ciencia, de acuerdo con la cual los valores contribuyen en la propia constitución de la ontología que la ciencia describe y explica, nos permitirá defender la estrategia de APM, rechazando, al propio tiempo, una concepción reduccionista de la identidad personal.

Keywords: identidad personal; genética; apropiación de niños; dictadura argentina (1976-1983); perspectiva pluralista.

1. Introduction

The purpose of this paper is to engage philosophy of science in certain debates usually addressed by social sciences. Particularly, we will focus on the case of appropriation of children in the last period of State terrorism in Argentina (1976-1983), and the subsequent endeavour of searching the children (nowadays young adults) and aiming at the restitution of their identities, by means of the Association *Abuelas de Plaza de Mayo* (hereafter APM) with the aid of genetics.

It is our conviction that philosophy of science can contribute to elucidating the assumptions and ontological commitments that operate in an abbreviated way in APM's discourse and in some disciplinary discourses involved in the restitution process. We also claim that it is necessary to analyse the ethical and political implications of philosophical and scientific discourses and practices in relation to a historical event that has consequences regarding the very constitution of personal identity. In fact, we assume that the approaches of some problems in analytic philosophy, articulated by means of the resource of thought experiments, are at a turning point if the same problems are considered under the light of a real event that shows a dramatic disengagement of different features of identity. The eminently metaphysical issue of personal identity is disturbed in its pure, ascetic formulation by means of appropriation, a real experiment –and not an imaginary one. On the other hand, it was a political demand that led science itself to the finding of the scientific measurement of a particular biological link. Moreover, the DNA-technique involved in this case and the effects of its results have challenged the philosophical question of personal identity. It is under this light that we understand the necessity of philosophy of science to engage in this political problem, in which scientific knowledge has played an essential role, and in its interaction with the re-formulation of a metaphysical problem, imperative.

In order to achieve our purposes, in section 1 we present the problem of personal identity as it is addressed in analytic philosophy, in which a psychological and a biological conception were established. In section 2 we reconstruct the case of appropriation of children in Argentina and present the APM's purpose of finding their

grandchildren and restore their true identity. We focus, particularly, on the role genetics plays in order to identify the appropriated people. In section 3 we reconstruct some critical arguments that point out the consequences of a notion of personal identity based on genes. Finally, in section 4 we analyse the relation between genetics and personal identity from a pluralistic perspective in philosophy of science. We claim that a pluralistic position –according to which ontology is constituted, and the so-called "external" values play an important part in such constitution- allows us to address the role of science and technology with regard to a political demand. It also invites us to think that scientific knowledge has, in the very practice of science, an ethical and political role that must be justly appreciated. It is our final objective to argue that a pluralistic perspective permits us to defend APM's demand and strategy but reject a reductive conception of identity.

2. Personal identity in analytic metaphysics: THE DEFINITION OF A PROBLEM AND WHAT IS LEFT OUT

The philosophical problem of personal identity consists in determining what makes a person be that person and not another one. It is related to some odd concerns, such as Who am I? What am I? Am I the same person today than the person that slept in my bed last night? We do not usually ask these kinds of questions in our ordinary life; even in spite of growth and ageing, it does not seem troublesome to decide over identity. But philosophy has obstinately dealt with this issue: What is personal identity based on? How can we identify a person, and, hence, assert that someone is identical to him or herself? What allows us to re-identify someone? The classical -and tricky- matter of personal identity is, therefore, the search for the metaphysical foundation and epistemological criterion of identity (Córdoba 2017).

Even though the worry concerning identity can be traced to Descartes, and even to Plato, we owe John Locke the systematic formulation of the philosophical problem in 1960, i.e., the search for the grounding of personal identity. David Hume (1975) posed the same question in 1739 offering a different -sceptical- answer. Nevertheless, it was during the 20th century that the debate became really agitated in the field of English-language analytic philosophy.¹

There is not a unique problem of personal identity; rather, different issues can be distinguished: The problem of synchronic identity (the *identification problem*) and the problem of diachronic identity (the *re-identification* or *identity over time* problem); the problem of quantitative and qualitative identity, among others.² The different problems are "a wide range of questions that are at best loosely connected. Discussions in this area do not always make clear which one is at stake" (Olson 2019 online). Nonetheless, analytic metaphysics, in almost every analysis, defined one concern as the fundamental of identity: The *persistence* question, i.e., the diachronic problem. In Eric Olson words:

The question is roughly what is necessary and sufficient for a past or future being to be someone existing now. Suppose we point to you now, describe someone or something existing at another time, and ask whether we are referring twice to one thing or once to each of two things" (2019 online).

We are addressing the debate regarding personal identity in the field of contemporary philosophy, but it cannot be overlooked that the issue has been analysed in several different disciplines and academic areas. Furthermore, it has also been discussed in some philosophical trends we have not mentioned here (see, for instance, Shoemaker, D. 2019). Outside the realm of philosophy, the debates over identity were very intense in the humanities and social sciences, especially in history, sociology, psychology, anthropology, gender studies and post-colonial studies, among others. In fact, *personal* and *collective identity* has become a central concept in such fields (see, for instance, Bruebaker & Cooper 2000; Giddens 2002; Jenkins 2004).

