Innocent in the Dark:
Toward a Duty to Preserve Biological Evidence
in Chilean Criminal Justice

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Preservation of biological evidence can profoundly impact criminal justice as it can be essential to establish the innocence of a convicted person and thus make evident a miscarriage of justice. The paper provides information and insights regarding the state's duty to preserve biological evidence in criminal justice, thus improving accessibility issues in the post-conviction review in Chile. In doing so, the paper looks beyond Chile's borders and seeks to obtain lessons from US states' preservation statutes. The research uses law comparison to assess and comprehend the appropriateness of Chilean regulation and then to identify areas for improvement in the criminal justice system.

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I Introduction

The development of DNA technology has shown how fragile criminal justice systems can be and how vulnerable they are to making mistakes. Since the late '80s, this technology has actively served the purposes of justice since it not only has exposed dramatic cases in which the system convicted innocent people, but it has also helped identify and incriminate the actual perpetrator of such crimes. This technology has been fundamental in the emergence of post-conviction litigation in the US, where DNA-based post-conviction relief applications have helped determine that the courts have convicted and sentenced innocent people.[1] For instance, the Innocence Project database shows that from 1989 to date, there have been at least 375 DNA exonerations. Likewise, the National Registry of Exonerations considers 535 DNA-based exonerations.[2] Thereby, DNA-based exonerations have undoubtedly gained relevance by exposing the problem of wrongful convictions and helping to free the innocent.[3]

Despite the growing use and significance of DNA in criminal justice, Chile has thus far not witnessed DNA-based exonerations.[4] While this may sound promising for those advocating for a

[1] In general, by post-conviction relief, I refer to the mechanisms used to correct a conviction after the defendant loses a direct appeal, and thus based on issues not reflected in the trial record or considered on direct appeal. In this context, however, I will be implicitly referring to them as based on, or supported by, new DNA testing. In Chile, the only relief available after a conviction becomes final is the so-called "recurso de revision" which I shall call *post-conviction review* throughout this article. However, other Chilean scholars refer to this mechanism as *wrongful conviction claim* (e.g., Duce, 2015; Fernández & Olavarría, 2009), *habeas corpus* (e.g., Duce, 2017), *revision action* (e.g., Mañalich, 2020) or *remedy of revision* (e.g., Carbonell & Valenzuela, 2021).

[2] See Innocence Project (2020). See also The National Registry of Exonerations (2020).

[3] In Keith Findley's words, "DNA moved exonerations from the periphery to the front and center" (Findley, 2017, p 184). For an overview of the impact of DNA on criminal justice, see Garret, 2011, pp 217-222; Medwed, 2017. See also West & Meterko, 2016, p 752 (asserting that DNA testing is the only forensic discipline that has been recognized as a scientifically valid and reliable method for differentiating individuals, as well as for demonstrating the connection between evidence and a specific individual or source). Nonetheless, it should be noted that while it is a reliable and accurate technology, scholars have pointed to a few circumstances under which DNA does not work, see Visser & Hampikian, 2012; Gill, 2014; Murphy, 2015. For additional limitations of DNA, see Bandes, 2008, p 10; Findley, 2008, p 1161.

[4] Although Chile's Innocence Project includes a few DNA exonerations in its registry, these cases cannot be considered either exonerations or wrongful convictions, as no sentence has been imposed. In said cases, the Criminal Court dismissed the case during the pretrial investigation based on article 250 section b) of the Chilean Code of Criminal Procedure (when the defendant's innocence has been clearly established). Therefore, such cases are much closer to the concept of *near misses* (Carrano et al, 2014, p 476) or, as it has been suggested in Chile, to the concept of *wrongful prosecution* (Duce & Villarroel, 2019, p 217).

better criminal justice system, the lack of exonerations does not mean that the system makes no mistakes. Conversely, it means that there are many problems to access or succeed in post-conviction review applications. On one hand, the post-conviction review legal setting is an issue, and Supreme Court interpretations and practices have made this an inaccessible proceeding (Duce, 2015; Fernández & Olavarría, 2019; Mardones, 2011). On the other, even if such a proceeding were to become accessible, there is no manner for those who have been wrongly convicted to present evidence to support their applications for post-conviction review through DNA testing, as physical evidence and biological samples are rapidly destroyed.

This scenario raises the issue of evidence preservation. In this regard, in 2005, the Innocence Project at Cardozo School of Law reported that 75% of the cases in which legal assistance in the exoneration process was provided eventually failed because evidence had either been destroyed or lost (Jones, 2005). Thus, when evidence is rapidly destroyed, lost, or even degraded over time due to improper preservation, the system creates colossal barriers to the prevailing of the innocent in post-conviction relief (Jones, 2005; Medwed, 2005; Norris et al, 2018). In Chile, however, the problem is double; on one hand, post-conviction relief is hard to access; on the other, their laws do not impose a clear duty to preserve evidence after a conviction. These two issues establish enormous obstacles for the innocent in the path of challenging their convictions and would suggest that Chile has a dark figure of wrongful convictions.

However, this is a matter not only of preservation but overall, the manner in which an investigation is conducted from the very beginning. Thus, to properly preserve a piece of evidence, several critical steps are required, such as its identification, collection, custody, tracking, and storage. In 2011, research analyzing the first 197 cases of DNA-based exonerations in the US established that exculpatory evidence was almost always obtained early on, during the original investigation (Hampikian et al, 2011, p 98). The early destruction or spoliation of evidence raises issues related to the state's duty to preserve the evidence, that is, an obligation to retain evidence that may contain biological material so that the evidence can be tested for actual perpetrator DNA or the absence of the defendant’s DNA. This scenario has led many US states to enact or strengthen innocent protection laws, enshrining provisions that mandate the state to preserve biological evidence. Chile, in turn, has some provisions that regulate the matter, but they are scarce, diffuse, and even contradictory. In this context, this work seeks to describe such rules in Chilean law to then assess and criticize them in the light of comparative experience and the recommendations of expert organizations.

As a first attempt to illuminate and incentivize the study of the issue of preservation in Chile, this article looks at the experience of the US and aims to identify areas for improvement in the Chilean criminal justice system. The first section presents an overview of the Chilean criminal justice system, focusing on the post-conviction review mechanism and describing its shortcomings. Then, it presents the methodology and research’s limitations. Later, the paper presents information on duty to preserve evidence and reflects upon the Chilean reality. Finally, the article describes, systematizes, and criticizes the Chilean rules and assesses them considering the comparative experience and expert recommendations.

II The Road to Exoneration: Challenging a Conviction in Chile

Imagine that you live in Santiago, Chile, and were recently convicted for a murder you did not commit. Your attorney filed a direct appeal, but the Supreme Court rapidly rejected it: the initial judgement is upheld, and you're sentenced to prison. From this point, let's analyze three scenarios.

In the first scenario, you hire a new attorney to file your post-conviction review application based on the retractation of a key state's witness, as well as the exculpatory testimony of two people, which the police never obtained during the original investigation. Although your innocence claim has merit, the Supreme Court declares it inadmissible due to a lack of grounds, as Chilean law does not allow a convicted person to apply for a review based on a new testimony or retractations.

In the second scenario, your attorney collects a key piece of evidence from the scene of the crime, which was not detected by the police, and submits it to the lab for DNA testing. The results are conclusive: the DNA profile obtained from the evidence does not match you. Based on these results, she files a post-conviction review application before the Supreme Court. However, after oral arguments, the court rejects the application because the DNA results are not new evidence under the court's criteria.

In the third scenario, you believe that a specific piece of evidence might contain the DNA profile from the actual perpetrator. Nevertheless, after an attorney-client meeting, you learn that the state destroyed all the evidence seized in connection to the case immediately following your conviction and testing such elements for DNA becomes impossible. Your hands are tied.

As illustrated, challenging a conviction in Chile can become a steeplechase. While this article focuses primarily on the third scenario's problem, this sub-chapter seeks to introduce general aspects of the Chilean criminal justice system, as well as the essential elements of the current post-conviction review mechanism, as well as its relevant shortcomings.

