



**Fair predictions of gender-sensitive recidivism**

**GA No: 101160473**

## **Deliverable 3.1**

# **Report on the relevance of gender and other sensitive characteristics in criminal proceedings**

**June 2025**



**Co-funded by  
the European Union**

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## Document Information

<b>Project Name</b>	Fair predictions of gender-sensitive recidivism
<b>Project Acronym</b>	FAIR-PreSONS
<b>Grant Agreement No</b>	101160473
<b>Call</b>	JUST-2023-JACC-EJUSTICE
<b>Topic</b>	JUST-2023-JACC-EJUSTICE
<b>Type of action</b>	JUST Lump Sum Grants
<b>Granting authority</b>	European Commission-EU
<b>Deliverable No</b>	3.1
<b>Deliverable Name</b>	Report on the relevance of gender and other sensitive characteristics in criminal proceedings
<b>Work Package</b>	WP3
<b>Dissemination Level<sup>1</sup></b>	N/A
<b>Deliverable Type<sup>2</sup></b>	R – Document, report
<b>Lead Organization</b>	Center for the Study of Democracy
<b>Lead Member</b>	Dimitar Markov, Bozhidara Tsvetlova
<b>Submission month</b>	M16
<b>Date</b>	12 June 2025

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<sup>1</sup> “PU – Public” or “SEN – Sensitive”

<sup>2</sup> “DATA – data sets, microdata, etc”, “DEC – Websites, patent filings, videos, etc”, “DEM – Demonstrator, pilot, prototype”, “R – Document, report” or “OTHER”

## Document history

Revision	Date	Description	Author
v0.1	12/06/2025	Final draft	Bozhidara Tsvetilova
v0.2	15/07/2025	Final version	Bozhidara Tsvetilova

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## Glossary

Abbreviation	
AI	Artificial Intelligence
ARAI	Actuarial Risk Assessment Instruments
CERD	Committee on the Elimination of Racial Discrimination
CJEU	Court of Justice of the European Union
CoC	Code of Conduct
COMPAS	Correctional Offender Management Profiling for Alternative Sanctions
CSD	Center for the Study of Democracy
ECHR	European Convention on Human Rights
ECLJ	European Center for Law and Justice
ECtHR	European Court of Human Rights
EJTN	European Judicial Training Network
ERRC	European Roma Rights Center
EU	European Union
EU Charter	Charter of Fundamental Rights of the European Union

<b>FRA</b>	European Union Agency for Fundamental Rights
<b>GA</b>	Grant Agreement
<b>ICPR</b>	Institute for Crime & Justice Policy Research
<b>JUST</b>	Justice Programme (of the EU)
<b>KFF</b>	Kaiser Family Foundation
<b>LFR</b>	Learning Fair Representations
<b>LLI</b>	Legal Literacy Institute
<b>PACT</b>	Positive Achievement Change Tool
<b>PATTERN</b>	Prisoner Assessment Tool Targeting Estimated Risk and Needs
<b>RAI</b>	Risk Assessment Institute
<b>SAVRY</b>	Structured Assessment of Violence Risk in Youth
<b>UN</b>	United Nations
<b>UNHCR</b>	United Nations High Commissioner for Refugees
<b>USSC</b>	United States Sentencing Commission
<b>WP</b>	Work Package

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## 1. Executive summary

This report, produced under Work Package 3 (WP3)/Deliverable 3.1 (D3.1) of the FAIR-PReSONS project, presents a comprehensive report on the relevance of gender and other sensitive characteristics in criminal proceedings which is aimed at identifying and addressing bias in recidivism prediction, with a focus on ensuring compliance with EU standards on fairness, non-discrimination, and fundamental rights. The FAIR-PReSONS project, funded by the EU's Justice Programme, seeks to develop a gender-sensitive, bias-aware artificial intelligence (AI) system for use in criminal justice settings. This report contributes to that objective by **exploring the impact of gender, race, ethnicity, age, religion and disability on criminal justice outcomes and the design and application of AI-based predictive models.**

The analysis commences by **examining disparities in sentencing, incarceration, and recidivism across different jurisdictions, with particular attention to the defendant's gender and other sensitive characteristics**, focusing primarily on Europe and the United States. It explores how both explicit and implicit biases influence judicial decision-making, thereby affecting the severity and duration of imposed sentences. These biases may result in either undue leniency or disproportionately severe punishments, depending on the extent to which the identity and behaviour of the convicted individual align with or deviate from socially constructed norms.

An intersectional approach elucidates how the convergence of multiple identity factors can influence perceptions of a convicted individual's propensity for violence, either mitigating or intensifying the perceived severity of the offense. Such perceptions can directly affect the nature and extent of the punishment imposed. This subjective interpretation frequently exposes underlying patterns of discrimination and unequal treatment within the legal system, which are subsequently embedded in algorithmic risk assessment tools.

The report also critically **evaluates existing risk assessment and AI-based recidivism prediction tools** - such as COMPAS, OxRec, HART, and PATTERN - examining both their intended applications and the limitations and discriminatory outcomes that have emerged in practice, particularly when these tools are trained on non-representative datasets. It underscores the trade-offs between accuracy and

fairness in algorithmic design and the risk of perpetuating gender and intersectional biases if mitigation strategies are not rigorously applied.

In conclusion, the report **advocates for the integration of gender- and rights-based frameworks into AI development in the criminal justice field**. It recommends the adoption of ethical standards and a code of conduct for legal professionals using AI, ensuring human oversight, transparency, and accountability. The findings and recommendations of this gender and other sensitive characteristics analysis form a critical foundation for the subsequent development of a fair and inclusive AI system through the FAIR-PReSONS project.

## 2. The FAIR-PReSONS project and WP3

### 2.1. About the project

The **FAIR-PReSONS project (Fair Predictions of Gender-Sensitive Recidivism)**, funded under the EU's Justice Programme (JUST-2023-JACC-EJUSTICE), aims to develop a bias-free, gender-sensitive artificial intelligence (AI) system for predicting recidivism. The project aligns closely with EU legislation on non-discriminatory and ethical AI use, particularly in the justice sector. It emphasises compliance with fundamental rights and data protection standards as enshrined in EU law, and seeks to ensure transparency, fairness, and accountability in criminal justice technologies.

A core component of the project is its **gender analysis**, which systematically examines the differential impacts of AI-generated predictions on women and men in all their diversity. To support this objective, the project foresees the collection and digitisation of relevant prison, offender management systems, and criminal justice data, employing EU-compliant metadata and semantic standards to ensure fair and lawful AI training. Beyond gender, the project also incorporates an **analysis of how other sensitive characteristics** may serve as grounds for discrimination, potentially exacerbating or legitimising acts of violence. In this context, the **intersection of gender with race, ethnicity, age, religion, and disability** is investigated to identify how these **identities may pose challenges to impartial legal decision-making**. Gaining insight into the specific mechanisms through which decision-makers may exhibit bias is essential for the development of AI systems that are free from such discriminatory tendencies.

FAIR-PreSONS is implemented by a **international consortium** coordinated by the University of the Aegean (Greece) and includes academic, civil society, and tech partners from Bulgaria (CSD), Portugal (IPS), Cyprus (ITML), and Greece (ReadLab, DUTH., ALLI).

Overall, FAIR-PreSONS aims to **bridge the gap between technological innovation and the EU's fundamental rights framework** by promoting responsible AI solutions that enhance justice without compromising fairness or equality.

## 2.2. WP3 objectives and tasks

Work Package 3 (WP3) of the FAIR-PreSONS project, led by the Center for the Study of Democracy (CSD), plays a key role in ensuring that the development of AI tools for recidivism prediction upholds the EU's commitment to non-discrimination, fairness, and fundamental rights. This work package is grounded in the understanding that AI technologies and risk assessment tools, if not carefully designed and implemented, may replicate or even reinforce existing biases within criminal justice systems. To counter this, WP3 is focused on **analysing the role of gender and other sensitive attributes in influencing outcomes**, both in existing systems and in emerging predictive models.

The first objective of WP3 is to conduct a **comprehensive gender analysis** to understand how men, women, and individuals of **diverse gender identities experience different treatment across the criminal justice process** - from arrest through to sentencing, detention and release. Using data from various sources, **the project seeks to identify patterns of disparity that may carry over into algorithmic tools**. Beyond gender, the work package expands its focus to include other sensitive characteristics, such as age, race, ethnicity, religion and disability. Drawing on EU anti-discrimination law and international human rights standards, WP3 seeks to map how the application of these characteristics in risk assessment tools may lead to unfair or disproportionate outcomes.

A key element of this work is the development of a **legal and ethical framework to govern the use of AI by legal professionals**. This framework includes a code of conduct (CoC) that defines the respective responsibilities of humans and AI in the decision-making process. It emphasises the need for human oversight, transparency, and accountability, ensuring that any AI system used within justice settings remains understandable, contestable, and respectful of individual rights. By including

a CoC, WP3 addresses not only technical fairness, but also broader legal and ethical implications of AI adoption in the justice sector.

To support these objectives, WP3 has **two core outputs**: a) a report on gender analysis and the impact of other sensitive attributes, and b) a detailed legal and ethical framework for the use of AI in criminal justice.

These deliverables will guide the consortium in creating a predictive system that is not only effective but also aligned with the EU's fundamental rights framework. In this way, WP3 lays the groundwork for a responsible and inclusive approach to AI development, where technology serves justice without compromising equality or human dignity.

### **3. Examining gender-bias in sentencing, incarceration and recidivism prediction**

#### **3.1. Gender disparity of sentenced offenders**

Conscious and unconscious **biases and stereotypes**, ingrained in socialisation and the social fabric, extend beyond private, everyday interactions and infiltrate the public sphere, exerting a **growing influence on the functioning of the criminal justice system** and the formulation of public policy (Russell and Torres 2023: 4). One significant factor influenced by such biases is gender, which has been shown to carry varied implications for offenders. The influence of gender on criminal court proceedings is particularly evident in cases involving female offenders. It affects the decision-making process regarding the appropriate sentence, including its severity, duration, and underlying motivations (Russel and Torres 2023; Wang 2024).