A clear explanation about the disctintion between quantitative and qualitative identity can be found in Paul Ricoeur 1990. Some problems regarding personal identity are also discussed in the context of the *identity* problem (the logical issue of identity and the question of natural objects' identity). According to the traditional theory, identity is considered a reflexive relation that every single thing maintains with itself; it is considered a relation of substitutability *salva veritate* (Noonan & Curtis 2019). Whenever identity is discussed, the attention is also directed to the issue of the *principle of individuation*. It has been debated whether such a principle is related to a "beginning of existence" in space and time, or it depends on spatio-temporal continuity (Noonan 2003).

The search for the necessary and/or sufficient conditions for a past or future being to be certain present being is at the core of this issue, since "we are presented, at different times, with the same person (or what is alleged to be the same person" (Perry 2008 5).

The debates about identity over time in analytic philosophy generated two main and mutually exclusive conceptions: the psychological view and the biological view or brute-physical views. According to the former it is a psychological relation – continuity or connectedness of memories or other mental features— what makes a person persist as that person. According to the latter, personal identity relies on biological continuity: to be the same person is to be the same body or biological organism.³

Locke –the precursor of the psychological view— considered that people are different from non-personal entities because they have consciousness or instant reflection. Consciousness is what makes a person a "self" (Córdoba 2017). Instant reflection extended backwards becomes memory; which accounts for identity over time. So a person can change a lot throughout a period of time, but that person is the same person in spite of changes, precisely because of memory (Ricoeur 1990). Locke (1997) claimed that a past being and a present being are the same person if and only if the present being can remember now an experience that the past being had.

The lockean view received many criticisms, in spite of which the psychological conception was followed, recovered and reformulated by numerous philosophers in the 20th century. Several different psychological views emerged within this scenario, but all of them assume that personal identity is exclusively psychological identity.⁴

The issue of personal identity gave rise to a wide area of discussion. Particularly in analytic philosophy, arguments for these two main positions can be found in Penelhum 1970; Shoemaker 1970, 1984; Williams 1957, 1970; Thompson 1997; Mackie 1999; Olson 1997 and Snowdon 1990, 1996.

According to Locke (1997) and others, it depends on continuity of memory. Some approaches extend the criterion beyond memory and assert that a present being is the same as a future being when the latter inherits the former's mental features –beliefs, preferences, the capacity of rational thinking, and so on, in addition to memory. So, it is psychological continuity (broader than memory continuity) what is necessary and/or sufficient in order for persistence to be possible. According

On the other hand, according to the biological view, personal identity depends on the continuity of a human body or a biological organism. The body or biological organism determines the person's identity, which thus relies on a physical continuity. The defenders of a biological view argue against the psychological view in every single version of it. Advocates of the psychological conception, on the other hand, do the exact same thing against the biological conception.

For instance, according to defenders of the biological view, if we answer what are we?, then we can derive from that answer the answer to what is identity based on? They also claim that advocates of the psychological view, in several versions, assume an essentialist stance regarding personhood.

Most of the biological view defenders accept animalism and claim that if *X* is a person in time t1 and *Y* exists in other time t2, then *X* is identical to *Y* (*X* is *Y*) if and only if *Y*'s biological organism is continuum to *X*'s biological organism (Noonan 1998; Olson 1997, 2019). According to this view, the persistence conditions of humans are no different from the persistence conditions of certain non-human animals. Whatever grounds identity must not be confused with a personhood criterion.

According to the criticisms, the psychological view is circular: memory presupposes identity. It also has counter-intuitive consequences, such as if there is a past experience of our own that we cannot recall, then we are not the person who had that experience; and if we lose memory for a certain period of time, we are not now who we were then. Besides, identity based on memory is at odds with transitivity and identity is a transitive relation. This conception has also been criticized on the

to other philosophers, it is not psychological continuity what guarantees identity, but psychological connectedness –a relation that can have degrees—: A present being can be more or less connected to a past being while he or she has or lacks of continuity whatsoever. (*Cfr.* for instance Noonan 2003; Parfit 1984; Shoemaker 1999).

Two positions can be distinguished within the biological view: The bodily criterion, according to which personal identity depends on the continuity of a human body (Williams 1970; Thomson 1997); and animalism, which claims that identity depends on the continuity of the organism, metabolic and vital organs of the human animal (Olson 1997; Snowdon 1990).

basis of the imaginary experiment of fission and brain transplant (Olson 2019). If the two hemispheres of a person's brain were transplanted to two different bodies, we must accept that a person can be psychologically continuous with more than one person in the past or in the future at the same time.