A. Overview of Post-conviction Review in Chile

In 2000, Chilean criminal justice underwent a profound reform, transitioning from a classic inquisitorial system towards an adversarial one. Thus, whereas the old system concentrated both the investigative and decision-making functions solely in the criminal judge, the adversarial separates such functions between the prosecutor as an investigator, and the judges as decision-makers. In addition, the adversarial system replaced the written dossier as the basis for deciding a case, establishing instead an oral and hearing-based proceeding. Then, along with creating the Public Prosecutor's Office, the reform introduced a system of discretion to rationalize criminal prosecution. Lastly, the reform replaced the old figure of the criminal judge with two new actors: the Guarantee Judge, entrusted with the investigative and pre-trial stages, and a judicial panel composed of three professional judges for trial proceedings.[5]

[5] Naturally, this section aims to present the reader only with an overall view of the essential aspects of the reform process. For a detailed review on the reform, see: Duce & Riego, 2007, pp 37-88.

While the reform modified the essence of the criminal justice system, the post-conviction review mechanism has survived almost unchanged for about two centuries. Indeed, article 473 of the new code, which entered into force in 2000, is almost identical to article 657 of the old Code of Criminal Procedure enacted in 1906, with only a few minor changes in setting the legal design of post-conviction review proceedings.[6] Particularly, the differences are minor drafting modifications and a new ground for applications (see below article 473 provision e).

The post-conviction review is a special procedure that allows the Supreme Court to revisit and eventually vacate a conviction despite it being a final judgment (Horvitz & López, 2004). Thus, the grounds for applying for review are:

a) When, by virtue of two contradictory judgments, two or more persons are sentenced for a crime that could not have been committed by more than one.
b) When a person is sentenced as the author, accomplice, or accessory to the homicide of an individual whose existence is proved after the conviction.
c) When a person is sentenced by virtue of a judgment based on a document or the testimony of one or more persons, provided that said document or testimony had been declared false by a final judgment in a criminal proceeding.
d) When, after the conviction, a fact occurs or is discovered, or an unknown document appears, and said fact or document is of a nature that, on its own, is sufficient to prove the convicted person's innocence.
e) When the conviction has been pronounced due to prevarication or bribery of the judges who issued it, whose existence has been declared by a final judgment.[7]

Unlike the US, where post-conviction relief applications are generally filed before the trial court, in Chile, it is the Supreme Court who has original jurisdiction to hear and decide these cases. However, before deciding to hear a case, the application must pass a preliminary admissibility analysis, which has become a tremendous barrier in practice. Indeed, research established that during the period between 2007-2016, 89.7% of post-conviction review applications were declared inadmissible by the Court. This led to the conclusion that the Court applies strict scrutiny when reviewing post-conviction review applications through the preliminary admissibility in comparison with other types of applications in criminal matters (Duce, 2017, pp 10-11; Duce, 2021, p 10). In these cases, the Court declined to hear them based solely on the written submission without granting oral arguments, in application of Article 475 of the Criminal Procedure Code. In sum, the Court decides most of the cases in the early stages, based on merely formal but not substantive analysis. The standing to file a review application is held by the Public Prosecution Office, the convicted, or their ancestors, descendants, or siblings. There is no deadline to file a petition; therefore, it can be filed even if the sentence has been completed, or if the convicted died

[6] See Duce, 2021, p 4 (citing Londoño et al, 2003, pp 439-446, and asserting that the criminal justice reform did not reach the post-conviction review, and there was no legislative discussion on the topic during the process).

[7] For further details see Horvitz & Lopez, 2004, pp 447-457.

while or after completing the sentence. In this latter hypothesis, their inheritors may file the claim to rehabilitate the convict's honour.

Although there are five grounds to apply for post-conviction review, the following subsection focuses on section d) of Article 473 for three reasons: first, in theory, it is the only provision that would allow revisiting convictions based on new or unknown evidence, thus opening the door to DNA testing; second, this would be the only hypothesis referring to factual innocence, while the others are cases of procedural innocence (Mañalich, 2020). Third, all post-conviction review applications have been granted based on said section, while the others have remained virtually useless (Fernández & Olavarría, 2009; Fernández & Olavarría, 2018; Duce, 2015).

B. Post-conviction Review in Action

In the period between 2007-2017, 550 post-conviction review applications were filed, of which the Supreme Court only granted fifty-three; that is, about 9.6% of those submitted (Duce, 2017). In this regard, the average rate of exonerations in Chile would almost double that of other countries where the average does not surpass 5%.[8] While this might seem promising, it is far from it. Indeed, research has shown that the forty-two exonerations have been based on a practice in which upon detention the actual perpetrator of a crime stated a name and ID number other than their own, and thus a different person was convicted (Duce, 2017; Fernández & Olavarría, 2018). Thus, this results in only eleven cases other than those related to fraudulent identification; however, seven of them can be explained as gross errors in law enforcement agencies and prosecution.[9] Thereby, after depuration, in the aforementioned ten year period, the Supreme Court has granted only four cases, which reduces the average rate of exonerations to 0.79% (Fernández & Olavarría, 2018).[10] As anticipated, while promising for those advocating for a better criminal justice system, the low rate of exonerations hides many problems.

Most concerning for this study has been the Supreme Court's interpretation of "new evidence" in light of section d) of Article 473. According to Fernández & Olavarría's findings, after analyzing more than 550 Supreme Court post-conviction review decisions, only one defendant used DNA evidence to prove innocence under section d).[11] In such a case, the Supreme Court ruled that the DNA result was not "new evidence" or "evidence unknown at the time of

[8] See Gross et al, 2014 (establishing a wrongful conviction rate of 4.1% in death penalty cases in the US); See also Risinger, 2007 (determining an error rate between 3.3% and 5% in rape-murder cases in the US).

[9] See Fernández & Olavarría, 2018, p 1214 (in which the authors provide the following examples: a) the case of a person convicted of bad checks, who later proved that the debt had already been paid; b) a person convicted of illegal possession of weapons, who later demonstrated having previously acquired the required permit; c) a person convicted of driving with a fraudulent license, which was later shown to be authentic, etc).

[10] See Fernández & Olavarría, 2018, pp 1213-1216 (explaining the method of database depuration and referring to this scenario as "the miraculous Chilean criminal process").

[11] For more examples of restrictive Supreme Court interpretations, see Duce, 2021, pp 13-17.

judgment", as it was obtained after the case had been already decided. In other words, this reasoning closes the door to any post-conviction DNA testing under this provision.[12]

C. Pending Challenges

The post-conviction review mechanism has not been modified in over two hundred years, and thus scholars have started claiming its shortcomings.[13] The prior section presented a few of these, but there are even more. First, post-conviction review claims are only available for those convicted of serious crimes, disregarding minor offences, which comprise 33% of the incoming cases in the criminal justice system. Second, the requirements that law prescribes to make such a review claim preliminarily admissible is also problematic, which imposes additional barriers for the innocent (e.g., ground and foundations, attaching certain documents, etc.). Third, the restrictive character of the grounds for application are also barriers for potential claims (Duce, 2021)[14]. Additionally, other scholars have pointed out the necessity of a proper definition of innocence specific to post-conviction review (Mañalich, 2020) and certain evidentiary aspects in this stage, such as the need to have a new standard of proof of innocence (Carbonell & Valenzuela, 2021).

In the end, if we imagine this subject like a soccer game, getting to play in the stadium of 'post-conviction review' is extremely difficult. Even so, those lucky ones that can make it, then realize at the beginning of the match that they must face an opponent comprised of worldwide stars. It is like playing with their legs tied for the entire game and so prevailing is extremely unlikely for them.