In recent years, the **gender disparity of sentenced offenders has become narrower**, with an increasing number of women being incarcerated. This trend is particularly evident in the growing involvement of women in property-related offences, such as theft and fraud, in countries including Portugal, Greece, and Bulgaria. A similar pattern is observed in drug-related offences in Portugal and Greece between 2020 and 2023 (D2.2).

Nonetheless, **men continue to comprise the majority of convicted individuals across all categories of crime**. Globally, the female prison population has seen a substantial increase, with a rise of over 60% in 2022 compared to the year 2000. In contrast, the male prison population grew by 22% over

the same period (ICPR 2022). Despite this increase, **men still represent approximately 90% of the total prison population.**

In Europe, according to the 2023 Space I report, which analysed data from 49 countries as of 31 January 2023 the **average prison population across the Member States of the Council of Europe consisted of 93.4% males and 5.2% females**, highlighting a significant gender disparity among incarcerated individuals. Among these Member States, the highest proportions of female prisoners were recorded in Andorra (11.5%), Iceland (9.9%), Cyprus (9.2%), Malta (9.1%), and Czechia (8.5%). In contrast, no female prisoners were observed in Liechtenstein and Monaco. However, this data should be interpreted with caution, as both countries are territorially small, with Monaco reporting a total prison population of 26 and Liechtenstein reporting 6, all of whom were male. Beyond these two cases, the next lowest percentages of female prisoners were recorded in Albania (1.3%), Croatia (1.9%), Armenia (2.6%), and Azerbaijan (2.9%) (Aebi and Cocco 2024: 40-41). The FAIR-PreSONS countries exhibit proportions of incarcerated women that are approximately in line with the international average: Bulgaria reports 3.6%, Greece 5%, and Portugal 7.2% (Aebi and Cocco 2024).

Furthermore, the SPACE I report employs a gender indicator to classify countries into **distinct clusters based on their female prison populations**. By calculating the prison population rate per 100,000 inhabitants, the report identifies 15 countries with a very high percentage of female inmates, defined as having values more than 25% above the median. These countries include Andorra, Iceland, Cyprus, Malta, Czechia, Finland, Latvia, Hungary, Slovakia, Spain, Portugal, San Marino, Austria, Norway, and Sweden. Additionally, eight countries are classified as having a high percentage of female prisoners, including Switzerland, Germany, Luxembourg, Slovenia, Croatia, Moldova, Denmark, and Ukraine (Aebi and Cocco 2024: 4).

In the context of the United States, the incarceration rate for women has experienced a sevenfold increase from 1980 to 2022, rising from 26,326 to 180,684 (Budd 2024). Despite this significant increase, women account for only about 10% of the total prison population in the United States (Prison Policy Initiative 2024).

### 3.2. Factors underlying the disproportionate representation of men and women

The significant disparities observed necessitate an investigation into the **underlying causes of the disproportionate representation of men and women in prison populations** globally, as well as the differential treatment in sentencing for legal infractions, including alternative measures such as probation and community service. The influence of gender in legal decision-making processes can be traced to its foundational role in interpersonal relations and societal structures. Gender, as a socially constructed characteristic, has been shaped by varying historical and cultural contexts, with each period assigning different meaning to how gender manifests in the private and public spheres – including in legal and policy frameworks.

Scholars have noted that the **treatment of women in judicial proceedings** is influenced not only by individual perceptions of the woman in question but also by the **prevailing societal attitudes toward women in general** (Wang 2024; Russel and Torres 2023). Complex cultural understandings of women's roles and their perceived character significantly affect how their crimes are interpreted and what procedures are used to determine appropriate punishments. One key determinant is the **theory that certain crimes are imbued with gendered connotations**, with violent crimes or offenses against the family often viewed as “masculine” (Estrada-Reynolds et al. 2017; Lima 2014: 8). Women who engage in such violent acts are regarded as profoundly transgressing the societal norms that expect women to embody tenderness, gentleness, and care. This perspective aligns with a broader assumption about gender, specifically the belief that **women, due to their femininity, are inherently incapable of violence**.

Consequently, when women commit violent crimes, a dissonance arises between their actions and the traditionally assumed peaceful image of femininity (Collins 2022: 8). This dissonance frames the violent act as an external force that penetrates the moral framework associated with femininity, often leading to more severe sentencing for violent female offenders. This phenomenon can be interpreted as a **punitive response to women's violation of both the law and the established gender norms**, a concept first articulated through the “Double Deviance Theory” or “Evil Woman Hypothesis” (Beeby et al. 2021). These theories posit that women who commit the most deviant, violent, or shocking offenses face harsher treatment within the criminal justice system, embodying the “evil woman” stereotype, while the majority of female offenders receive more lenient sentences (Tillyer et al. 2015)

An additional factor influencing sentencing outcomes for women is the **political climate in which jurisdictional decisions are made**. The importance of the political and social context lies in its capacity to shape individuals' worldviews, including judicial perceptions of gender equality, roles, and stereotypes. Research (Kruttschnitt & Savolainen 2009) indicates that **gender bias in sentencing is influenced by the level of gender equality** within a particular social context at a specific point in time, with Finland exemplifying this trend. The underlying rationale posits that **higher levels of gender equality within a society mitigate gender-based prejudices and biases**, thereby fostering a more equitable legal process that is less influenced by gendered considerations. Therefore, over time, as attitudes towards gender become more progressive and societies adopt increasingly liberal values, and when controlling for legally relevant factors, the disparity in sentencing between men and women has been diminishing. Ultimately, while the influence of gender on sentencing patterns has declined, gender biases in criminal proceedings continue to persist (Kruttschnitt & Savolainen 2009).

This body of relevant literature establishes a framework suggesting that **women are more likely to receive harsher sentences when they deviate from stereotypical gender roles and characteristics** associated with the female image (Wang 2024; Collins 2022; Estrada-Reynolds et al. 2017; Lima 2014: 8). Conversely, another strand of literature highlights situations where **women may benefit from more lenient sentencing** compared to their male counterparts, particularly in terms of the severity and duration of their punishments (Chase 2008: 41; Crew 1991; Goulette et al. 2015). This claim is supported by the “Chivalry Hypothesis”, a prevalent concept introduced in criminal justice research. According to this hypothesis, women who commit crimes are often given more lenient sentences for two key reasons: they are generally perceived as primary caregivers and “loving mothers”, and they are viewed as being “emotionally too weak” to engage in violent behaviour (Chase 2008: 41). The hypothesis asserts that this leniency is exhibited not only by authorities such as judges, prosecutors, and law enforcement officers but also by men as a broader social category.

The interactions between men and women, as explained by the theory, are often marked by paternalistic and protective attitudes, which stand in contrast to the punitive nature of sentencing. These gendered dynamics are attributed to the **reluctance of men to directly or indirectly accuse, arrest, or prosecute women**, thereby contributing to the lower rates of female incarceration globally. It is important to note, however, that this hypothesis first emerged in the 1950s, within societies

characterised by strong patriarchal norms. During this period, women's rights were significantly more restricted than they are today, and the prevailing view of women was largely paternalistic, equating their agency to that of vulnerable groups such as children (Pollak 1950). As a result, the historical context in which this hypothesis was developed must be considered when applying it to contemporary phenomena, as its relevance has been increasingly contested.

The perception of women is significantly shaped by the roles they occupy in the lives of others. Specifically, the societal emphasis on the "loving mother" stereotype positions women's marital and parental status as key determinants in shaping how they are viewed. Subsequently, the **typical tropes of a "wife", "widow" or "mother" frequently emerge when analysing female convicts in media and courts**, unavoidably linking their image to their familial status and using it as a justification for the offences. This suggests that their agency and self-determination to commit violence are limited, making them incapable of choosing to engage in crime on their own. Their transgressions are often portrayed as being motivated by their interpersonal relationships. This is often presented as an excuse in court, resulting in a more lenient sentence. A notorious example of this is the Chechen Female Suicide Terrorists, also known as the "Black Widows" (Speckhard and Akhmedova 2017).

The Black Widows were female terrorists involved in twenty-two out of twenty-seven suicide attacks in Chechnya during the early 2000s, accounting for 81% of those attributed to Chechen rebels. In total, 110 bombers participated in these attacks, of whom forty-seven were women (43% of the total) (Speckhard and Akhmedova 2017: 63). The term "Black Widows" was coined by the Russian and international press, referring to these women when it became apparent that their violence was driven by a desire for revenge following the deaths of their husbands, sons and brothers. This characterisation was reinforced by their appearance in black mourning attire, with bombs strapped to their bodies (Speckhard and Akhmedova 2017: 63). The primary motivations attributed to these women were "direct personal traumatisation", revenge for the killing of a family member, and religious affinity. Notably, the gender of the bombers was frequently emphasised in media coverage. Furthermore, while many Russian journalists claimed that these Chechen women were kidnapped, raped, or drugged and subsequently forced into participating in the attacks, scholars have found no evidence supporting such claims (Speckhard and Akhmedova 2017: 66-70). On the contrary, research has demonstrated strong evidence of self-recruitment and a pronounced willingness among these

women to sacrifice themselves for social justice, and independence and to avenge the loss of a family member (Speckhard and Akhmedova 2017: 70-71).

This case study highlights how society, media, and legal representatives interpret women's involvement in violent acts. The focus is consistently placed on the gender of the bombers, framing their participation in criminal activity as extraordinary and abnormal. Consequently, their identities are often constructed around their roles as wives and mothers, linking their actions to their relationships with men, thus giving rise to the label “Black Widows” and alternatively the “Brides of Allah”. Moreover, the narrative propagated by media outlets that the female bombers were coerced into these acts, influenced by men and not acting of their own volition, reinforces the perception that women are inherently non-violent and incapable of autonomous, uncoerced violence. The majority of individuals, who were closely associated with the terrorists, expressed sympathy and understanding towards their motivations, with only 12% openly criticising them (Speckhard and Akhmedova 2017: 75). This portrayal sustains the image of women as innocent and non-violent due to their gendered nature.