The biological view, on the other hand, can supposedly deal with circularity, and it does not confuse identity with personhood. According to several conceptions, it is closer to certain intuitions (by assessing, for instance, that people die whenever their bodies or organisms die). But it is challenged by brain transplant: If a person's brain was transplanted, it must be accepted that the person will still be the organism without brain (Unger 2000; Johnston 2007). Finally, this approach cannot account for ethical features, like moral responsibility. It also cannot account for human specificity, since personal identity is simply animal identity (Olson 2019).

In addition, both positions are partial and reductionist approaches given that they postulate a unique feature of people or human animals as essential and constitutive of personal identity (Córdoba 2015). Summing up, both approaches place identity on a body deprived of consciousness or on an incorporeal consciousness, and demand psychological or physical continuities that are as unlikely as they are odd regarding the possibility to account for identity.

Practical —ethical, social and political— concerns involved in several social practices, as adoption or in vitro fertilization, pose the problem of personal identity in foreground. On the other hand, these cases are not studied by philosophy as they are by social, political and legal sciences. Particularly, philosophy of science has never got involved in these discussions, which is striking, since science seems to have much to say regarding those issues. In the next section we will analyse a *historical real* case in which personal identity is the key concept and regarding to which science seems to have a decisive role. The analysis of the case will renew the interest in the theoretical problem of personal identity and show the necessity of offering a criterion of identity over time. The analysis of that case will show the necessity of engaging philosophy of science into the identity debate as well.

3. Appropriation of children and abuelas de plaza de mayo

During the last civic-military dictatorship (1976-1983), the Argentinian Armed Forces implemented a systematic plan for appropriation⁶ of the children of the detainee-disappeared for political reasons.⁷ For approximately five hundred children, this meant the suppression of their filiation and imposition of a new identity. The Armed Forces designed a singular regime for the treatment of children; instead of exterminating them, their identities were substituted through the falsification of public documents, such as birth certificates, identity documents and illegal adoption procedures. Abducted children during the repressive operations, as well as infants born in captivity during the detention-disappearance of their mothers were mostly registered as biological children of members of the repressive forces or their direct or indirect sympathizers. In other cases the children were delivered to families, usually neighbours of the abductors, who either adopted them in good faith or registered them as their own offspring, while still others were placed in institutions for minors. However, considering that these children were not given voluntarily and legally for adoption, all the methods involved – and still do involve – the suppression of filiation and the creation of "another" legal and biographical identity, thereby consummating the disappearance-appropriation. In October 1977, APM, formed by grandmothers of the appropriated children was founded with the aim of finding

Even though during the dictatorship the grandmothers of disappeared children began to denounce the existence of a systematic plan for the appropriation of babies, it was not until 2012 that the Argentinian Justice deemed it proven.

In the face of the unyielding silence of the military forces and of denialism, Argentinian Human Rights organizations estimated the number of the detained-disappeared people for political reasons at 30.000. This number is a symbol of the re-foundation of democracy in Argentina and an emblem of denunciation of State terrorism crimes.

their grandchildren (now young adults) and restitute them. To date, APM has found 127 grandchildren, but about 300 remain to be identified.

It is worth noting that in four decades of struggle, APM have devised various strategies to search for, find and restitute those children, working jointly with lawyers, psychologists, physicians, geneticists and anthropologists, among other experts. In this context, some of their outstanding achievements have been the development of the grandparenthood index, which enables the determination of the genetic connection between the grandparents and their grandchildren;9 the 1984 formation of the Equipo Argentino de Antropología Forense (Argentine Forensic Anthropology Team), which specializes in the identification of the remains of the detainee-disappeared and the determination of the cases of women who gave birth at clandestine centres. The creation in 1987 (Law 23511) of the Banco Nacional de Datos Genéticos (National Genetic Data Bank), containing the DNA samples of the families that have disappeared children; the inclusion of the Articles 7, 8 and 11 –informally called "Argentinian articles" - in the 1989 United Nations Convention on the Rights of the Child, directed to establish the "right to identity";10 the conformation in 1990 of the Comisión Nacional por el Derecho a la Identidad (National Commission for the Right to Identity).

However, it is the initiative related to genetic identification tests that is particularly interesting for the purpose of the current study, because of its ontological implications for the notion of personal identity. The restitution of identity of the appropriated people has vindicated genetic science in Argentina in the Human Rights organizations' discourse, certain scientific-academic spheres and conventional wis-

When these people were children, restitution meant returning to live with their biological families; nowadays, considering they are over 40 years old, it consists of unveiling the appropriation and rectifying their personal papers according to their true provenance.

The first person identified by immunogenetics was Paula Logares in 1984. However, the work of APM and their relationship with scientists in different parts of the USA and Europe began in 1979, during the dictatorship (APM 2007).

See articles 7, 8 and 11.

dom. Nevertheless, the restitution of identity through evidence provided by DNA techniques has been questioned inasmuch as it involves a genetic notion of identity. Some criticisms point out the risk that such a notion may lead to accept reductionism and/or genetic determinism. Before considering this issue, let us review the importance of DNA testing in the restitution of appropriated grandchildren.