The issues presented are a huge problem; however, there are many different actions we can take in order to generate a change to better protect the innocent. While most of them are beyond the scope of this research, I have dedicated some paragraphs to introduce them as joint progress must be made in these areas to protect the innocent adequately. Fixing such issues is imperative to the usefulness of a potential law of evidence preservation. Conversely, such a law would guarantee operability of post-conviction review. Thereby, improving these areas would provide the wrongly convicted not only formal but substantive accessibility to post-conviction review, that is, a real chance to correct their convictions, and not an illusory right.

III Methodology and Sources

This research aims to explore the consistency of the legal setting in Chile in the issue of preservation. Thus, it will reflect on whether the Chilean law adequately protects wrongly

[12] See Duce, 2021, p 16 (citing Roxin, 2019, p 692, who asserts that the use of DNA is a paradigmatic example of the use of new evidence in a post-conviction review).

[13] See Duce, 2021, p 4 (asserting that the mechanism's design comes from the Spanish Criminal Procedure Law, which, in turn, closely followed the French Napoleonic Code of Criminal Instruction of 1808).

[14] See Horvitz & López, 2004, p 451 (describing the grounds for application as extreme cases, where the legitimacy of the decision that imposes a criminal sanction is in crisis. See Mañalich, 2020, pp 30-31 (describing the grounds for application as situations where the gravity, viewed from the injustice of the decision, makes the execution of the sentence (or its continuation) legally unbearable).

convicted individuals and if it provides them with real possibilities to challenge their convictions through new DNA testing. As an underlying assumption to this question, and cross-cutting to this research, there are two premises. First, that DNA technology is the most powerful, accurate, and reliable technology available to provide means for wrongly convicted to challenge their convictions. Second, that evidence retention might provide what I shall call *substantive accessibility*, which relies on preserving biological materials to support innocence claims and operationalize the post-conviction review.

Strictly speaking, it is not necessary to look at comparative law to identify problems in the Chilean regulation on the preservation of evidence, since it can quickly be seen that there are very few, scattered and even contradictory norms. Nonetheless, I find the law comparison a powerful and useful tool to learn how to improve the Chilean criminal justice system. Thus, the goals pursued in this research through law comparison are as follows. First, it seeks to obtain knowledge of the US legal structures in biological evidence preservation. Second, it finds arguments in the comparative experience that might support establishing a preservation duty. Third, it aims to identify areas for improvement in this matter in Chile by law comparison. Finally, in laying down those points for improvement, it hopes to guide potential reform discussions.[15]

In order to carry on the law comparison, I have chosen US state-level legislation for the following reasons. First, unlike Chile, US states do register post-conviction DNA exonerations, which sheds light on the operability of the wrongful conviction correction mechanisms based on this technology. Second, considering the latter, most of these jurisdictions have adopted or strengthened regulations on biological evidence preservation until the post-conviction stage, with the precise object of ensuring the operativity of post-conviction relief based on new DNA testing; in doing so, they have followed different legal designs. Third, as a personal factor, considering my background, I have become more familiar with the US legal system rather than others.[16] Fourth, there are good structural reasons that make law comparison possible, as in both countries, criminal justice works under the paradigm of an adversary system and there are many similarities post-conviction stage. Therefore, it is fair to assume that there is a structural equivalence in criminal justice where it is possible finding more than just a lowest common denominator.[17]

Regarding sources, I have used the Innocence Project database to compile all the statutes requiring biological evidence preservation across the US to analyze them and revise their conformity with the standards and recommendations by experts and this research's interests.[18] I have also consulted specialized literature on wrongful convictions and the preservation of biological evidence. Additionally, to understand how the Chilean criminal justice institutions deal with an item collected in connection to a criminal case, and in my attempt to clear this obscure scenario, I have used the Chilean law of transparency and filed several open records requests,

[15] Regarding functions and goals of law comparison, see Pieters, 2009, pp 3-10.

[16] However, naturally, I cannot be entirely familiar with practices in all the jurisdictions included in the comparison. In regard to my background, as I am not a scientific expert in DNA technology, I approach the issue from the legal perspective. These must be considered as research limitations.

[17] The phrase "lowest-common-denominator" is borrowed from Damaška, 1986, p 5 and Langer, 2004, p 7.

[18] This appendix can be accessed upon request.

asking for data and documents from the Prosecutor's Office, Public Defender Office, Forensic Medical Services (hereinafter SML), and the Police Departments. This source was helpful to access crucial documents, information, and data to reconstruct this reality, although in several times, these institutions did not provide the information requested because they did not have it; these deficiencies are also part of the findings and will be reported when relevant.[19]

Methodological risks can be anticipated. The first one is the so-called danger of ethnocentricity, since one of the jurisdictions included in the comparison is the author's own (Pieters, 2009, p 27). However, such a risk is minimized and should not be a concern in this study, since this research doesn't seek to influence the others but rather benefit from them. Second, a challenge arises from the perspective of legal sources; while several jurisdictions have established the duty through regular laws, a few have materialized it through other means, such court or governor orders, general attorney guidelines or police policies. Similarly, in Chile, the rules are scattered within the Code of Criminal Procedure, laws and decrees on DNA, police protocols, chief prosecutor's general instructions, and others, which might arise challenges with uniformity and comparing legal sources of different levels and binding. Third, the diversity within US jurisdictions can be considered in two ways. On the one hand, the fact of the several existing legal designs on evidence preservation can enrich the law comparison and be valuable lessons to Chile. On the other, however, the diversity of jurisdictions is a limitation since I cannot address all the specific practices of each of them, which inevitably impacts the depth of the analysis considering the distance between the *law-in-the-books* and the *law-in-action*. Therefore, my focus will be on describing the regulations and their elements in order to have an overview of how the statutes that enshrine the duty to preserve work.

In light of these considerations, the presented methodology and sources, although limited, allow this research to approach the issue and explore a comparative and national reality, thus collecting valuable information, especially to Chile's criminal justice, where the issue of preservation remains in the dark.[20]

IV Duty to Preserve Evidence

Overall, by duty to preserve evidence I shall understand the state's obligation to retain, under specific technical conditions, either biological or physical evidence with the purpose of testing its biological material for DNA in support of an innocence claim filed within the context of a post-conviction proceeding. In an ideal model, such an obligation should apply to all criminal cases. Moreover, it should only cease once the convicted is freed from any form of state-ordered supervision.

In this section, I shall look to the US to extrapolate a few lessons that might be beneficial to Chilean law. First, the paper goes over the objections usually raised by those contrary to

[19] These open records forms, and their responses, can be accessed upon request.

[20] The issue has not been directly addressed, except for a brief mention in Chaparro (2013), Proyecto Inocentes (2021), Duce (2021), Castillo (2013).

establish such a duty. Then, the different legal arrangements or designs followed by the US states are revised. In both sections, I shall present reflections upon the Chilean regulation and reality.

A. Overcoming classic objections

Those who oppose the establishment of a duty to preserve evidence base their position on three objections: high costs, excessive administrative burdens, and the finality of judgments (Jones, 2005, p 1262). This subsection, on Jones's shoulders, reviews such objections to contrast them with the reality in Chile. Here, I shall argue that these objections would not find support in Chile.

a. Costs

The first and greatest objection rests on the allegedly excessive costs required to preserve each piece of evidence obtained from a criminal investigation, both in strictly economic terms and others such as human resources, infrastructure, space, and technology equipment (Jones, 2005). This objection mainly concerns with the *quantity* of evidence to be preserved. Thus, it is necessary to know the approximate number of criminal cases in which biological evidence is obtained, or to at least identify in what *types* of cases such evidence is more likely to be collected. Unfortunately, there is no data available on this aspect in Chile.[21] However, to orient our investigation, research has shown that the *types of crimes* in which the most amount of biological evidence is obtained and analyzed are in violent crimes, sexual crimes, robberies, and missing and unidentified persons (Medwed, 2012; West & Meterko, 2016).