The assertion that **women are primarily guided by their emotions and driven by interpersonal relationships** is further illustrated by a body of literature examining “**crimes of passion**”. This term refers to violent acts, particularly homicides, committed in response to a sudden, overwhelming emotional impulse, such as anger or jealousy, rather than as a result of premeditation. Notably, crimes of this nature have often been met with significant social and legal tolerance, emphasising an understanding of the motivations behind the act, thus removing the element of malice aforethought (Hill 2002). In cases classified as “crimes of passion”, defendants are typically shielded from the most severe penalties, such as those for first-degree murder (Hill 2002; LLI 2022). Instead, convictions often result in lesser charges, such as second-degree murder or manslaughter, which negates the requirement for intent in the legal decision-making process and sentencing. Legal precedents involving “crimes of passion” frequently feature defendants who display signs of temporary insanity or provocation, with such cases predominantly arising from incidents involving romantic partners (UN Women 2011; Hill 2002).

The discourse surrounding **women’s involvement in crimes of passion is complex and multifaceted**. On one hand, when women are perpetrators, they are often portrayed in court as emotional,

irrational, or hysterical - lacking logical reasoning and self-control. These characteristics are closely tied to the image of the female defendant, rendering her seemingly incapable of full responsibility for her actions (Jacobs 2010; Harris 1991). This frequently leads to more lenient sentencing, based on the assumption that a woman cannot bear the full consequences of her crime due to presumed psychological instability (Jacobs 2010; Harris 1991). On the other hand, women are often the victims of such “crimes of passion”, particularly in cases of domestic and intimate partner violence (UN Women 2011). Many instances of femicide in these contexts are excused by the male partner’s anger or jealousy, which is argued to impair their ability to think rationally (UN Women 2011). Furthermore, considerations of honour - often exemplified by “honour killings” - also fall within this category, reinforcing the notion that women are subject to the authority of their male relatives. In such cases, men are excused from responsibility when a woman is seen to have “compromised” their honour (UN Women 2011; Hill 2002).

### 3.3. Intersectional approach

Against this background, **women’s conduct of violent crimes and female recidivism rates can be contextualised beyond the gender dimension through an intersectional approach.** Utilizing an intersectional approach to analyze and disaggregate data on female reoffending offers a valuable framework for understanding differential sentencing outcomes. This approach helps distinguish the influence of intersecting identities from other relevant factors that will be explored in the subsequent sections of this analysis. Intersectionality offers unique insights into the characteristics of perpetrators, facilitating a more precise understanding and representation of their profiles.

Building on this perspective, the relationship between age and criminal behavior is a well-established finding in criminological research. Data from Portugal, Greece, and Bulgaria reveal a consistent pattern, with a high concentration of offenders belonging to younger age cohorts, particularly those between 19 and 35 years old. This age group is more frequently involved in crimes against persons and property-related offences, especially within these national contexts (D2.2).

An illustration of this correlation is the age-crime curve that demonstrates how criminal activity varies with age. According to the curve, offending is low during childhood until the age of ten, but then

peaks during adolescence from age 10 to 25, and then declines during adulthood as individuals take on more responsibility (De Rooy et al. 2019). The aggregate curve stays consistent across history, cultures and demographic groups; however, its **age-crime provisions are different for men and women** (De Rooy et al. 2019). Men are found to generally demonstrate higher conviction rates than women across all age groups, with an age-crime curve that peaks during youth and exhibits distinct temporal patterns of change. In comparison, younger women tend to abruptly desist from offending during the transition into adulthood. Scholars argue that while most females cease offending upon entering adulthood, a subset of chronic offenders persists, deviating from the typical age-crime curve – this group starts offending at a later age (De Rooy et al. 2019).

Distinct **gender-specific variations in factors such as social cognition and early victimisation** have been identified as significant predictors in the study of criminal behaviour (De Rooy et al. 2019; Bennett et al. 2005). Women tend to reach their peak in criminal activity earlier than men, indicating significant life-course differences between the sexes. Research further demonstrates that the timing of both the onset of offending and desistance is shaped by factors such as substance misuse and victimisation. In terms of substance misuse, **female offenders tend to initiate drug use at a younger age** than their male counterparts. Furthermore, a nationwide Australian study found that girls aged 10 to 14 experience the highest rates of sexual assault victimisation (475 per 100,000), a rate 15 times higher than that of the general male population (De Rooy et al. 2019). This finding suggests that adolescent experiences may play a significant role in the development of criminal behaviour. Female inmates also report significantly higher levels of childhood maltreatment compared to male inmates. Life-course theory posits that the **prevalence of childhood victimisation among female offenders is a strong predictor of future criminal behaviour**. Consequently, early victimisation is closely linked to early offending, with age playing a critical role in shaping female offenders' experiences, as their histories of victimisation are central to their pathways into criminality (De Rooy et al. 2019).

Life-course theory provides a broader framework for understanding gender differences in recidivism rates. In the United States, a study of 300 men and 300 women found that **factors such as urban residence, experiences of childhood and recent abuse, cohabitation with a criminal partner, drug sales, stress, depression, fearfulness, and suicidal ideation serve as stronger predictors of recidivism among women than men** (Benda 2005). In contrast, male recidivism is more strongly associated with criminal peer affiliations, weapon carrying, alcohol abuse, and aggressive tendencies.

Moreover, job satisfaction and educational attainment have a greater influence on men's duration of residence in the community, whereas women's community tenure is more significantly shaped by the number of children and interpersonal relationships (Benda 2005). Therefore, the factors influencing community stability often vary by gender, and incorporating these considerations may enhance the understanding of recidivism trajectories.

Advancing the intersectional analysis of female offending, **ethnicity emerges as a significant sociodemographic factor influencing offending trajectories**. Within the framework of life-course theory, scholars explore how antisocial behaviours, shared risk factors and culturally specific factors influence recidivism rates, highlighting their intersection with ethnic minority backgrounds such as Indigenous people (De Rooy 2019). **Shared risk factors include “child abuse, quality of parenting, and school failure” while culturally specific factors encompass “systematic racism, forced removals, welfare dependence, and substance abuse”**. In light of these considerations, De Rooy’s research characterises Indigenous individuals, and particularly Indigenous Australians, as often exhibiting “higher levels of recidivism, illicit drug dependence, lower social and material capital, lower levels of education, unstable housing, and underemployment”. De Rooy illustrates these trends by presenting data on Australian prisoners, asserting that "Indigenous Australian status appears to be a considerable risk for recidivism" (De Rooy 2019). Statistical evidence from 2016 indicates that although Indigenous Australian women comprise only 2.2% of the total female population in Australia, they represent 34% of all female prisoners and face an incarceration rate that is 11 times higher than that of non-Indigenous women (De Rooy 2019; Kilroy 2016). Consequently, **the intersection of gender and ethnicity can exacerbate the vulnerability of ethnic women as they navigate the criminal justice system**.

The relationship between gender, ethnicity, and recidivism is not yet conclusively established in the literature, as the higher rates of reoffending among ethnic women cannot be attributed solely to greater involvement in criminal activity. Prejudice and bias within the criminal justice system must also be considered as potential contributing factors. Taking this into consideration, data reveals that **girls from ethnic minority backgrounds generally exhibit higher rates of reoffending**, particularly when mental health issues and a history of trauma are present (De Rooy 2019; Kilroy 2016).

Similar trends can be observed in England and Wales, as indicated by a Female Offender Dashboard created by the United Kingdom's Ministry of Justice, a platform that presents key metrics on female offenders. It is important to note that this is an active website with data that is updated annually; therefore, figures may vary depending on the time of access.

According to 2023 data accessed in 2024, white men and women constitute the largest proportion of first-time entrants into the justice system, accounting for approximately 68% to 74%. Black and Asian individuals represent around 7% to 10% of male entrants and 4% to 6% of female entrants (Ministry of Justice 2024), while the remaining cases are classified as "unknown". Given that Black and Asian individuals comprise 13.9% of the overall UK population (Ministry of Justice 2024), these figures suggest the potential for over-policing within these communities. Moreover, this disparity is more pronounced among men.

A similar pattern is evident in arrest statistics for England and Wales, where Black men and women account for approximately 7% to 8% and 6% to 7% of arrests, respectively. Asian men and women constitute 6% to 10% and 5% to 6% of arrests, respectively (Ministry of Justice 2024). In contrast, the proportion of arrests for white men and women remains relatively stable. This trend highlights the overrepresentation of Black and Asian individuals in arrest statistics, suggesting potential biases within policing and the broader criminal justice system, particularly at the intersection of gender and ethnicity. However, this relationship should be carefully analysed across different national contexts and considered as a possible outcome of systemic bias and legal challenges faced by ethnic minority defendants.

## **4. Examining the influence of protected characteristics in sentencing, incarceration and recidivism prediction**

### **4.1 Racial Bias in Judicial Decision-Making**

Judicial decision-making processes are influenced by various forms of bias, including but not limited to gender-based biases affecting sentencing outcomes and sentence length determinations. Among these, racial bias emerges as a particularly salient factor. Legal instruments dedicated to safeguarding human rights, such as the European Convention on Human Rights (ECHR) and the Charter of

Fundamental Rights of the European Union (EU Charter)<sup>3</sup>, explicitly prohibit racial discrimination (Council of Europe 1950; European Union 2010). The ECHR articulates a comprehensive prohibition against discrimination, identifying race as a protected characteristic and mandating that rights and freedoms be guaranteed regardless of racial identity (Council of Europe 1950).<sup>4</sup> Similarly, the EU Charter underscores the principle of non-discrimination, unequivocally proscribing any discriminatory practices grounded in race (European Union 2010).<sup>5</sup>

Personal biases and stereotypes regarding racial and ethnic minorities, frequently portraying them as more dangerous, unreliable, and prone to recidivism, extend beyond interpersonal interactions into judicial proceedings. These prejudiced perceptions can profoundly influence judicial decisions, impacting sentencing and punishment determinations for defendants. **Isolating the specific impact of race on sentencing outcomes proves challenging due to the interplay of various "omitted case characteristics that are correlated to race", such as the defendant's criminal history and the quality of legal representation** (Abrahams et al. 2010: 3). Nonetheless, race is firmly established as a significant factor of direct relevance to legal policy (Abrahams et al. 2010: 4).