Genetic testing is crucial to APM's search, because it enables appropriated people to be identified despite the relentless passage of time, as well as providing judicial proof of the crime of children appropriation and identity substitution. It also prevents further crimes of substitution of identity. With regard strictly to DNA testing, as Córdoba and Lipko state, technological advances made techniques for identifying people highly reliable. Before these techniques were refined to their current level of sophistication, it was possible to prove that someone was not the biological parent of a person, but it was more difficult to confirm actual biological parenthood, i.e. it was possible to exclude someone from a family group, but not to include them. This is why it is often said that APM's search challenged genetics by creating the need to determine filiation in the absence of progenitors (APM 2008). Indeed, APM motivated scientists to seek an answer to their need and design a scientific method to allow them to identify and recover their grandchildren¹¹. But how could evidence be used to prove blood relationships when the parents had disappeared? It is well known that a child's genetic traits come from their biological parents, and in turn, from their grandparents. Thus, biological ties can be tested by analysing the supposed grandparents of the appropriated children. To do so, the mathematical formulas needed to be modified so that instead of analysing the probability of parenthood, they analyse the probability of grandparenthood, providing a grandparenthood index; i.e. the probability, expressed as a percentage, that certain people are indeed the biological grandparents of a given individual:

However, the methods for identifying people did not begin with DNA, but with other studies of inheritance patterns of blood types and certain histocompatibility antigens or HLA system involving the immune system (APM 2008).

The principles are the same than those in parenthood tests, except that in these cases the genotypes of the disappeared people who may have been the biological parents of the appropriated children must be inferred by studying their parents' genotypes. Naturally, this involves more uncertainty given that the required data has been inferred; nevertheless, when four potential grandparents or other potential biological relatives —e.g., siblings of the disappeared people whose biological parenthood is under investigation—, the situation provides a further degree of certainty, because the genotypes of the potential biological parents can be inferred with almost as much certitude as if they had been analysed directly (Córdoba & Paula 2013 276-277 our translation).

Biological identity acquires a decisive status for APM, because it permits re-identification of the children/young adults who were appropriated and demonstrates the existence of a biological tie between them and their grandparents. The proof of biological identity also facilitates both confrontation in the judicial sphere, as well as in the public sphere, against discourses that are favourable to the appropriators, which claim that filiation, identity and kinship are based on a "debiologized" notion of nurturing (Quintana 2016, 2017, 2018). Nevertheless, DNA seems not only to act as an invariable criterion of persistence over time and proof of crime, but also to shift and gain the metaphysical status of *foundation* of personal identity. On this point we shall reflect below.

4. DENUNCIATION OF AN ALLEGED GENETIC NOTION OF IDENTITY IN APM'S DISCOURSE

The role genetics plays in the restitution demand and the relation between genetics and human rights have been widely discussed in several analyses (APM 2008; Bergel 2012; Penchaszadeh 2012; Olarte-Sierra & Jaime Castro 2019). Even though "[Genetics] has become the most controversial discipline in the history of science", as Salvador Bergel states (2012 41 our translation), genetics contributed to APM's

search. 12 So, as Córdoba and Lipko affirm: "The fact that genetics has, despite its history, taken a stance on the side of truth and justice, has been of enormous relevance not only to APM's search for APM, but also far beyond it" (2013 277 our translation). Given that restitution is understood as a reconstruction against the damage produced by appropriation, each occasion upon which an appropriated person is found is celebrated as an act of rectifying, "a sort of 'reversion' of such phenomenon, which has become an exemplar of struggle, resistance and reparation for the whole Argentinian society" (Córdoba & Paula 2013 277 our translation). That is why a theoretical reflection on restitution must accompany and support the achievements of APM and their on-going search. The discussion took place even when it can be considered fairly obvious that identity is not exhausted by genetics. Víctor Penchaszadeh –who happens to be the geneticist who jointly with Mary Claire King found the parenthood index- assesses: "The wonder of genetic individuality should not lead us to the mistake of thinking that the identity of people can be reduced to their genetic characteristics" (2012 263 our translation). It is simply not accurate to think that science, particularly biology, has the final say in personal identity. In other words, what has been questioned is that the criterion used in order to identify people becomes the basis for identity (Córdoba & Paula 2013). A criterion that perfectly works for identifying people should not be confused with the very foundation of identity. That misunderstanding can be moderated if the distinction between identification process and identity is emphasized. In fact, the whole debate around the consequences of the restitution demand based on identification techniques can be rewritten if such distinction is clearly established. Identification does not take the place of identity,

María Fernanda Olarte-Sierra and Jaime Enrique Castro Bermúdez analyse the role of identifications of forced-dessapaired persons in transicional justice in Colombia (2019). Their analyses of the techniques' impact in order to achieve the values of *truth*, *justice*, *repare* and *no-repetition* (Olarte-Sierra ét al. 2014) can be transpolated to the analyses of the Argentinian case. To analyse the fundamental role of DNA technologies for identifying crime's suspects, as well as its relation to racism, see M'charek 2008 and Jong and M'charek 2018.

since knowing the genetic information of an individual does not provide access to its identity –it does, instead, to the person's filiation or biological ties.