Based on this assumption, and looking at the national reality, it is possible to estimate that the duty to preserve would only apply to a rather small number of cases. According to available data in Chile, obtained from the Prosecution Service, out of a total of 1,508,350 cases reported in 2019, sexual crimes represented 2.1% (32,510), while homicides only represented 0.1% (2,170). In contrast, the majority of incoming cases corresponded to crimes against property, such as robbery 20.9% (316,272) and other less severe offences against property 15.9% (241,428). A similar trend can be observed in the 2020 figures, where out of 1,430,960 cases, sexual crimes represented 1.9% (28,143), homicides 0.1% (2,795), whereas robbery represented 16.5% (237,013), and other crimes against property theft represented 11.7% (169,609). Likewise, in the period from January to June 2021, out of 661,339 cases, sexual crimes corresponded only to 2.2% (15,164), and homicides just 0.1% (1,146), while robbery represented 13.4% (88,675), and other crimes against property represented 10.6% (70,754). Therefore, considering only sexual and homicide offences that do not surpass 2.3% of the total, if the law were to impose a duty to preserve evidence, this would be only applicable to a small number of cases, which does not support the objection of high costs for the state.[22]

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[21] The Prosecution Service asserted that there's no available statistic regarding the number of cases where DNA evidence has been collected (in response to open record request #13462). Likewise, the Public Defender's Office indicated that, unfortunately, the Criminal Defense Management Computer System does not register the nature of evidence items (in response to open record request #AK005T0000746).

[22] In making this estimation, I have disregarded crimes against property as, in light of the data I have, it would be misleading to believe that biological evidence is collected in all of them. Second, under robberies,

Additionally, research has shown that about 76% of all crimes reported in the US are property offences and thus do not involve biological evidence. Therefore, a duty to preserve would only be applicable to a minuscule percentage of cases (Stephens, 2018). This argument also seems to apply to the Chilean reality, where the largest number of reported cases correspond to crimes against property, as showed.

Other objections related to high costs fail on their own. First, states are not required to preserve and store millions of large physical items of evidence, but rather only to extract a sufficient number of biological material samples in the precise quantities needed to conduct DNA tests. Once samples are drawn, evidence can be subject to disposition as appropriate according to the law. Second, storing such samples only requires a dark, dry, and air-conditioned room but no exorbitant expenses as one might intuitively think (Ballout et al, 2013 Jones, 2005: Medwed, 2012).

b. Administrative Burden

The second objection suggests that such a duty would impose an excessive administrative burden on the states, as they would need to have personnel labeling, classifying, tracking, and storing evidence (Jones, 2005, p 1263). This is a misleading argument, as the duty to preserve (or custody) is limited only to those pieces of evidence which the state has obtained from the beginning of the investigation. Indeed, the state is not being asked to go and find new pieces of evidence, nor to take measures of evidence preservation from those carried out according to its own interest in the case, as well as with the purpose of obtaining a conviction. (Jones, 2005, Medwed, 2012). A clear example of such interests is that the state will always be concerned with properly preserving the evidence collected in a scene up until its introduction at the trial stage, as any break in the chain of custody could be a reason to challenge the admissibility of such pieces of evidence at trial, thereby frustrating the conviction (Ballout et al, 2013). In Reed's words, retention statutes only standardize and extend the already existing post-conviction period, without imposing additional facilities or personnel (Reed, 2004).

To rebut this objection, I am going to briefly reconstruct the path of evidence. In Chile, the law entrusts the police with the protection and preservation of all crime scenes by closing or isolation, so that its personnel can identify, collect and keep all the items that appear to have served the commission of the investigated crime under seal.[23] Then, such items are submitted to the Public Prosecution Office for their custody,[24] although biological evidence can be immediately submitted to SML if the prosecutor requires an expert report or further analysis.[25] Afterwards, materials are stored or subject to disposition according to law. In a nutshell, no new activity is required in these early activities; thereby, no excessive burden is imposed on police, prosecutors, or any other

the data considers cases involving both violent and non-violent appropriation of another's property. Thus, it is fair to assume many cases might not have any kind of biological evidence. Lastly, under other crimes against property, several different conducts are considered, so it would not be fair to assume that biological evidence could be gathered in all of them.

[23] Article 83 c), Code of Criminal Procedure, Law No 19.696, 12 October 2000, Diario Oficial [DO] (Chile).

[24] Article 188, Code of Criminal Procedure, Law No 19.696, 12 October 2000, Diario Oficial [DO] (Chile).

[25] Article 24 of Regulation on Custody of Items Seized by the Public Prosecution Office.

criminal justice institution. If a retention obligation were imposed, it would only require that the items collected be preserved for a longer period.

It is also important to note that research conducted on the first 197 DNA exonerations in the US established that exculpatory evidence was almost always obtained during the original investigation (Hampikian et al, 2011), which not only ends the argument of excessive burden, but also strengthens the idea that appropriate preservation of evidence starts and depends on the investigation activities early on in a case.[26] Hence, it is crucial to improve police performance and techniques in this subject, so that materials can maintain their utility throughout the process, including the post-conviction stages.

Furthermore, establishing a duty to preserve evidence would not only benefit those who have been wrongly convicted, but also the interests of the state and the victims. Indeed, after being tested, such evidence could allow the identification of the actual perpetrator of a crime or determine the perpetrator in cold cases, thus improving the state's clearance rate and bring justice to the victims (Jones, 2005). Conversely, early destruction of evidence would prevent the state either from prosecuting the true perpetrator or linking cold cases committed by the same individual, as well as bringing justice to victims and their families.

Regarding the interests of the state, establishing a preservation duty might benefit prosecutions. In fact, the so-called SACFI units[27] were recently created to strengthen criminal prosecution and investigation of unsolved cases, as well as to avoid the excessive use of prosecutorial discretion, specifically, the so-called *archivo provisional*.[28] Therefore, while helping wrongly convicted people, evidence preservation also benefits the state and these units by contributing to connect cold cases that might have been committed by the same individual.

Finally, I strongly believe that retention of evidence should be relevant for prosecutors as well, since they have standing to file claims for review according to the current legal setting.[29] Thus, having biological evidence available for potential DNA testing would also serve their interest in this matter. Nonetheless, I think it is necessary to develop a culture that recognizes the potential likelihood of making mistakes, as criminal justice is a human endeavor. In such a goal, regarding prosecution service, other legal reforms would play a pivotal point, for instance, through the creation of the so-called conviction integrity units.

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[26] See National Institute of Justice, 2000 (stating that actions taken at the crime scene, at the outset of an investigation, can play a pivotal role in the resolution of a case. That is, careful and thorough investigation is key to ensure that potential physical evidence isn't tainted or destroyed).

[27] SACFI is the acronym for "Sistema de Análisis Criminal y Foco Investigativo" which can be translated as "System of Criminal Analysis and Investigative Focus". See Law No 20.861, 20 August 2015, Diario Oficial [DO] (Chile).

[28] *Archivo provisional* is a discretionary power that allows prosecutors to keep a case unfiled when there are no available records or pieces of evidence that would allow conducting activities in order to determine if a crime has occurred. The case may remain unfiled until further information arises (e.g., this prosecutorial power has been usually applied in crimes against property, when the author's identity is unknown).

[29] Regarding the role of prosecutors in preserving biological evidence, see Medwed, 2012, pp 156-157.

c. Finality of Judgments

A third objection asserts that allowing actual innocence challenges grossly undermines the state's interest in the finality of judgments and providing victims with closure (Jones, 2005). Thus, opponents of the duty to preserve evidence argue that the narrow margin of error that results in wrongful convictions demonstrates that the system, while imperfect, operates fairly and should no longer be burdened with such a duty.

This certainly calls us to reflect upon our justice system's values. In Chile, both the legal arrangement of post-conviction review and Supreme Court decisions show that the finality of judgments is a crucial value in the system. Also, scholars have pointed out in the same direction, considering that the grounds for review are cases where the legitimacy of the decision imposing a criminal sanction is in crisis (Horvitz & López, 2004) or situations where the gravity, viewed from the injustice of the decision, makes the execution of the sentence (or its continuation) legally unbearable (Mañalich, 2020). While the finality of judgments seems to be the main concern for our system, bringing real justice and not only an illusion of it to the victim and victim's family should also be a crucial value to be pondered. Hence, the balance of these values needs to be revisited.