It is essential to recognize the **disparity in data collection concerning race within the criminal justice systems of Europe and the United States**. While the United States has a long-standing practice of recording racial identification across various governmental agencies due to the significance of racial demographics in American policymaking and legislation, many European countries do not officially categorize citizens by race. Moreover, several European nations, particularly France and Germany, enforce strict legal restrictions on the collection of racial data in official records (Bleich 2001; Bilic 2023). Consequently, racial information on prisoners is disproportionately prevalent in American criminal justice statistics compared to those of European countries.

With this in mind, an analysis of judicial decision-making patterns based on publicly available data on legislative proceedings reveals disparities in sentencing between White and minority defendants. In England and Wales, Black defendants, on average, spend over 70% more time in prison awaiting trial

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<sup>3</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:12012P/TXT> Charter of Fundamental Rights of the European Union, Article 1 of Protocol No. 12; Section I, Article 12

<sup>4</sup> Council of Europe (1950), European Convention on Human Rights, ETS No. 005, Rome, 4 November 1950. [https://www.echr.coe.int/documents/d/echr/convention\\_ENG](https://www.echr.coe.int/documents/d/echr/convention_ENG)

<sup>5</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:12012P/TXT> Charter of Fundamental Rights of the European Union, Article 21

and sentencing compared to their White counterparts. In 2022, the average number of days spent in prison on remand was 302 for Black prisoners and 272 for mixed-race prisoners, whereas White remand prisoners spent an average of 177 days. The percentage difference in remand duration between Black and White prisoners has more than doubled since 2015, increasing from a 33% disparity to 71% (Wilding and Syal 2023).

In the United States, this disparity is also widely evident. According to the Jail Data Initiative, which compiled data on the U.S. prison population through an interactive tool<sup>6</sup>, between March 2020 and December 2022, the average number of White individuals in jail increased by less than 1%, whereas the number of Black individuals increased by 8% across 349 jails. As of 2022, Black individuals were admitted to jail at a rate more than four times that of White individuals and remained in jail for an average of 12 additional days across a sample of 595 jails (Wertheimer 2023).

Furthermore, in 2022, Black individuals comprised 12% of local populations but accounted for 26% of jail populations on average across the 595 jails in the Jail Data Initiative sample for which race data was available for the entire year. In nearly 71% of these jails, the proportion of the incarcerated population that was Black was at least twice the percentage of the Black population in the surrounding locality (Wertheimer 2023).

These patterns have been long-standing within the American criminal justice system. For instance, in 2008, African American men were incarcerated at a rate six and a half times higher than White men. Furthermore, the application of a Monte Carlo methodology (a computational approach that relies on repeated random sampling to generate numerical results) amplifies this racial incarceration gap by 18 percentage points (Abrahams et al. 2010: 3-4; Kroese et al. 2014). Specifically, African American and Hispanic defendants are statistically more likely to be incarcerated than their White counterparts and, when sentenced, tend to receive longer prison terms (Abrahams et al. 2010: 6). Research further indicates that one in five Black men is serving a life sentence, and people of color constitute two-thirds of all individuals serving life terms in the United States (Nellis 2021). Furthermore, despite comprising only 13% of the general population, Black Americans account for 35% of individuals executed under the death penalty in the United States (NAACP 2024). Conversely, further research suggests that while race influences the decision to incarcerate, it does not necessarily affect sentence

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<sup>6</sup> <https://jaildatainitiative.org/dashboards/population>

length. Although findings on the racial impact in sentencing vary across national and legislative contexts, race consistently emerges as a critical factor associated with disparities in incarceration and sentencing outcomes.

One literary strand seeks to explain differences in judicial decision-making by examining judges' personal characteristics, assuming that such traits may influence their rulings. Empirical research indicates that **judges' individual characteristics affect case outcomes, particularly when these traits align with salient issues in the case.** For instance, in cases involving racial discrimination, a judge's race has been found to significantly influence sentencing decisions, whereas gender typically does not play a similar role. However, some studies suggest that female judges are more likely to impose sentences of equal length on both white and minority defendants, highlighting the need for further exploration (Abrahams et al. 2010: 7; Rachlinski and Wistrich 2017: 7-8).

For example, African-American federal district judges are more likely to rule favorably for plaintiffs in pretrial motions concerning race or gender discrimination cases compared to their white counterparts. Similarly, white federal judges have been shown to be less sympathetic to employment discrimination claims than minority judges, particularly in prosecution cases. Chew and Kelley's research demonstrates that plaintiffs in racial harassment cases experience a 42.2% success rate with African-American judges, compared to 20.6% with white judges and 15.6% with Hispanic judges. Additionally, both white and African-American judges are more likely to rule in favor of plaintiffs of their own race than plaintiffs of other racial backgrounds (Chew and Kelley 2009).

Research findings exhibit variation across different case types, reflecting divergent judicial tendencies. While race frequently emerges as a significant factor in sentencing decisions, results remain inconclusive - some judges exhibit differential treatment based on race, while many others do not (Rachlinski and Wistrich 2017: 7; Chew and Kelley 2009; Mitchell and MacKenzie 2004).

Consequently, existing studies provide substantial evidence supporting the notion that **personal biases and prejudices can influence judicial decisions.** Nonetheless, isolating specific variables and quantifying their precise impact necessitates further empirical investigation. This line of inquiry gives rise to the "myth of a color-blind judge", suggesting that "judges of all races are attentive to the relevant factors of the cases but may reach different conclusions depending on their races" (Chew and Kelley 2009: 1117). Using logistic regression analysis, Chew and Kelley established that African-

American judges were 3.3 times more likely to rule in favour of plaintiffs than white judges, yielding statistically significant results unlikely attributable to chance (Chew and Kelley 2009: 1145-1146).

Analyzing the intersection of racial bias and judicial decision-making poses methodological challenges due to the primary reliance on quantitative data analysis. This approach attempts to capture complex dynamics involving human socialization and the formation of prejudice. Given these intricacies, research findings remain inconclusive, emphasizing the need for further investigation and the potential adoption of alternative research methodologies.

The topic could be further explored through the lenses of social scientific theories. In particular, the term "**predictive racial profiling**" emerges as a critical concept in discussions of the role of racial characteristics in judicial processes. This term refers to the practice of suspecting an individual of criminal activity solely based on their race (de Vries 2024; Glasser 2014; Engel and Cohen 2014). Racial profiling is further problematized by its disproportionate burden on minorities, as individuals from certain racial backgrounds are more likely to be stopped and searched by police, thus facing a disproportionate amount of sanctions (Glasser 2014: 3). The increased frequency of stopping and searching innocent people of color raises the likelihood of wrongful arrests, contributing to the overrepresentation of minorities in incarceration and sentencing statistics (Glasser 2014: 3).

These disparities are evident in stop-and-search data from the European Union Agency for Fundamental Rights (FRA) 2023 report on the "*Experiences of People of African Descent*". According to a survey conducted in 2022, 26% (one in four) of respondents of African descent reported being stopped by the police within the five years preceding the survey. Among those stopped, 58% perceived the intervention as racially motivated, with the highest rates recorded in Germany (69%), Spain (66%), and Sweden (58%) (FRA 2023: 71). Data from the United Kingdom further illustrate this trend, showing that Black individuals are significantly more likely to be stopped and searched by the police compared to their White counterparts - up to four times more likely to be subjected to such practices (Namoradze and Pacho, 2018).

A similar pattern is observed in arrest data from the United States. According to a 2020 KFF poll, four out of ten (41%) of Black Americans state that they have been stopped or detained by police because of their race (KFF 2020). Moreover, 2007 reports reveal that although Black individuals comprised approximately 12.5% of the American population, they accounted for 28.2% of all arrests. Glasser notes that Black incarceration rates rose steadily during the 1980s and 1990s, stabilizing at a high

level in the early 2000s. This trend does not indicate improvement in arrest and incarceration rates for Black individuals in the 2000s but rather underscores the persistence of historically high arrest levels (Glasser 2014: 3-5).

**One explanation for the prevalence of racial profiling is the assumption of higher crime rates among minority groups.** Indeed, the National Crime Victimization Survey has reported relatively high crime perpetration rates among Black individuals in America. However, these rates are insufficient to justify identifying them as inherently more dangerous or warranting increased police surveillance (Glasser 2014: 5-6). Moreover, the sporadic nature of data collection, particularly within the U.S. context, hinders the ability to conduct consistent, cross-nationally valid research.

**An alternative explanation centers on the role of prejudice and decision-making influenced by conscious and unconscious biases,** which is recognized as a significant concern across diverse contexts in judicial processes involving race. Studies reveal that Black defendants are more frequently convicted and subjected to harsher sentences (Glasser 2014: 8). Research suggests that "overt racial prejudice is unusual in our post-civil rights era, but psychological studies indicate that Whites are more likely to display anti-Black prejudice under relatively ambiguous circumstances" (Glasser 2014: 8).

These findings highlight the unconscious biased patterns that influence interactions with minority civilians and people of color, resulting in higher arrest and investigation rates. This, in turn, generates more judicial proceedings involving racial minorities. Consequently, the societal perception of people of color as inherently more dangerous is reinforced, further influencing judicial decision-making and contributing to disproportionately lengthy and severe sentences for individuals from minority groups. This cycle does not deny the higher crime participation rates among some minority groups but rather adds **a nuanced understanding of the structural and social factors** underpinning this phenomenon.