Regarding the false overlap between personal identity, on the one hand, and identifying processes and identifying techniques, on the other, Giorgio Agamben offered a historical explanation of the fact that identity is confused with biological data (2011). In order to do that, he refers to the changes the idea of identity suffered in the second half of the 19th century, thanks to the improvement of police identification techniques. According to Agamben's criticism, biological data of a person have nothing to do with identity; it is -even it sounds paradoxical- extremely alien to the person. That movement -from criterion to ground- completely exceeds the demands of justice such criterion was required for and also conditions other vindications of the right to identity in Argentina, which are not linked to State terrorism. In this sense, it has been stated that when immunogenetic identification techniques -which provide evidence of one aspect of an individual's identity- become the basis for personal identity, an "ontologization" of that criterion takes place (Córdoba & Paula 2013).

Even though it is necessary to distinguish between identity and identification processes, it is undeniable that in modern-states identification techniques and identification processes -especially those linked to DNA- play a relevant role in the very constitution of individuals/persons as citizens, as the work of Lindsay Adams Smith shows: "Techniques of identification like the passport, ID card, fingerprint, and now DNA have a privileged relationship to modern modes of governance. They betray the intimate relationship between processes of identification and the rise of the modern nation-state and by extension the modern citizen." (Smith 2016 1051). According to the author, these processes give rise to a "biological citizenship", in which identity and biology become linked. She assess that to be a full citizen in Argentina, the government must recognize each person as a member of the polity, not exclusively as an individual, but also as a member of a particular family. This recognition is not bureaucratic; it is based on an immutable notion of a lifelong identity inscribed in people's genealogy -and DNA techniques make that evident.

Gabriel Gatti emphatically questions the assimilation of identity with genes. He criticizes the fact that genetic data –related to the urgency of finding elements to establish grandparenthood– have been transformed into an *ontological definition*. In such regard he claims:

The tactical and practical necessity (...) became an ontological definition that has ended up colonising not only the field of the detained—disappeared persons but even the most usual definitions of identity. Since then, genes and genetics have ended up defining being (Gatti 2012 359).

Gatti also argues that the possibility of recovering the appropriated people led to the notion of *origin*, since it is the most straightforward fashion to denounce appropriation and demand restitution, which resulted in a *strategic justification* of APM. However, he holds that such justification has become a *theoretical* construction with universal aspirations and the form of an *algorithm*, according to which: *Identity is origin, origin is gene*, then identity is gene. The policy of searching living disappeared people is, therefore, based on the "the most conservative possible definition of identity": identity is the *preservation of what is* (2008 101-102).

Sabina Regueiro (2010) also reflects on the genetic identification practices promoted by APM and alleges that kinships are politically, legally and also scientifically constructed. According to her, what is *biological* in human beings does not exist beyond social practices. This is the case even when it may seem, in APM's discourse, that kinship and identity are solely connected with genes because of the impact of genetic identification tests. From that standpoint, it can be said that while immunogenetic identification provides the *proof* of the crime and demonstrates that there is a "true" (biological) identity versus a "false" identity, it is not sufficient, since it is equally essential that legal mediation be present to establish biological identity. In fact, it is a legal manoeuvre, which first grants legitimacy to the scientific test, and only then will it establish biological identity and kinship. It is not enough for science to provide 'hard' data, but there is also a need for a *speech act* from the State to enshrine the

biological relationship between the grandparents and their grandchildren. Moreover, neither is a court ruling sufficient to restore an identity and construct an *affective* tie; much the contrary, in Regueiro's words, it is necessary to "transform the symbol of the 'biogenetic substance' into a *family relationship*" (2013 187 *our translation*). In this regard, it should be noted that although 'family' operates as a framework providing intelligibility and organizes the demand of APM, the *restitution* process involves the work of re-narrativization to turn DNA ('genes', 'blood', 'roots') into the privileged signifier upon which to re-found the identity of the appropriated/restituted people. Even though it is precisely this narrative dimension which shows the failure of getting closure and thus the impossibility of reducing identity to its biological aspect.

Although the risks of a biologically grounded notion of identity involved in restitution have been pointed out by the works of Gatti, Regueiro and Córdoba and Paula, DNA, far from being the ultimate basis of personal identity, becomes the condition of possibility to articulate a new narrative of personal identity. Accordingly, it seems possible to relativize the above-mentioned shift from the identification test to the metaphysical basis for personal identity. DNA allows us to identify someone -i.e., to determine who someone is- in the idem sense of identity, following Paul Ricoeur's proposal (1990). It works as a criterion for idem identity, since it guarantees continuity over time of the same individual. Nevertheless, we can wonder which kind of identity can be built on the basis of merely biological data? According to Ricoeur, the ipse aspect of identity –which refers to the sense and fact of becoming another over time-should also be taken into account, since otherwise, the who is masked by a what. DNA, hence, does not account for who a person is. The distinction among idem and ipse identity allows us to argue that even though the reference to DNA is decisive to APM's search -since it requires the re-identification of disappeared appropriated people, vindicating a feature of identity not linked to nurturing- DNA is, nevertheless, insufficient to account for personal identity. Even though an ontologization of the identification proof and a displacement to the status of foundation can be denounced -as the criticisms pointed out do- and even though DNA results, in fact, enable re-identification and, hence, work perfectly as a starting point of the restitution process, the identity of the appropriated-restituted people cannot be