In any case, the classic objections are overcome by reality, as well as technological and scientific advances. Thus, the emergence of organizations such as the Innocence Project have demonstrated that criminal justice systems actually do make mistakes, and that exonerations based on DNA evidence are inconceivable if there is no duty of preservation (Hampikian et al, 2011; Jones, 2005). Criminal justice systems not only fail when they convict the innocent, but also when they impede individuals from accessing the mechanism to correct such mistakes and from obtaining the necessary materials to reverse their sentence.

B. Setting the Duty

Hand in hand with the innocence movement, US states have enacted or strengthened innocent protection laws. These bodies of laws generally consider a post-conviction DNA testing proceeding, a compensation law, and other reforms on investigative techniques, such as the use of confessions, informants, identification procedures, etc. Particularly, in the issue of preservation, most of the US states have enacted laws mandating the state with the duty to preserve biological evidence.

Currently, there are only six states with no law requiring evidence preservation: Delaware, Idaho, New York, North Dakota, Vermont, and West Virginia. However, although all other states and territories have such a law, only twenty-eight meet the NIST standards,[30] while sixteen do

[30] This is the case of Arkansas, California, Colorado, Connecticut, District of Columbia, Florida, Georgia, Hawaii, Illinois, Indiana, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Nebraska, Nevada, New Hampshire, New Mexico, North Carolina, Oklahoma, Oregon, Rhode Island, South Carolina, Texas, and Wisconsin.

not.[31] Said standards come from the so-called *Technical Working Group on Biological Evidence Preservation*, which contributed with two publications that establish uniform practices regarding the handling and preservation of biological evidence.[32] These standards have guided the reform on laws of evidence preservation in the US. In general, they distinguish between the type of crime as well as the case status in order to then set a period of time during which retention or preservation of evidence is required.[33] For instance, in homicide offences, they require the authority to retain the evidence indefinitely either in open cases or when charges were filed. If the case was adjudicated, retention is required for the length of incarceration. When prosecutorial discretion is applied (e.g., unfounded, reused, denied, no further investigation), the evidence can be disposed upon receipt of authorization. In other crimes, such as sexual offences, assault offences, kidnapping, abduction and robbery, the standards establish a minimum retention period, that is, for the length of the statute of limitations in open cases, and for the length of incarceration once the case is adjudicated (Ballou et al, 2013).

Thus, in setting the duty to preserve, at least three main variables must be considered. First, whether the obligation automatically emerges or requires further activities, such as a court order or a motion for post-conviction DNA testing. Secondly, the cases eligible for such evidence retention, considering types of crimes and case status. Thirdly, the duration of the period of preservation. However, other variables might also be relevant, such as the legal source where the duty has been established (e.g., law, police department policies, state Attorney General guidelines (New Jersey), administrative rules, etc), the criminal justice actor or institution upon which the duty has been imposed, in other words, who must take measures for adequate preservation (e.g., attorney general (South Dakota), prosecuting attorney (Kansas), law enforcement agencies (Kentucky), police departments), the tension between strict and well-defined rules or discretion to make decisions (e.g., in Washington judges can determine the length of retention, but generally the law sets such a period), the evidence to be preserved and its qualification (e.g., whether the evidence or biological material was introduced at trial), procedurals events (e.g., statutes making retention applicable only to cases decided in a trial, others also including cases where the defendant pled guilty, or both), the sanction for beaching the duty, etc.

Regarding the first variable, that is, whether or not the duty to preserve automatically emerges, statutes can be classified as follows: *no-duty* statutes, *qualified duty* statutes, and *blanket duty* statutes (Jones, 2005). Now, I shall mainly rely upon this classification, but I'm going to attempt to include the other variables as well, in order to find out how these statutes might protect the innocent, or rather fail to do so.

First, *no-duty* statutes group such laws that purport to establish a right to DNA testing for prisoners but fail to mandate preservation of the biological evidence needed to give that right any real meaning. For instance, North Dakota does not have duty to retain, but the law allows a

[31] This is the case of Alabama, Alaska, Arizona, Iowa, Kansas, Kentucky, Missouri, Montana, New Jersey, Ohio, Pennsylvania, South Dakota, Tennessee, Utah, Virginia, and Washington.

[32] See Ballout et al, 2013 (also including recommendations on packaging, tracking, disposition, etc). See also Ballout et al, 2015 (including recommendations for policy makers in this subject).

[33] See Ballout et al, 2015, pp 3-5. Particularly, in p 5, Table 1-2: Summary of Biological Evidence Retention Guidelines for Crime Categories.

convicted person to file motions for DNA testing to demonstrate actual innocence. Similarly, Idaho, with no law of evidence preservation, has enacted the Uniform Post-conviction Act, allowing a convicted individual who claims to be innocent to apply for DNA testing of evidence that was secured in relation to the trial that resulted in said conviction, but which was not subject to such testing.

The problem with this group of statutes is rather clear. With no legal obligation to retain evidence, there wouldn't be an actual right to DNA testing for prisoners, as this right could easily be negated by systematically destroying all biological evidence in every closed criminal case, pursuant to the local evidence management policy. Thus, access to biological material for DNA testing in post-conviction stages cannot simply be contingent upon the goodwill of law enforcement agencies, as this completely weakens and nullifies the innocence protection statute. Conversely, to operationalize the post-conviction statutes in jurisdictions like Idaho or North Dakota, establishing such a duty to retain evidence must be essential, otherwise, such statutes only become a "statement of goodwill".

An example of this idea of goodwill is Idaho. In this matter, Dr. Greg Hampikian, Boise State University professor and codirector of the Idaho Innocence Project, has asserted that he has been able to examine evidence within in the state as old as 20 or 25 years old. Nonetheless, as depending on law enforcement agencies' goodwill, the length of retention varies across different cities in the state. Moreover, this arises concerns with the way in which evidence is handled by such agencies (Clark, 2019). Once again, with no legal regulation, everything becomes a factual matter, lacking uniformity and with room for discretion and arbitrariness.

In second place, laws under the category of *qualified duty* statutes require a trigger for the duty of evidence preservation to emerge. In other words, it is a qualified duty because it is not activated until a petition for DNA testing is filed. An example of this setting is Alabama law of evidence retention, where the preservation is possible in capital offences, but the duty only emerges upon notice of a motion for DNA testing. Similarly, under Kansas law, which allows preservation in murder and rape convictions, the duty is only activated upon a petition for DNA testing, whereupon the court must order the prosecuting attorney to preserve all biological evidence and to take all the necessary steps to ensure said biological material is preserved until post-conviction proceedings are completed. In South Dakota, the attorney general must preserve all evidence collected in connection with an investigation or prosecution until the completion of such a proceeding, but such a duty arises upon receiving notice from the court. Likewise, in Pennsylvania, the duty is contingent upon filing for post-conviction DNA testing and the subsequent court order. In Tennessee, the evidence must be preserved upon receiving notice from the court as well, and the duty extends throughout the pendency of the proceeding.

The inconvenience of this setting is quite evident, as many times the duty will frequently emerge late, when evidence has already been destroyed. Although in some cases it could work, it seems that this type of regulation does not offer a sufficient guarantee of substantive accessibility to post-conviction review.

Moreover, it is important to carefully review the scope of retention, as many of these statutes are restricted to specific offences, such as capital offences, murder, or sexual crimes (e.g.,

Alabama's retention law only applies to capital offences). Also, a qualified duty statute may only set short periods of retention or leave the determination of the period to discretion and thus be insufficient to protect the innocent. For instance, Indiana's statute establishes the duty in a court order issued after a petition for DNA testing; in this case, the state must retain the evidence during the pendency of the proceeding. In Utah, while requiring a petition for DNA testing in order for the duty to emerge, the law does not articulate the length of the preservation.