#### **4.2 Ethnic Bias in Judicial Decision-Making**

Racial discrimination is often examined alongside ethnic discrimination. While both share similar foundations, they differ in how they manifest. Race is typically an immediately perceivable characteristic that does not require additional information to ascertain an individual's racial identity. In contrast, **ethnicity is a more nuanced and less overt attribute that may not initially trigger discrimination but can still lead to biased treatment,** particularly against non-native populations.

Due to these subtle distinctions, ethnic discrimination in criminal justice cases and incarceration should be considered separately from racial discrimination (Bash 2024).

According to the 2023 SPACE I report, on January 31 2023, foreign inmates - defined as prisoners from non-native populations, comprised an average of 26.8% of the total prison population across Council of Europe member states (Aebi and Cocco 2024: 4). The report classifies 22 out of the 46 examined countries as having exceptionally high proportions of foreign inmates, with Monaco (88.5%) and Liechtenstein (83.3%) displaying figures significantly above the average. However, due to the small territorial and population sizes of these two countries, caution is required when making direct comparisons. Additionally, other countries, such as Luxembourg (77.7%) and Switzerland (71.0%), also exhibit notably high proportions of foreign inmates (Aebi and Cocco 2024: 62-63). The high proportion of foreign prisoners in Switzerland, including a significant number of Italians, has been partially attributed to the country's longstanding border protection policies (Gonnella 2016).

To distinguish between racial and ethnic discrimination, the case of prejudice against Eastern Europeans serves as a relevant example. Unlike racial discrimination, which often relies on visible physical attributes such as skin color, Eastern Europeans generally do not differ significantly in appearance from other Europeans. However, they frequently experience discrimination based on their nationality within criminal justice settings (Kakar et al. 2024). Specifically, Eastern European backgrounds are often stereotypically associated with high crime rates, fostering a bias that links their ethnicity to a perceived propensity for criminal activity and recidivism. This form of prejudice persists despite their typically fair skin, highlighting a dimension of discrimination that extends beyond physical characteristics (Lewicki 2023; Kakar et al. 2024). As a result, it is essential to examine the influence of ethnicity on legislative decision-making processes.

These patterns can be analyzed through the concept of “**ethnic profiling**”, which refers to law enforcement practices based on assumptions about an individual’s ethnicity or national origin rather than their behavior or objective evidence. Ethnic profiling may be carried out by law enforcement officials at all levels, from local police forces to counterterrorism units, and can occur in various policing practices, including identity checks and border control (Open Society Foundations 2019). Minority and immigrant communities across Europe and the United States are among the most affected by this practice. Extensive documentation of ethnic profiling has been reported in several

European Union member states, including Bulgaria, Hungary, Spain, and France, as well as in Russia (Open Society Foundations 2019).

Ethnic biases are most evident in specific regional contexts, where certain groups face systemic discrimination within the criminal justice system. Research conducted by the European Roma Rights Center highlights the significant structural discrimination experienced by Romani people across Europe, particularly in countries such as the Czech Republic, Spain, Bulgaria, Slovakia, Serbia, and North Macedonia (ERRC 2021). For example, a survey carried out between November 2016 and February 2017 by the Bulgarian Helsinki Committee revealed that 50,8% of newly imprisoned persons identified themselves as Roma. This is in contrast with the official police statistics of that period on the share of minorities among the identified crime offenders. According to that data the share for 2014 is 18,4%, while for 2015 the figure is 17,5% (Angelova and Kukova 2020).

Similar to Bulgaria, the proportion of Roma prisoners in Hungary and Romania approaches 50%. Additionally, while Roma individuals constitute less than 1% of the general population in Ireland, they account for nearly 25% of the female prison population (Children of Roma and Traveller Prisoners 2017). Further studies in Spain indicate that 25% of non-foreign female prisoners were of Romani descent, representing a twentyfold overrepresentation compared to their proportion in the general population (Children of Roma and Traveller Prisoners 2017). This overrepresentation in the criminal justice system is driven by various forms of discrimination, including disproportionate targeting and arrest, biases in judicial proceedings, and inadequate legal protection. Additionally, a presumption of guilt, reinforced by broader racist narratives about so-called “Gypsy crime”, further exacerbates these disparities (Fair Trials 2020). Consequently, **ethnic discrimination within the legal system is not only systemic but also deeply embedded in historical misconceptions and societal stereotypes.** Often referred to as “*antigypsyism*”, Roma communities have long been depicted as inherently criminal or socially deviant, leading to ingrained biases that are frequently accepted as fact (Fair Trials 2020; Council of Europe 2022).

Similar ethnic and societal biases can be observed in the treatment of Albanians in countries such as Italy, Switzerland, and Germany. Historical stereotypes have played a crucial role in shaping the legal treatment of Albanians, much like the case of Roma communities. The mass migration of Albanians to Italy in the early 1990s led to significant negative media coverage, which persistently associated

Albanians with crime and social instability (Bego 2023). This negative media portrayal has continued occurring, with Italian news outlets disproportionately focusing on crimes committed by ethnic Albanians, even in cases where allegations remain unverified (Mai 2002). Similar patterns are observed in Switzerland, where Albanians are frequently linked to drug trafficking. Although limited data exists on the direct impact of these biases on judicial decision-making, systemic discrimination is evident in incarceration statistics. In 2018, non-Swiss nationals made up 70% of the prison population in Switzerland, reflecting a substantial overrepresentation linked to institutional biases (Islas 2019). Likewise, in Italy, non-nationals constituted 34.1% of incarcerated individuals, a trend likely driven by societal prejudices, socioeconomic inequalities, over-policing, and inadequate legal representation - similar to the challenges faced by Roma communities (Islas 2019).

Concerns regarding disparities in pre-trial detention have been raised by the United Nations Committee on the Elimination of Racial Discrimination (CERD). The committee warns that *“racial or ethnic groups, particularly non-citizens - including immigrants, refugees, asylum seekers, and stateless persons - as well as Roma, Indigenous peoples, and other marginalized communities, are disproportionately subjected to exclusion, marginalization, and lack of integration into society”*. It further highlights that *“an excessively high number of non-nationals are held in pre-trial detention”* (CERD 2005). In France, pre-trial detention is notably more common among individuals born outside the country’s sentencing jurisdiction, with 5.2% of foreign-born individuals held in pre-trial custody compared to only 1.8% of those born in France. Similarly, non-Italian nationals make up 35% of those in pre-trial detention in Italy (Fair Trials 2021).

Belgium presents a particularly stark example, with 45.8% of pre-trial detainees being non-citizens (Fair Trials 2021). Research indicates that *“defendants born outside Belgium face a significantly higher risk of pre-trial detention than those born in Belgium”* (Fair Trials 2021). Further studies reveal that, even when controlling for other variables, *“defendants with perceived Islamic names are, on average, three to five percentage points more likely to be convicted than those with traditionally Belgian names”*. These findings underscore the pervasive role of ethnic discrimination within European judicial systems, demonstrating how **entrenched biases continue to influence legal proceedings and incarceration rates**.

In the United States, Latino individuals face significant societal stereotypes and are disproportionately represented within the judicial system across various states. Despite comprising approximately 19.5% of the U.S. population in 2024, Latinos experience incarceration at substantially higher rates than most other ethnic groups (U.S. Census 2021). Latino men, in particular, face a heightened likelihood of imprisonment, with approximately one in six Latino men being incarcerated at some point in their lifetime, compared to an estimated one in seventeen White men. Additionally, research conducted by the Sentencing Project indicates that Latino youth are 16% more likely to be incarcerated than their White peers (Rovner 2023). Although this figure reflects some improvement, given the disparities in population distribution, significant inequalities persist.

The overrepresentation of Latinos in the criminal justice system is the result of multiple intersecting factors, including disproportionate policing, sentencing disparities, and in-court discrimination. A study by the United States Sentencing Commission found that between the years of 2017 and 2021, Latino/Hispanic males received federal sentences that were, on average, 11.2% longer than those of White males for comparable offenses (USSC 2023). However, it is important to acknowledge that much of the available data fails to distinguish between race and ethnicity. This conflation is a prevalent issue in data reporting and collection, with only 30% of justice records management systems differentiating Latino or Hispanic ethnicity from broader racial categorizations (Contreras and Galvan 2023).

Discrimination within the U.S. judicial system is deeply rooted in a historical legacy of segregation, legal discrimination, and anti-immigration sentiment. The enduring effects of Jim Crow-era segregation laws, which extended beyond African Americans to impact Mexican Americans, contributed to the systemic exclusion of Latinos from various social institutions, including schools, neighborhoods, and public services. These patterns of marginalization remain evident today, particularly in states with large Latino communities (Braveman et al. 2022).

One proposed approach to mitigating ethnic bias in the legal system is to diversify the prosecutor's office by increasing the representation of minority groups. This strategy is linked to the concept of **"familiar ethnicities"**, which suggests that individuals who share cultural or ethnic similarities with legal decision-makers, such as judges, jurors, and prosecutors, may receive preferential or less harsh treatment (Hunt 2015). Specifically, the **"similarity-leniency effect"** posits that jurors are more likely

to sympathize with defendants who belong to their ethnic in-group, leading to more favorable legal outcomes (USLaw 2023). Having a shared cultural background fosters relatability and increases trust in the defendant's testimony and overall experience.

However, legal scholars have also highlighted the potential for the 'Black Sheep Effect' (Marques et al. 1998), wherein jurors or judges from the same ethnic group may impose harsher penalties on defendants perceived as deviating from the social norms of their community (Marques et al. 1998). For example, a Latino juror may impose a stricter sentence on a Latino gang member out of a desire to dissociate themselves from criminal elements within their community. The extent of this reaction depends not only on the strength of the evidence - where weak evidence may lead to greater leniency and strong evidence to harsher judgment, but also on internalized biases. As argued by Lin Liu in the *Stanford Law Review*, such internalized biases may contribute to more severe punishments for both in-group and out-group defendants (Liu 2022). Although this study was conducted in the U.S., its findings may be applicable to other legal systems, depending on the prevailing biases within each country. Consequently, while increasing minority representation within the judiciary is one strategy for addressing ethnic bias, it remains an imperfect solution and may, in some instances, reinforce discriminatory patterns rather than eliminate them.