finally established without, on the one hand, the role of the State and, on the other hand, a process of biographic re-narrativization. Moreover, the ontological position of DNA itself may be questioned because scientific discourse does not seem to have a different status from juridical and psi discourses, which perform and over-determine identity. Nevertheless, if we justly appreciate the role science and techniques based on science play in this case, we can recognize that DNA works here as a condition of possibility of the eminently political process of restitution in the public realm and re-narrativization of identity in the personal and communitarian level. So, what can philosophy of science contribute to this issue, particularly, to the link between genetics and personal identity? We shall see in what follows.

5. GENETICS AND PERSONAL IDENTITY: A PLURALISTIC PERSPECTIVE FROM PHILOSOPHY OF SCIENCE

Given the scenario presented above, we will argue that it is possible to defend the restitution strategy but at the same time reject a reductive genetic conception of personal identity. And philosophy of science can help us in that task. Can a genetic conception of personal identity be considered grounded? Can genetics reduce identity?

A genetic approach on personal identity is a reductionist stance, since it makes identity dependent of a single aspect of the person. Moreover, this position is also inheritor of a reductionist view within the very field of biological sciences, according to which there is an epistemological priority of genetics, in terms of molecular biology, over other biological sub-disciplines (see Rosenberg 1997, 2006). Furthermore, it can be argued that such reductionist view rests on the ontological assumption that every somatic feature of a biological organism can be reduced to the molecular genetic level. During the 20th century –"the century of the gene" in Evelyn Fox Keller's words (2000) – the gene has been exalted as the unit of heredity and information, according to its pre-eminence in biological explanation and investigation. Nevertheless, in contemporary biology, as well as in philosophy of biology, many arguments question such conception. According to these critical views, the genetic

material's role in living beings can be moderate; hence DNA cannot be ascribed a sufficient condition role in living organisms. In this line, for instance, Griffiths and Stotz argue for the role of the environment in gene expression and regulation, which can be appreciated more neatly in the case of parental effects and plasticity (2013). As Richard Lewontin, Steven Rose and Leon Kamin (1990) assert, biological determinism is the position that holds that human life is strongly controlled by the genes for specific behaviours or for predispositions to these behaviours. The authors argue against that idea, by assessing that it denies the fundamental difference between human and other biological organisms. Human's biology is such that we can constantly recreate our material and psychical environment; therefore our lives are the result of a plurality of causes (1990).

From an exclusively metaphysical perspective, if we accept the analytical framework, it can be stated that DNA works as a principle of persistence over time, it seems to account perfectly for identity, and can be considered an enlightening version of the biological view. But, in the very frame of the metaphysical discussion, we can also affirm that genetics fails to define identity in the same way that any biological criterion does so. Even though genetics plays a central role in the identification process of appropriated children, if we universalize a notion of identity based on biology involved in that particular case -by means of assessing that genes ground identity—, we will face the same problems that the biological approach faced. A biological criterion disregards several practical problems. In the first place, it cannot account for ethical responsibility: The rationality of a person's anticipations to future experiences -and responsibility for past actions- seems to be grounded on the fact that that future -or past- person inherits the former mental features, their psychology, while the inheritance of their biological organism seems irrelevant (Shoemaker, D. 2019). As we have seen, human specificity is also overlooked, and the identity considered can be thought as the identity of a *what* rather than the identity of a *who*.

On the other hand, however tempting as it may sound –given that the metaphysical debate over identity has led to *aporias* and paradoxes– it does not seem reasonable to ask science and technology to provide an ontological definition –and therefore a resolution- to a metaphysical issue. We have also argued that DNA is insufficient in order to account for identity, that it does not reduce or define identity, but it can be read as a condition of possibility of re-articulating personal identity.

On this basis, it could be considered a settled matter that DNA does not ground identity. Nevertheless, to deconstruct the association between identity and genetics, we may still have to fight an ingenuous idea about the relation between science and values, and some realistic positions regarding scientific knowledge and ontology described by science. We will argue that pluralism can help us in both tasks.

Besides the considerations that have led several philosophers to adopt pluralism –for example, the complexity of phenomena under research (Mitchell 2003; Cartwright 1999), the harmful consequences of the monist pursuit of truth (Chang 2004, 2012), among others—, there are two features of scientific knowledge especially relevant in order to address the role of genetics by defining identity regarding the case of restitution. One of them is accepting the character of *situated* that scientific knowledge has and, consequently, the role of values in science, and the other one is related to fighting the ontological commitments of a realistic externalist position.