The third kind, *blanket duty* statutes, provide the most comprehensive evidence preservation requirement. Under such a regulation, the government has an obligation to preserve all biological evidence that has been collected during the initial criminal investigation, and to properly retain such evidence until the prisoner is released from confinement (Jones, 2005). Unlike the qualified duty, in this case the obligation is triggered automatically and is not contingent upon the filing of a petition for DNA testing. Likewise, the length of preservation is not limited to a specific period but rather extends until the convict's release.

Neat examples of this setting are Texas, Connecticut, Wisconsin, and Massachusetts. In Texas, the statute requires automatic preservation of biological evidence in felony cases, which must be maintained until the convicted dies, is executed, or released on parole (in capital felony convictions), until the defendant dies, completes the sentence, or is released on parole or mandatory supervision (in term confinement sentences), until the defendant completes the term of supervision (in sentences to community supervision), or, in cold cases, for no less than 40 years or until the statute of limitation has expired. In Connecticut, the law requires automatic preservation, for the length of a convict's incarceration, of all items related to an investigation on a capital offence conviction, murder with special circumstances, or any crime where a person was convicted at trial, or upon court order. Wisconsin's statute states that any biological material collected in connection with a criminal investigation that resulted in a criminal conviction, a delinquency adjudication, or commitment, shall be preserved until the convicted reaches his or her discharge date. Finally, in Massachusetts, preservation is automatic upon conviction, and the length is for the period that a person remains in custody or under parole or probation, with no regard to whether the evidence was introduced at trial.

Although still within the category of blanket duty statutes, other less protective regulations can be identified. Michigan and Mississippi have a similar setting, with a law requiring automatic preservation of biological materials for the person's incarceration period, however, such an obligation is restricted to felony convictions. Likewise, Minnesota's retention statute orders automatic preservation, for the length of sentence, but it is limited to evidence used to secure said conviction.[34]

Notwithstanding, it is also possible to discern an intermediate category of cases, that require preservation of all DNA evidence but are limited to a period other than the convict's release. Although the duty emerges automatically in these situations, considering the length of retention, they might not provide substantial accessibility to post-conviction review. For instance, Iowa's

[34] This statute can be seen as the opposite of Massachusetts'. While Minnesota preservation's scope is limited to the items used to secure a conviction, in Massachusetts the preservation duty applies even if the evidence was not introduced at trial.

retention law, which enshrines automatic preservation of all DNA evidence for criminal actions, establishes a mere three-year retention period. Another example is Montana, where even though the statute requires automatic preservation of biological evidence for a minimum of three years after the conviction becomes final, any extension of such period must be issued by a court. Likewise, Ohio's law orders automatic preservation of biological evidence for both aggravated and ordinary murder offences, but just for the period in which the crime remains unsolved. Missouri can be labeled as an intermediate case as well, since law orders automatic preservation in certain felony convictions, but the length of the preservation period is not expressed.

The same is true in other intermediate cases that I have identified, where the blanket duty is rather apparent, due to the fact that it does not cover all offences required by standards. For instance, Virginia's statute requires automatic preservation of all biological evidence when the death penalty is imposed, however, in non-death criminal cases, the duty can only be activated upon defendant's motion, and only for a maximum period of 15 years, which can be extended by the determination of the court.

Finally, I want to give a few thoughts regarding the practical performance of retention statutes, their implementation, and their impact on DNA exonerations. A 2019 article showed that, up to said year, 13 states had never exonerated a convicted based on DNA evidence (Emmanuel, 2019). Among them, 10 had a law requiring evidence retention, although only 7 meeting the NIST standards. The remaining three did not have such a law. Thus, while the lack of exonerations has not a definitive answer, the absence of a law requiring evidence might explain it in those three states. Then, the destruction or misplacing of DNA evidence emerges as one even in those states that have said law. Also, it might be explained because states have enacted a law of preservation just a few years ago. Moreover, the setting of post-conviction DNA testing and especially the high standard to prevail in such a stage can also be a factor. Therefore, this might illustrate that establishing a retention law is not in itself a guarantee of exonerations. Conversely, police practices and training in handling DNA evidence are important, as well as the legal setting of post-conviction remedies and the barriers that these might inherently impose. As I have emphasized, all these issues must move forward together to adequately provide the innocent with adequate means to try to reverse their conviction.

a. Where is Chile in this scheme?

In this scheme, it is not easy to categorize Chilean law. While I shall delve into such rules in section V, in the following paragraphs I'll provide their essential aspects.

In Chile, the law does not impose a clear duty to preserve evidence, either physical or biological, until post-conviction proceedings have ended, but naturally only extends such an obligation from the initial investigation up until a short time frame after a conviction has been obtained. Thus, once a piece of evidence has been retrieved from the scene, the police begin the chain of custody, submitting the item to the Prosecution Office for its safekeeping during the pendency of trial. Once a conviction becomes final, the evidence is generally kept for no more than six months after which it is auctioned to the public or destroyed, depending on the nature of the property seized. The situation varies slightly when such evidence is biological. Thus, after being collected from the scene it can be submitted by the police directly to the lab for analysis and

its subsequent destruction, unless a qualified exception applies to allow its retention. Moreover, if a biological sample is obtained in connection with the investigation of certain sexual offences, it must be preserved for at least a year.

In general, although restricted in length, the duty to preserve physical evidence after conviction emerges automatically. Regarding biological materials the situation is different, after analysis, prompt destruction is ordered unless SML determines that obtaining biological materials is technically unrepeatable. If so, the prosecuting attorney may order the retention for up to 30 years upon discretion. Therefore, in the case of biological samples, their conservation is triggered by a two-step process; first, the lab's qualification of the biological material as technically unrepeatable, and then, the length of retention upon the prosecutor's determination. Nonetheless, if a biological sample is obtained in connection to certain sexual crimes, the law orders its preservation for no less than a year.

In the following section, with the goal of identifying areas for improvement, I delve into these rules to assess them in light of the comparative experience presented, as well as expert recommendations on the matter.

V Assessing the Chilean Law

A. The Legal Sources Puzzle

While the regulation on preservation of evidence is diffuse and nearly non-existent, several legal instruments contain provisions related to collecting, handling, tracking, and custody of physical evidence. The Code of Criminal Procedure is the main source, but other administrative regulations have been issued by authorities or agreed upon by criminal justice institutions. For instance, the National Prosecutor has created several administrative regulations, such as the "Regulation on Custody Procedures, Storage and Elimination of Records, Documents, and Others", "Regulation on Administration of Physical Evidence", and the "Regulation on Custody of Property Seized". In addition, the Protocol of First Investigation Proceedings was established by the National Prosecutor in order to uniform the police proceedings of the Chilean national law enforcement police ("*Carabineros de Chile*") and of the Chilean Criminal Investigations Police (PDI).

Particularly, regarding biological evidence, there are very few rules. In 2004, the legislature enacted Law No 19.970, creating a National Registry of DNA.[35] Subsequently, the Executive issued Decree No 634 which specifies its scope and complement the law in several technical aspects.

This dispersion of rules challenges not only the interpreter, who performs a systematic study of them, but also their internal consistency. Thus, it is possible to find contradictions between the code of criminal procedure and other administrative regulations. This is not to say that absolutely everything needs to be regulated by a law; actually, I consider that giving other

[35] Law No 19.970, 6 October 2004, Diario Oficial [DO] (Chile).

authorities the faculties to establish rules within a limited scope is helpful, especially to facilitate their modifications, and considering the high specialization and technicality of some matters. Nonetheless, an important aspect, such as the period that evidence must be retained, should be carefully regulated by the law, thereby preventing discretion and contradictions among the several bodies that regulate this matter.