Research on **risk assessment instruments (RAIs) in the justice system** has primarily examined their ability to predict recidivism across racial and ethnic groups, a concept known as predictive bias. However, less attention has been given to whether courts apply these risk scores differently, resulting in disparate application. A 2024 study investigates both predictive bias and disparate application in three specific risk measures (criminal history, social history, and overall risk level) generated by the Positive Achievement Change Tool (PACT) for White, Black, and Hispanic youths involved in the justice system (Li et al. 2024). The findings indicate that race and ethnicity influence the relationship between criminal history scores and violent reoffending, compromising the reliability of these scores in predicting future offenses. Moreover, Black and Hispanic youths classified as high-risk were more likely to receive harsher sanctions than their White counterparts with similar risk levels. Therefore, **ensuring the consistent interpretation and application of RAI results in judicial decision-making proves as critical as verifying their accuracy in predicting recidivism across different racial and ethnic groups** (Li et al. 2024).

Ultimately, these considerations illustrate that both conscious and unconscious biases regarding individuals' origins extend beyond physical attributes such as skin color to encompass deeply ingrained prejudices related to ethnic and national identity. As demonstrated by the theoretical framework and empirical data presented above, such biases among legislative decision-makers can have detrimental consequences in the processes of detention, imprisonment, recidivism, and the administration of criminal justice, disproportionately affecting ethnic minorities and non-national populations. The deeply embedded nature of ethnic bias within judicial systems across multiple countries underscores its systemic character. While these biases exhibit similar patterns on a global scale, their manifestations must be analysed on a case-by-case basis, as they are often shaped by a nation's distinct social, historical, and political context.

### **4.3 Age Bias in Judicial Decision-Making**

Judicial decision-making processes are further complicated by the interplay of multiple factors that contribute to the final outcome. Individual characteristics do not exist in isolation; rather, they intersect, creating compounded vulnerabilities. A similar yet often overlooked factor is age, which plays a significant role in sentencing outcomes and further interacts with other demographic variables to influence judicial decisions.

According to the SPACE I report, on January 31 2023, the average age of the prison population in the member states of the Council of Europe was 38 years. On average, individuals aged between 18 and 25 years comprised 14.7% of the total prison population, with the highest proportions recorded in Liechtenstein (33.3%)<sup>7</sup>, Montenegro (28.5%)<sup>8</sup>, Sweden (26.4%), and San Marino (21.4%) (Aebi and Cocco 2024: 38-39).

Furthermore, individuals aged between 26 and 49 years accounted for an average of 66.6% of the prison populations across the member states, with the highest proportions observed in San Marino (78.6%), Andorra (77%), Czechia (75.8%), Poland (74.9%), Slovenia (73%), Turkey (71.9%), Serbia (71.3%), and Scotland (71.1%) (Aebi and Cocco 2024: 38-39).

Additionally, the report indicates that individuals aged between 50 and 64 years constituted an average of 14.9% of the prison population, with the highest percentages recorded in Slovakia (23.9%),

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<sup>7</sup> considering territorial and demographic factors

<sup>8</sup> considering territorial and demographic factors

North Macedonia (21%), Portugal (20.9%), and Montenegro (20.2%)<sup>9</sup> (Aebi and Cocco 2024: 38-39). Inmates aged 65 years or older represented only 3.5% of the prison population on average, with the highest proportions reported in Liechtenstein (16.7%)<sup>10</sup>, Monaco (11.5%)<sup>11</sup> and Cyprus (10.3%) (Aebi and Cocco 2024: 4).

Notably, the report identifies nine countries with very high proportions of inmates aged 50 years or older within the prison population, while an additional seven countries exhibit relatively high proportions. In contrast, the total proportion of minors in the prison population across these member states remains minimal, at merely 0.5% (Aebi and Cocco 2024: 38-39).

**The proportion of older individuals in prisons has been rising at a faster rate than the general prison population**, not only in Europe but also in countries such as Japan, Singapore, the United States, and Canada (Penal Reform International 2021: 2). The reasons for this trend vary across jurisdictions. In some cases, older individuals are being convicted for offenses committed in their youth, while in others, factors such as poverty and social isolation have contributed to criminal activity among this demographic. However, the primary driver of this increase is the adoption of more punitive sentencing policies and a growing reliance on imprisonment, coupled with reduced opportunities for early release in certain countries. Life sentences are being imposed more frequently for less serious and non-violent crimes, while mandatory sentencing laws have resulted in longer prison terms and a greater prevalence of life imprisonment without the possibility of parole (Penal Reform International 2021).

**The ageing prison population poses significant challenges for health policy and practice within criminal justice systems.** Prisons are primarily designed for younger individuals, who constitute the majority of incarcerated populations worldwide, yet many prison systems already struggle to meet their needs. Addressing the requirements of older prisoners necessitates modifications to physical infrastructure, healthcare services, and rehabilitation programs (Penal Reform International 2021). Given these considerations, it can be inferred **that legislative decision-makers' perceptions of**

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<sup>9</sup> considering territorial and demographic factors

<sup>10</sup> considering territorial and demographic factors

<sup>11</sup> considering territorial and demographic factors

**individuals at different stages of life, alongside structural factors, influence their decisions regarding sentencing, imprisonment, and the likelihood of recidivism based on age.**

In regard to younger offenders, research has shown that juvenile criminals are given more compassion for their sentence duration (Jordan and McNeal 2016). Offenders of younger age are believed to have poor impulse control and cognitive immaturity which lead judges to view them as less morally responsible and, therefore, more deserving of sympathy from the judge (Jordan and McNeal 2016). This idea is supported by legal precedents, such as *Roper v. Simmons* (2005) in the US, which forbids the death penalty for minors on the grounds of their "diminished culpability" (Jordan and McNeal 2016). Likewise, Canada's Youth Criminal Justice Act requires that juveniles' "greater dependency" and "reduced maturity" is taken into account when sentencing them (Jordan and McNeal 2016).

Statistical data also shows significant differences between juvenile and adult sentencing. For instance, during the years 2002-2003 in Canada only 22.7% of young offenders received prison sentences compared to the 56% of adults convicted of comparable charges (Pyne 2014). In the same manner, in 2005, 68% of adults and just 8% of juvenile offenders in England and Wales received jail time for comparable offenses (Pyne 2014). In New Zealand a similar pattern is seen where 3.2% of juvenile offenders were imprisoned in 2004 compared to 9.4% of adults (Pyne 2014). This discrepancy also applies to the length of sentences. In Canada, the average punishment for adults was 115 days, whereas the average sentence for juveniles was 67 days (Pyne 2014). This recurring pattern implies that **judges frequently give young criminals much lesser punishments because they think they are more likely to alter their behavior** (Pyne 2014).

Such bias towards juvenile offenders stems from the judges' belief that rehabilitation rather than imprisonment can lead younger criminals towards a life of lawfulness (Kurlychek and Johnson 2004). However, research shows that this tolerance might backfire when juveniles are committed to adult courts, where they frequently receive harsher punishments than young adults convicted of identical offenses (Kurlychek and Johnson 2004). In adult courts, juveniles are no longer viewed as "rehabilitatable youth" but rather as "high-risk offenders", which results in lengthier sentences and fewer chances for reintegration into society (Kurlychek and Johnson 2004). This phenomenon is observed by Megan C. Kurlychek and Brian D. Johnson who questioned the notion that minors are always treated more leniently than adults. Even though younger criminals receive more compassion

in juvenile court, when they are convicted in adult courts they experience a harsher treatment (Kurlychek and Johnson 2004). Judicial views of risk, recidivism, and public safety issues give rise to this contradiction, which disproportionately disadvantages youngsters transferred to adult courts in sentencing decisions (Kurlychek and Johnson 2004).

Moreover, studies show that minors in adult court are given disproportionately harsher sentences than those given to young adults (Redding 2003). When compared to adults with similar criminal offenses, juveniles moved to adult court have a 30% higher chance of being sentenced to prison (Redding 2003). Additionally, their sentence's length is on average equal or even higher than that of older criminals. This data backs the notion that the judicial system views younger offenders as more "reformable" whereas transferred juvenile criminals are believed to have already exhausted all available rehabilitative options resulting in more severe punishment (Redding 2003).

Judges' bias against transferred minors is based on their evaluation of the minors' likelihood to commit future crimes (Redding 2003). Juvenile court judges often see young offenders as immature and impulsive, which suggests they have a greater chance of rehabilitation. However, in adult courts, these same traits are interpreted as signs of a higher risk of reoffending, leading to stricter sentencing (Redding 2003). Additionally, **adult court judges tend to see younger offenders as more dangerous because they are expected to have more "criminal years ahead of them"**. This punitive approach is further supported by automatic transfer policies, which send minors to adult court only in cases where their offense is severe (Redding 2003). These rules take away judges' discretion, making it impossible for them to take into account a person's unique situation, maturity, or capacity for rehabilitation (Redding 2003).

On the other hand, the bias regarding older prisoners reveals two outcomes regarding how age affects the sentencing results (Kerbs and Jolley 2009). Firstly, compared to younger elderly offenders, older defendants had a lower likelihood of being sentenced to jail (Kerbs and Jolley 2009). These findings imply that judges might consider senior age to be a mitigating factor, perhaps as a result of beliefs of heightened sensitivity in prison environments and a lower probability of recidivism (Kerbs and Jolley 2009). Secondly, older defendants had received higher terms after being found guilty (Kerbs and Jolley 2009). According to these results, **elderly offenders are sentenced to prison with heavier penalties even though their incarceration rates are lower** (Kerbs and Jolley 2009).