About the former, we claim that pragmatic interests cannot be avoided in order for a philosophy of science to account for the effective practice of science. As Helen Longino establishes: "the individuals participating in the production of scientific knowledge are historically, geographically and socially situated and their observation and reasoning reflect their situations" (Longino 2016 online). The case of restitution due to a technique based on scientific knowledge illustrates how people's lives and relations are modified by certain developments made by science. In fact, as we have claimed, the case shows how genetics itself played a part in an actual pursuit of justice and a political "truth". It can be argued that social values necessarily play a role in science, by means, for instance, of such a techno-scientific practice. The grandparenthood index was discovered thanks to a practical political demand of justice, a demand that became a technique and had legal consequences as well.

Some philosophers of science place the role of the so-called "external", social values on science in the foreground (Longino 2016 *online*). Elliot (2011) points out that not only harmful consequences of science should be discussed; social benefit should also be regarded as playing a role concerning scientific knowledge. But, of course, the

problem of consensus regarding which values should or should not be pursuit in scientific research arises. It seems truly naïve to assume the possibility of consensus and assess that some values are simply "socially desirable". It is usual to criticize the role of values in science, since knowledge and objectivity are associated with power-over relations and domination. But regarding that critical view, the case or restitution implies at least a call for attention: things seem to be upside down in this case. The issue of values can be sufficiently approached regarding the case of identity, genetics and restitution, by means of adopting a pluralistic view of science, as we shall see.

Regarding the latter –the naïve view on knowledge and ontology– a pluralistic internal stance can come to our assistance in order to comprehend the relation between identity and genetics. In his famous "Empiricism, Semantics and Ontology" (1956), Rudolf Carnap defended a pluralistic position, by assessing that questions concerning the existence of entities have to be made within a linguistic framework; otherwise, they do not make sense. According to Carnap, to be real means to be an element within a linguistic system. External questions about the existence of the "thing world" are meaningless, since they are wrongly formulated. This carnapian internal pluralism can be traced as an inspiration of Hillary Putnam's internal realism (1981) and Olimpia Lombardi and Ana Rosa Perez Ransanz's ontological pluralism of Kantian roots (2012). The core of these positions is the rejection of the externalist realistic perspective –the "God's eye view".

According to externalism, objects exist independently from the subject of knowledge (they are *self-identifying* entities), and constitute a determined totality. The world is thus a set of mind-independent objects. Therefore, there is a *true* and complete description of the world as it is (Putnam 1981 49). Putnam, as Kant did, rejected the idea that the objects we know are things with an independent existence from our sensibility. According to Putnam, there is not such thing as a totality of objects independent to our knowledge, our mind, language or conceptual schemes.¹³

The existing entities do not appear to us as they are; they appear to us only by means of the mediation of certain sets of concepts and categories. Objects are phenomena resulting from a synthesis

There are, rather, several points of view coming from real people, reflecting their *interests* and *purposes*, to which their theories serve (Putnam 1981 49-50). In the same fashion, Lombardi and Pérez Ransanz state that objectivity does not emerge from a hypothetical inexistent God's eye, but it is the result of the application of our conceptual schemes to *noumenic* reality. Different alternative schemes coexist, and they are not convergent or reducible to a unique scheme. So, this Kantian realism leads to an ontological pluralism that opens the possibility of coexisting *different ontologies*, even incompatible with each other, equally adequate in different contexts. Lombardi and Pérez Ransanz have defended their pluralism as a non-reductive conception of science, according to which different ontologies are related to each other by means of symmetric nomological links that do not suppose ontological dependence or priority whatsoever.

If a scientific pluralism of that kind is applied to the problem of personal identity, the partial character of every view is no longer a problem, given that no approach is considered *the* approach to identity. Neither psychology nor biology exhaust identity (so, genetics cannot ground identity), but every single view can work on different contexts, with different purposes and according to particular practical interests. Since the role of values is not eliminable from scientific practice, then we can adopt, from a pluralistic perspective, a genetic conception of identity for the case of restitution, a fact that reveals how science works jointly with certain social values in particular contexts.

Lindsay Adams Smith analyses the case of restitution in transitional justice in Argentinian democracy and claims:

Although feminist scholarship and the Nietos [Grandchildren] and Abuelas themselves have shown that the individual, the family, and the nation are constantly imagined, created, and contested, in policy settings, DNA identification

between the external world and our conceptual schemes. Since there is not a God's eye perspective, it makes no sense to ask What is out there, in the world?, as Carnap had said.

has become a symbol for healing through its power to reconnect these systems of belonging -literally to genealogically connect a searching mother and the bones of her child or a grandmother and her kidnapped grandchild. It is constructed as offering some kind of an answer to this crisis of meaning making generated by disappearance (Smith 2016 1050-1051).