B. Identification, Collection and Custody of Biological Evidence

Having an adequate definition of biological evidence is a crucial starting point. This is relevant to guide both the criminal investigation, as well as the attitude of those who lead it when coming in contact with these elements, since such a definition impacts how they must proceed in collecting, tracking, submitting, storing, and, in general, the path followed by such items. Experts recommend defining biological evidence as "evidence commonly recovered during a criminal investigation in the form of skin, hair, tissue, bones, teeth, blood, semen, or other bodily fluid, which may include samples of biological materials, or evidence items containing biological material" (Ballou et al, 2015, p 4). Thus, a definition as proposed attempts to illuminate all potential handlers on how to proceed once an item is identified as biological evidence, upon its encounter at the crime scene and throughout the criminal process, and whether such item should be retained and, if so, for how long (Ballou et al, 2015).

There is no definition for *biological evidence* in Chilean Law. In fact, the Code of Criminal Procedure does not use such an expression, although it is possible to find the term *biological sample* in a couple of provisions. Furthermore, Decree No 634 does not define *biological evidence* either, however, its article 4 No 6 does define *biological sample* as "any fluid or tissue from a human source, either liquid or solid, susceptible of containing DNA that can be attributed to an individual whose identity is known".[36] Then, article 4 No 7 defines *evidence* as "any physical element that contains or may contain DNA of a preliminary unknown person". While these definitions could be of some use, they are insufficient because their scope is restricted only to Decree No 634 and Law No 19.970, which are particularly concerned with DNA comparison and DNA matching expert reports.[37] In other words, such definitions do not apply in the context of a criminal investigation and thus they are not intended to guide the investigator's behavior.

The *handbook on crime scene police work,* which is used for police training in Chile, does not provide a proper definition either. Thus, the same problem arises, since it only defines *evidence* as "physical element directly connected to the investigated crime, including elements such as fingerprints, blood, tissue, personal items, and elements used by the offender (knife, gun, crowbar,

[36] Decree No 634, 12 June 2013, Diario Oficial [DO] (Chile).

[37] According to SML, DNA comparison and DNA matching are two types of expert reports elaborated by the service in the context of a criminal investigation. The first is made by contrasting specific genetic fingerprints whether of known origin or not, which eventually allows them to establish an identification, contribution, or a biological relationship between them. The second is made by contrasting specific genetic fingerprints with those contained in one or more DNA registries of the system, which has been specifically required, by the competent authority, in a criminal procedure (as indicated in response to open record request # AK003T00001786).

etc)". Notwithstanding, the document appears to be mainly concerned with the collection of evidence, as it emphasizes the gathering and manipulation of such items. In addition, it promotes good practices in chain of custody, while highlighting this institution's role as a guarantee in keeping evidence safe and integrally preserved for its presentation before trial court. Once again, this reinforces what I previously argued against the objection of excessive administrative burden; namely, that we are not asking the police to do anything different than what they are doing now.

Anyhow, the lack of definition might cause problems. First, it might impact the path of evidence. In general, items collected in a criminal investigation are kept under the custody of the Prosecution Service.[38] However, biological evidence follows a different path, as it is submitted to the lab for analysis, after which it's either preserved in qualified cases or destroyed.[39] Therefore, without an adequate definition there is no way to figure out if the police are submitting for lab analysis all the evidence they are supposed to or not.

Second, and related to the above, it can be said that, within the Code of Criminal Procedure, the general rule is to preserve physical evidence for up to six months. After that, if no interested party claims any right over the property, it can be actioned or destroyed. However, this provision does not consider that such items might contain biological material; therefore, there is room for early loss or destruction of biological evidence.

Third, based on internal regulations, the Prosecution Service has the power to increase the length of retention up to the time of statute of limitation, but this is applicable only to evidence under its custody. Once again, biological evidence follows a different path.

Now, it is important to note that the administrative rule allowing longer preservation relies on the prosecuting attorney's discretion, as there is no guideline or instruction on how or when to use such a faculty and for how long. In addition, the fact that there's no data available on how many cases a longer retention of evidence has been ordered, nor on the type of cases in which this has occurred, is extremely worrying. In general, there is a lack of the minimal information required to understand and evaluate the functioning of criminal justice institutions.

Finally, related to this, while the Code of Criminal Procedure, in those cases of improper preservation, allows the defendant to file a motion before the Guarantee Judge, who may adopt any necessary measure for the proper preservation and for ensuring the integrity of the evidence collected, it seems to be applicable only to physical evidence under Prosecution's custody. Moreover, parties may access such materials to recognize them or to carry on scientific analyses.[40] In conclusion, these rules are not only deficient in the matter of retention, but also in terms of access to biological evidence.

[38] Article 188, Code of Criminal Procedure, Law No 19.696, 12 October 2000, Diario Oficial [DO] (Chile).

[39] Article 25, Decree No 634, 12 June 2013, Diario Oficial [DO] (Chile).

[40] Article 188.2, Code of Criminal Procedure, Law No 19.696, 12 October 2000, Diario Oficial [DO] (Chile).

C. Retention or disposition?

In order to provide an adequate answer to this question, several distinctions need to be made. In other words, the destiny of a piece of evidence depends on its nature: physical evidence, biological sample, or biological sample in connection to certain sexual offences. Regarding physical evidence, after conviction has been obtained, the possibilities are destruction, public auction, or destination. The rules leading the destiny of physical evidence are article 469 and 470 of the Code of Criminal Procedure, as presented in Table 1.

Table 1. Summary on rules of physical evidence disposition in the Criminal Procedure Code

Legal Source	Ground	Retention	Disposition
Article 469 Crim Pro Code	Property subject to criminal forfeiture	While pending disposition to be made as soon as the judgment becomes final	Destruction, public auction, or destination
Article 470 Crim Pro Code	Property seized but not forfeited in cases terminated by final judgment in a trial	Until six months after decision becomes final	Public auction
Article 470 Crim Pro Code	Property seized but not forfeited in case temporary dismissed or derived to pretrial diversion	At least for a year	Public auction unless of unlawful property subject to destruction
Article 470 Crim Pro Code	Property seized but not forfeited in case terminated by prosecutorial discretion[41]	At least for six months	Public auction unless of unlawful property subject to destruction
Article 470 Crim Pro Code	Unlawful property seized but not forfeited	While prosecuting attorney request a warrant to destroy	Destruction

By analyzing these rules, various problems can be anticipated. First, due to the lack of an adequate definition of biological evidence, the conspicuous problem is that the rules leave room

[41] Under this provision, prosecutorial discretion considers the powers of articles 167 (*archivo provisional*, see footnote 29), 168 (refusal to investigate), 170 (opportunity principle), and 248 provision c) (decision not to persevere in criminal prosecution). All these articles, from the Code of Criminal Procedure, Law No 19.696, 12 October 2000, Diario Official [DO] (Chile).

for either the loss or destruction of physical evidence, that might contain biological materials, shortly after conviction. This is undesirable, especially considering all the evidence indicating the likelihood of convicting an innocent person, and the importance of having materials, especially biological, to challenge a wrongful conviction based on DNA evidence.

Second, in comparison with the US statutes and experts' recommendations, the rules presented here do not distinguish categories of crimes nor their severity; all cases are treated as the same. As presented in section IV, it is pivotal that retention rules determine the types of crimes where evidence is to be preserved.

Third, when comparing the length of retention of the articles 469 and 470 of the Code of Criminal Procedure with those contained in the statutes presented in section IV, the former are not only shorter but certainly insufficient. If an evidence retention law wants to make conviction review mechanisms operational, the length of retention must be reviewed and adjusted. This is especially the case since there is no deadline for filing a review application.

Fourth, in several cases, the use of prosecutorial discretion, particularly the so-called *archivo provisional* could include unsolved serious crimes. In such cases, the early destruction might prevent said investigations from reopening if additional information were to become available in the future. This is undesirable, as it goes against the goals pursued by units like SACFI, but also because it prevents the state from improving its clearance rate, and most importantly, solving such cases and bringing real justice.