There is an increasing proportion of elderly prisoners. For instance, in the US, between 2001 and 2009, the number of convicts aged 50 and above increased fivefold compared to 1990 (Kerbs and Jolley 2009). By the end of 2009, 10.38% of the overall jail population were 50 years of age or older. This pattern is primarily due to the “tough-on-crime” policies which require mandatory minimum punishments leading to the rise of senior criminals incarcerated (Kerbs and Jolley 2009). The results show an evident age leniency effect with offenders aged 50-54 having the highest likelihood of being sent to a prison facility and prisoners aged 60+ having the lowest chances of being sentenced (Kerbs and Jolley 2009). This data, however, does not apply to the sentence length since on average criminals 65 or older were given lengthier sentences than younger senior defendants. The analysis additionally demonstrates that sentence judgments are heavily influenced by legal considerations, including the type of offense and past criminal history (Kerbs and Jolley 2009).

This rise of elderly prisoners is attributed to a number of key factors. To begin with, one of the most significant elements is the “**get tough-on crime**” which restricts judge’s discretion and their ability to take age and other mitigating factors into account (Kupchik et al. 2003). Secondly, a high number of prisoners serve a longer sentence which leads them to age in the criminal facility rather than enter as a senior offender (Kupchik et al. 2003). This effect causes jails to become overcrowded with elderly inmates, imposing pressure on medical services and driving up correctional expenses. This pressure leads judges to give more lenient punishments to older offenders (Kupchik et al. 2003).

In contrast, earlier studies on the relationship between age and sentencing, show that often **judges give older criminals lighter sentences because they believe they pose less of a risk to society and are less likely to commit crimes again** (Steffensmeier et al. 1995). For instance, Robert Butler’s notion of “ageism” explains how cultural preconceptions and stereotypes portray older people as weaker, less capable, and thus deserving of lenient sentencing (Steffensmeier et al. 1995). According to this concept, judges may have unconscious prejudice just like any other person which influences their punishment decision-making (Steffensmeier et al. 1995). Older age is frequently viewed as a mitigating factor, especially due to health issues, decreased chances of recidivism, and the challenges of jail for the elderly (Steffensmeier et al. 1995). In some instances, though, age has been regarded as insignificant or even viewed as contributing to harsher sentencing, especially when the crime is serious or has been unreported for a long time (Steffensmeier et al. 1995).

To further investigate the bias regarding elderly offenders, a case law review of over 212 Canadian court decisions examined the relationship between age and sentencing in offenders aged 60 or above (Doron and Love 2013). The authors explored factors such as the type of offense, the duration of the sentence, the defendant's health, and whether the judge specifically took age into account while making their decision (Doron and Love 2013). The review showed that age was mentioned as a mitigating factor in more than half of the cases, which decreased the severity of the sentence (Doron and Love 2013). Also, rather than being imprisoned, older offenders were more likely to get non-custodial punishments (such as house arrest or probation). However, age was frequently ignored as a mitigating factor in violent or sexual criminal cases, and in certain situations, this resulted in heavier penalties because of public safety concerns (Doron and Love 2013).

The case law review outlined four reasons why judges may decide to lower an elder offender's sentence (Doron and Love 2013). According to certain judges, an aged person's life expectancy is reduced, hence a lengthy prison term is disproportionate compared to their remaining years (Doron and Love 2013). Secondly, many judges believe that older offenders are more susceptible to the severe circumstances of jail, such as psychological stress, aggression, and inadequate medical care. Also, courts feel that severe punishments have a small preventive impact because statistical evidence indicates that elder criminals have a lower likelihood of reoffending (Doron and Love 2013). Lastly, according to some judges, elderly offenders have generally led law-abiding lives, and their occasional violations are viewed as anomalies rather than signs of persistent criminality (Doron and Love 2013).

In conclusion, a variety of factors can affect the fairness and the length of a sentence, making judicial decision-making complex and multidimensional. Age is proven to play a significant role in the outcome of the court ruling. When it comes to the age bias, research shows that younger criminals are perceived as impulsive and immature which results in a more lenient treatment, emphasizing rehabilitation over punishment. However, when minors are transferred to adult courts where they are treated as high-risk criminals, this leniency disappears and they are given harsher penalties. On the other hand, older criminals frequently face two types of bias: they are typically given longer terms when imprisonment is deemed essential, but they are also less likely to get prison time because of their age and lower chance of recidivism.

#### 4.4 Religious Bias in Judicial Decision-Making

Navigating questions of religious affiliation within legal proceedings presents distinctive challenges, particularly where morality and ethics are concerned. Because religion is frequently regarded as a foundation of moral authority, the defendant's faith can shape perceptions of culpability and influence the severity of sanctions that lawmakers and judges impose.

Evidence indicates that religious identity, especially when it involves minority or non-traditional faiths, may adversely affect judicial outcomes, not through explicit prejudice but through entrenched cultural assumptions and structural bias. Such findings call into question the ideal of religious neutrality in the courtroom.

Historically, religion has been intertwined with the maintenance of social order and the legitimisation of moral authority in law. In contemporary pluralistic societies, however, this linkage can become problematic. Audette and Weaver (2015), for example, demonstrate that members of religious out-groups are more likely to view court decisions as illegitimate when the judiciary appears aligned with dominant faith traditions, thereby eroding public confidence in legal institutions and complicating claims to secular neutrality. Conversely, when the defendant's religion coincides with that of the judge or the prevailing faith, the defendant's narrative may be afforded greater credibility (Audette and Weaver 2015).

Courtroom rituals such as swearing an oath on a sacred text or invoking "God" carry powerful symbolic implications. Because divinity is ascribed ultimate moral authority, references to God within testimony are often presumed to signify veracity; the witness is thought unlikely to perjure themselves when calling upon a higher power - an assumption especially salient in highly religious or conservative jurisdictions. Experimental research confirms that mock **jurors' evaluations of witness credibility vary according to the form of oath administered and their own attitudes toward Christians and Muslims** (Fraser and Fehr 2023).

Under common-law practice in the United Kingdom, Australia, and the United States, witnesses may choose either a religious oath (e.g. "I swear by Almighty God that the evidence I shall give shall be the truth, the whole truth and nothing but the truth") or a secular affirmation, in which they "solemnly, sincerely and truly declare and affirm" their intention to speak truthfully. Although both

forms are legally equivalent, debate persists over whether the secular affirmation communicates the same level of trustworthiness to judges and jurors, potentially disadvantaging non-believers. Studies suggest that a widespread perception endures that “it is simply impossible for people to be moral without religion or God”, a view that may implicitly bias assessments of credibility in the courtroom (McKay et al. 2023).

Moral suspicion manifests in criminal settings towards atheists as well. In Britain, for example, one-fifth of survey respondents concurred with Laura Schlessinger’s assertion that morality is unattainable without belief in God; the proportion of respondents with this belief is considerably higher in the United States (44%) and rises still further in numerous other countries (Tamir et al. 2020; McKay et al. 2023). A 13-nation investigation by Gervais et al. (2017) likewise demonstrated that **distrust of atheists** is widespread and arises intuitively, even among non-believers. Across most of the sampled societies, including Britain and the United States, participants were, on average, about twice as likely to regard morally transgressive behaviour as characteristic of atheists rather than of religious adherents. Notably, this moral prejudice persisted even among individuals who declared complete disbelief in God (Gervais et al. 2017; McKay et al. 2023).

At the structural level, principles such as **laïcité** (secularism), particularly salient in the French context, underscore the commitment to state secularism. However, Hennette-Vauchez (2020) critiques laïcité for advancing a “colorblind” framework that fails to account for the lived experiences of religious minorities. Under the guise of neutrality, this model may obscure, rather than address, systemic inequalities. Legal neutrality, therefore, often appears to be more aspirational than actual (Hennette-Vauchez 2020).

A 2023 report by the United Kingdom’s National Secular Society indicates that jurors may exhibit bias against individuals who opt to affirm rather than swear religious oaths. Non-religious individuals were perceived with heightened suspicion, and their credibility was consequently diminished. These findings suggest that **religious expression (or its absence) can significantly influence the interpretation of witness testimony** (National Secular Society 2023).

The “Neutrality Principle”, much like the “colorblind” model, may fall short of achieving its purported objectives. For example, the Court of Justice of the European Union (CJEU) has increasingly

adjudicated cases concerning religious expression, particularly within professional settings. In this context, the Court has developed the Neutrality Principle to uphold companies' freedom to conduct business, as enshrined in Article 16 of the EU Charter of Fundamental Rights.

Applied to workplace discrimination, this principle permits employers to prohibit the expression of all convictions or beliefs in the workplace. The Court has justified such bans on the grounds that they do not constitute direct discrimination against any particular religion or belief, and that they help present a neutral image to customers. On one hand, while this may appear to reflect an effort to respect all religious perspectives equally, the Neutrality Principle in practice might suggest an underlying bias toward secularism (ECLJ 2023). On the other hand, approximately one-third of Muslim respondents (29% men and 31% women) in the Second European Union Minorities and Discrimination Survey report experiencing harassment wearing traditional or religious clothing in public (FRA 2019: 37).

Controlled studies provide further insight into these dynamics. An experimental study (Miller et al. 2010) examined perceptions of Muslim defendants in simulated terrorism trials. The findings revealed that Muslim defendants were sentenced 40% more harshly and often than non-Muslim defendants, (Miller et al. 2010). Although group deliberation mitigated some of these biases, the underlying prejudices largely persisted. Similarly, research (Frings, Rice, and Albery 2018) has demonstrated that religious stereotypes, particularly those associating Islam with violence, can significantly influence judicial decision-making.

At a broader societal level, the Special Eurobarometer 537 (2023) and the EUMC reported that a substantial proportion of Europeans perceive discrimination on the basis of religion to be prevalent. Muslims, in particular, are widely regarded as frequent targets of such bias (European Commission 2023; Choudhury et al. 2006). These findings underscore the notion that **judicial institutions do not operate in a vacuum; rather, they reflect and are shaped by dominant societal attitudes, which may, in turn, inform legal reasoning and outcomes.**

The complexities and limitations of religious neutrality are starkly exemplified in the French context, where the European Court of Human Rights (ECtHR) has consistently upheld restrictions on the display of conspicuous religious symbols within public institutions. Proponents of these measures

contend that they serve to reinforce the principle of secularism (laïcité). However, scholars such as Carolyn Evans (2006) argue that such rulings disproportionately impact individuals, particularly Muslim women, whose religious identity is outwardly expressed, thereby limiting their participation in public life and undermining their access to equal treatment (Evans 2006).