"In the case of Argentina, DNA is reconstitutional: offering individual restitution in the form of biogenetic identification, and at the same time constitutional of new modes of postviolence reckoning" (Smith 2016 1052). According to her, "forensic DNA acts not only as a powerful disciplinary site of biocitizenship but also as a potential space to reimagine the social contract between the body, the public, and the state" (Smith 2016 1038). Smith also claims, following Jasanoff (2011), that the link between transitional justice, identification, and kinship can be interpreted as a kind of bioconstitutionalism, "where new biotechnologies coproduce new legal and political systems of meaning" (Smith 2016 1052).

We have argued that even though DNA serves as a criterion -and offers a proof- of the persistence of a biological organism, given that it guarantees uninterrupted continuity over time, personal identity cannot be grounded on genetics. Nevertheless, biology is, in a sense, exalted in the restitution strategy, and that is due to the fact that DNA functions -as it has been said- as a condition of possibility of articulating an identity that faces appropriation, and opens the possibility of biographical rewriting. Besides these political and ethical reasons, and being careful regarding the exaltation of biology involved, we can appeal to pluralism in order to, on the one hand, accept a certain genetic definition of identity for a particular case and context, and, on the other hand, be alert regarding its universalization and consequent extrapolation to other contexts. So, there is also an epistemological reason to accept a contextual and partial scientifically grounded genetic conception of identity, adequate to a particular context, but knowing that being scientifically grounded must not be identified with being true or valid for every single context (as the metaphysical debate aspired to). Philosophy of science contributes in the debate by accepting a pluralistic stance, rejecting a reductive essentialist notion of identity. In this sense, we claim with Longino:

Researchers committed to a monist or unified science will see plurality as a problem to be overcome, while researchers already committed to a deeply social view of science will see plurality as a resource of communities rather than a problem (Longino 2016 online).

Since –following internalism– to be real means to be an element within a linguistic system or conceptual frame and external questions are meaningless, it also does not make sense to ask for personal identity itself, neither in any scientific domain, nor as a metaphysical issue. The contextual character of scientific knowledge not only leads us to assume the impossibility of such kind of universal supra-context definition, but it also makes room for social, political and ethical commitments within scientific research (as the development of the grandparenthood index show and the consequences over and above the scientific realm that DNA tests have). 14 So, philosophy of science engaged in the debate over identity and the political dimension of restitution can aid the definition of a precise role of science, not as a guarantor of objectivity in a naïve externalist sense. Political values, the so-called "external" values, are not that external; they contribute to framing and hence constituting ontology. In this case, they contribute to establishing genetic identity not as *nude fact* but as a politically valued fact, a valued fact that Governments must protect and science can account for. The acceptance of this kind of pluralism not only sheds some light on the metaphysical realm, by closuring the debate between mutually exclusive notions of identity –a debate that leads to paradoxes–, but also allows us to evaluate scientific knowledge as a practical concern.

Can personal identity of restituted grandchildren be understood as a product of science and technology –in M'charek's (2010) words?

6. CONCLUDING REMARKS

In philosophical research, we are used to the fact that interactions among science, metaphysics and politics seem not only theoretically inaccurate but also impossible, given the "nature" of the matter in question in every field, and the "methods" and interests involved as well. The case of restitution, made possible by a technique grounded on scientific knowledge, shows how artificial certain limits among philosophical sub-disciplines are —and hence, how fake the alleged inaccuracy of addressing such interactions is.

After analysing the role of genetics in restitution, the implications of the interpretations of dna results within —but also far beyond— its legal effects, especially in order to comprehend personal identity, and how the so-called "external" interests of science contribute to ontology constitution, it is not far fetched to state that the role of science regarding personal identity is an issue that must be, at least, philosophically addressed.

The general thesis that scientific practice is not neutral, that it is rather a socially situated practice, and that values and interests are inseparable from it —especially when it comes to technology— may be considered evident nowadays. Nevertheless, the problem here addressed allows us to exemplify that thesis, showing at the same time the social relevant role that science has in its practice.

Regarding this case, we are not establishing the possible "bad" consequences of genetic determinism by means of making room for a genetic notion of personal identity, we are not wondering what genetics theoretically affirms –if anything– regarding the ontological issue of personal identity either. We are stating that science not only has effects on people's lives –which seems quite obvious– but it has a *constructive*, *constitutive* role regarding the very ontological domains it tries to account for. Acknowledging that fact will have significant consequences for understanding the world we live in, for addressing new political and ethical demands –in which science and technology are involved- and for fairly evaluating science from a pluralistic framework that recognizes the role of values in science. On the other hand, it will also make room for new questions and problems to arise. For instance, if according

to pluralism, different domains are equally constructed by means of diverse schemes, a suitable notion of personal identity in a certain historical time and in a peculiar context can be considered wrong in a context in which different social values are held. It is usual to differentiate among internal and external problems of science, but we hope our analysis contributes to thinking that philosophy of science can keep a critical and alert mind regarding ontology constitutions, as long as it involves a politically committed attitude towards science. That is not an *external* attitude that must be *added* to philosophy of science, but an essential part of it.

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