Up until this point, I have only referred to physical evidence. Thus, continuing with the second distinction, when a biological sample has been obtained in the context of a criminal investigation, it is submitted to the lab for analysis directly from the scene. Once the lab analysis is completed, the general rule is the prompt destruction of said sample. However, the rule considers a quite interesting hypothesis, that opens the door for a longer retention period, as presented in Table 2.

Table 2. Rules on disposition of biological samples in Decree No 634

Legal source	Ground	Disposition
Article 25 Decree No 634	Once forensic report and results are submitted	Prompt destruction
Article 25 Decree No 634	Immediately after receiving lab results.	Prompt destruction
Article 25 Decree No 634	SML qualifies the obtaining of biological material as *technically unrepeatable*	Preservation of a part up to 30 years upon prosecuting attorney discretion

Thus, in the Chilean setting, if the SML, which acts as a technical agency, has qualified the obtainment of the biological material as *technically unrepeatable*, this allows the prosecuting attorney to order the preservation of part of the sample for up to 30 years. This scenario is far removed from those studied in the American legal design, where it is the law that sets the length of retention or, in other cases, it is left up to the judge's discretion. Overall, it should be noted that the excessive dependence on the prosecutor's discretion is quite characteristic of the revised norms of Chilean regulation on the subject.

From 2016 to 2020, the SML has made such a qualification in 3,448 cases; this results in an average of 862 each year.[42] Unfortunately, there is no data that allows us to know whether in said cases the prosecuting attorney effectively used the power to extend the length of retention and, if so, for how long. There is no information regarding the type of crimes in such cases either. Moreover, we lack information regarding the existence of guidelines or internal prosecutorial regulations that guide the application of this faculty.

Now, regarding the third distinction, according to the Criminal Procedure Code, the obtention of biological samples in connection to the investigation of certain sexual offences triggers different rules. In this case, such samples are obtained either as a product of medical exams or evidence as such. The institution in charge of obtaining the samples and performing tests must conserve both the samples obtained as well as the results of the analysis and exams performed under its own custody. Curiously, under this provision, the length of retention is for no less than a year, after which they are to be submitted to Prosecution Service, as presented in Table 3.

Table 3. Rules on disposition of biological samples in the Criminal Procedure Code

Legal source	Ground	Disposition
Article 198 Crim Pro Code	Biological sample obtained in connection to certain sexual offences	Preservation for no less than a year to then be submitted to Prosecutions Office

Unfortunately, once again, neither the Prosecution Service nor the Public Defender's Office has available data regarding the number of investigations for sexual offences that have obtained biological evidence according to this provision.[43] However, as presented above, the total of sexual offences that are yearly reported in Chile's criminal justice system are not significant in light of the total cases reported. Now, when reviewing the cases-ending data, it is implied that an important part of sexual offence investigations has no available evidence, although it is impossible to determine from said data if they lack biological or any type of evidence, nor the specific type of sexual offence. In any case, it is an analysis worth doing.

Thus, most sexual offences usually end in light of the *archivo provisional*, while a minimum portion either goes to trial or end by means of the defendant's guilty plea. For instance,

[42] Forensic Medical Service, in response to open records request #AK003T00001786.

[43] In response to open record request #13462 and #AK005T0000746, respectively.

in 2019, 2,718 convictions were obtained, and 638 cases ended with an acquittal. In the same period, the Prosecution Service applied discretion to end 19,412 sexual offence investigations based on *archivo provisional* and 1,026 based on the decision to not persevere. These two prosecutorial powers are based on the lack of evidence. In the first, the absence of information impedes the development of any investigation activity, and so the case remains unfiled. In the second, although evidence is available, the prosecuting attorney decides not to take the case to trial since the evidence is insufficient to get a conviction.

More worrying is the fact that there is no information available on the amount of biological evidence that is retained or destroyed each year, nor the type of crimes on which such materials were obtained.[44] Certainly, aspects such as transparency and information availability need to improve.

D. A Few Lessons

In this last subsection, I simply want to recapitulate the most important lessons, although I do not pretend to be exhaustive when pointing out the possible defective areas. On the contrary, these lessons seek to be the first approximation to understand how adequate Chile's national regulation is.

First, as a formal matter, rules on retention should not only be uniform in their consistency and non-contradiction, but it would also be desirable to concentrate them in a single statute. Thus, enacting a law that regulates, at the very least, the essential aspects of the duty to preserve, would prevent the problems derived from having multiple regulations on the same matter, as we've detected in this article. Moreover, it would reduce the room of the prosecuting attorney's discretion in regard to the application of a retention extension and the length of such.

Second, in the context of a criminal investigation, and in order to guide the investigator's behavior, it is necessary to enshrine an adequate definition of biological evidence according to the aforementioned experts' recommendations. Such a definition should also frame biological evidence as such, as well as physical evidence that contains or that might contain biological materials. Thus, this would allow criminal investigators to know, at a very early stage, which path each type of evidence should follow and, above all, how said evidence should be preserved and until when it should be retained.

Third, overall and considering the rules revised, it seems that the issue of evidence retention isn't a subject the legislator is particularly concerned with. Most rules in the matter are contained in legal sources other than the Code of Criminal Procedure. Thus, the issue is governed by administrative regulations generated by the National Prosecutor, Decrees, or police protocols. This raises concerns about excessive secretion and possible arbitrariness.

Fourth, the state of current Chilean regulation is far from the recommendations and legal design of the American statutes revised. For instance, Chile's statute and regulations do not distinguish the type of crime investigated in order to establish the duty. Moreover, the retention

[44] Forensic Medical Service, answer to open records request #AK003T00001786.

length is shorter, and thus prevents the material from being used for potential DNA testing. Finally, while the law distinguishes the case status in regard to physical evidence (Table 1), such status does not impact on the length of retention. In all other cases, the rules do not concern on case status.

Last but not least, although beyond its scope, during this research I realized that this is an under-explored area, greatly characterized by the lack of information.[45] Thereby, there is plenty of room for future investigations, both from a strictly legal perspective, as well as other approaches. In further studies, I will venture with a specific proposal for a legal design or arrangement on the matter. This study has only attempted to begin to illuminate the issue.

VI Conclusion

Chile's criminal justice system does not adequately protect those wrongly convicted, as it does not provide them with any concrete possibilities to challenge their convictions. Nowadays, the post-conviction review mechanism, which has remained unmodified in over two hundred years, is hardly accessible, either because of its legal setting (e.g., the grounds for applications, standard of proof, etc.) or due to the Supreme Court's interpretation and practices (e.g., barriers in preliminary admissibility, Court's understanding of new evidence, etc.) Thus, to provide formal accessibility to post-conviction review, reform in the legal setting and change in Court practices are needed.

Still, it is necessary to create new legal structures to operationalize such a review mechanism, as the one suggested herein, by strengthening the rules for the preservation of evidence, and thus providing substantive accessibility to review, as well as enforcing additional values. While it can exonerate the innocent, the DNA technology might also be helpful to incriminate the actual perpetrator, or it may also contribute to identify the perpetrator of multiple connected crimes, which have thus far remained unsolved, thereby improving the state's clearance rate, and bringing real justice to victims. Thus, the proposed legal structure would actively serve the purposes of justice while also perfecting the system in the process.

This paper has sought to be an initial attempt at illuminating the issue of evidence preservation in Chile. Many aspects of the post-conviction review must be analyzed and reformed if we're to improve its accessibility shortcomings, especially regarding the matter of evidence retention, an area in which Chilean law is quite defective, as this research has identified. Only in the extent that these aspects are reformed, and when an actual evidence preservation statute is established, we will be able to say that the law grants substantive accessibility to those who have been wrongly convicted. All these aspects need to walk side by side though; otherwise, to a greater or lesser extent, the innocent will continue to remain in the dark.

[45] For instance, part of the requested information was denied because institutions simply did not have it. As stated in footnote 21, in their open record responses, both the Prosecution Service and the Public Defender's Office explained that their computer systems and database do not register certain information. This was certainly a barrier for this research.

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