In the Polish context, Górska and Juzaszek (2023) investigated judicial portrayals of Muslim litigants. Their analysis revealed that court decisions frequently framed Muslims as culturally incongruent with dominant Polish values. Such representations contribute to institutional forms of “othering”, implicitly weakening the perceived legitimacy and legal standing of Muslim claimants (Górska and Juzaszek 2023).

On a broader European scale, the 2021 report by the European Network Against Racism highlights the disproportionate surveillance and suspicion directed at Muslim communities across the European Union. This pattern extends into the legal sphere, where Muslims are more likely to encounter invasive interrogation, prejudicial assumptions, and harsher judicial outcomes - particularly in cases concerning national security or terrorism (Choudhury 2021).

Findings in the United States suggest similar concerns. According to the Federal Bureau of Investigation’s Hate Crime Statistics database, roughly 15 percent of the hate-crime incidents recorded in the United States during 2021 were motivated by religious bias, and more than 14 percent of the victims were targeted on religious grounds (U.S. Department of Justice 2021).

In response to growing recognition of the need for reform, several European institutions have initiated measures to address cultural and religious bias within the judiciary. The European Judicial Training Network (EJTN), for example, has developed training programmes aimed at increasing awareness of cultural bias among judges and prosecutors. These initiatives seek to promote empathy, reduce stereotyping, and foster more reflective and equitable judicial decision-making.

However, the implementation of such training remains inconsistent across member states. In many jurisdictions, participation is either non-mandatory or inadequately resourced. **Legal reforms likewise face significant challenges in maintaining a balance between safeguarding religious freedom and upholding principles of state neutrality.**

In response, some scholars advocate for a procedural accommodation model, wherein religious diversity is acknowledged and respected within a broader framework of equal treatment under the law. Conversely, others caution that excessive accommodation risks conferring undue privilege on religious expression, thereby undermining the principle of equality. This ongoing debate highlights the inherent tension between inclusion and neutrality in legal practice.

Religious bias within judicial systems is rarely explicit. More commonly, it emerges through subtle mechanisms such as **unexamined assumptions, culturally encoded language, and entrenched institutional norms**. Nevertheless, the consequences are substantial. When parties to a legal proceeding (whether defendants, witnesses, or jurors) perceive that they are being evaluated not solely on their actions but also on their beliefs, the foundational ideal of judicial impartiality is fundamentally compromised.

#### **4.5 Disability Bias in Judicial Decision-Making**

According to the European Union Agency for Fundamental Rights (FRA), approximately 80 million individuals within the European Union (around 15% of the total population) live with a disability (FRA 2025). Despite the adoption of the United Nations Convention on the Rights of Persons with Disabilities (CRPD) by EU member states, which aims to ensure legal protections for persons with disabilities, significant underrepresentation persists within the criminal justice system (FRA 2025). Recent evaluations indicate that up to **40% of inmates in numerous European prisons have been diagnosed with a mental health condition** - a proportion markedly higher than that observed in the general population (FRA 2025).

Specifically, the UK Ministry of Justice has reported that while 19% of the general adult population experiences a physical or mental impairment, this figure rises to 36% among the adult prison population (Sentencing 2020). Additionally, over 25% of incarcerated individuals in the UK reported experiencing symptoms of anxiety or depression, and 15% indicated that they had developmental disabilities or learning difficulties (Sentencing 2020). Comparable trends have been observed in Scandinavian countries, where studies suggest that up to 30% of inmates require specialized mental health care (Sentencing 2020). These empirical findings raise critical concerns regarding the potential

influence of bias in incarceration decisions and broader systemic issues within the criminal justice framework (Sentencing 2020).

Overall, although discrimination against individuals with disabilities is explicitly prohibited under the European legal framework, bias continues to influence judicial decision-making and sentencing practices concerning individuals with mental and physical impairments. On the one hand, mental or cognitive limitations are often perceived by judges as indicative of a heightened risk to public safety, leading to harsher penalties or extended periods of pretrial detention. On the other hand, some judges demonstrate increased leniency toward defendants with physical disabilities, opting for non-custodial alternatives (FRA 2025). This dual bias (rooted in both fear and compassion) remains largely overlooked in empirical legal research.

Moreover, despite the existence of European Union legislation aimed at safeguarding the rights of persons with disabilities, individuals with impairments continue to face significant challenges within the criminal justice system (Monteiro et al. 2024). A particularly persistent form of bias is the judicial tendency to conflate disability, especially psychosocial and intellectual impairments, with notions of risk or incapacity (Monteiro et al. 2024). According to the ENABLE project, a report co-funded by the European Union, approximately half of the suspects or accused individuals with disabilities interviewed across six EU countries were classified as “dangerous” or “unfit to stand trial”. This often resulted in compulsory treatment, protective custody, or admission to forensic psychiatric institutions (Monteiro et al. 2024). Moreover, such individuals were frequently deprived of their procedural rights and legal protections due to prevailing prejudices that portray them as unsafe or incompetent (Monteiro et al. 2024). The report highlights that those deemed “unimputable” often lost access to legal safeguards and, in some cases, were subjected to incarceration without adequate information or justification (Monteiro et al. 2024). This form of bias - rooted in the inappropriate medicalization of disability, stands in direct contradiction to the principles of the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), which advocates for capacity assessments as a means to facilitate legal participation rather than as grounds for exclusion or neglect (Monteiro et al. 2024).

In addition to bias, perceptions of dangerousness and incapacity, another critical, yet frequently overlooked factor, concerns the misinterpretation of disability-related behaviors by judicial actors. In

numerous instances, judges misconstrue the behaviors of individuals with disabilities as signs of defiance, non-cooperation, or even guilt (Monteiro et al. 2024). According to the ENABLE report, judges and other criminal justice professionals in six EU member states (Bulgaria, Romania, Czechia, Portugal, Slovakia, and Spain) often interpret behaviors such as dismissive body language, heightened anxiety, or difficulty following instructions, all of which may be manifestations of a disability, as indicative of obstructiveness or suspicious intent (Monteiro et al. 2024). Traits associated with autism, atypical speech patterns, or mental health conditions are frequently perceived as hostility or resistance, rather than as signals necessitating reasonable accommodations (Monteiro et al. 2024).

This form of bias is further substantiated by empirical data from Lithuania, where defendants with disabilities reported being forced to wear restrictive shackles in public courtrooms (Monteiro et al. 2024). Such practices not only caused physical discomfort but also publicly marked these individuals as “dangerous” or “unruly” in the eyes of judges and observers (Monteiro et al. 2024). Additionally, judicial authorities often fail to consider whether defendants with disabilities have received adequate support in presenting their defense or in understanding the proceedings, presuming instead that the mere presence of legal counsel is a sufficient safeguard (Monteiro et al. 2024).

A significant source of judicial bias within European courts is the continued reliance on the medical model of disability, which conceptualizes disability primarily as an individual health deficit rather than as a condition shaped by social and environmental barriers (Monteiro et al. 2024). Despite the Court of Justice of the European Union (CJEU) embracing a more socially contextualized understanding of disability, certain national courts, such as those in Denmark and Ireland, persist in applying outdated medical paradigms (Monteiro et al. 2024).

This reliance on the medical model undermines judges’ ability to recognize how external barriers, such as inflexible courtroom procedures or the absence of appropriate communication supports, contribute to the discrimination experienced by individuals with disabilities (Waddington and Broderick 2023). As a result, **judicial decisions may prematurely classify defendants with disabilities as unfit to stand trial without considering whether reasonable environmental accommodations could enable their meaningful participation** (Waddington and Broderick 2023). For instance, contrary to the principles established by the Court of Justice of the European Union (CJEU), courts in

Bulgaria and Ireland continue to require extensive medical documentation to "prove" the existence of a disability (Waddington and Broderick 2023).

A Bulgarian judge has drawn attention to the problematic weight often placed on forensic psychiatric reports, noting that these assessments are frequently inadequately scrutinized. This lack of oversight can result in unjust and dehumanizing legal outcomes, particularly when judges, lacking the necessary expertise, uncritically accept the conclusions of such reports (Waddington and Broderick 2023). Consequently, behaviors stemming from disability, such as visible anxiety or distress, may be misinterpreted as signs of hostility or non-cooperation rather than as legitimate manifestations of the individual's condition.

Another important yet often overlooked bias in judicial decision-making within European sentencing practices is the tendency of judges to exhibit greater leniency toward individuals with disabilities (Prison Reform Trust 2023). This inclination is frequently influenced by the perception that individuals with physical, mental, or cognitive impairments are more vulnerable, less morally culpable, or less suitable for conventional forms of incarceration (Prison Reform Trust 2023). **Although such leniency may originate from a protective or humanitarian impulse, it can lead to inconsistent sentencing outcomes and undermine the principle of equal treatment under the law** (Prison Reform Trust 2023).

A clear example of this phenomenon can be observed in England and Wales, where sentencing guidelines allow for diminished responsibility in cases involving defendants with mental health conditions, learning disabilities, or neurological disorders (Prison Reform Trust 2023). According to 2022 data from the UK Ministry of Justice, 31% of offenders diagnosed with a mental disorder received a more lenient or community-based sentence, compared to just 17% of the general offender population (Prison Reform Trust 2023). Furthermore, under the Mental Health Act, individuals with severe mental illness were three times more likely to receive hospital orders rather than custodial sentences (Prison Reform Trust 2023). These findings suggest that the presence of a disability often results in sentencing outcomes that diverge from standard punitive measures, frequently favoring non-custodial or unsupervised alternatives.

A prominent example of this bias can be seen in the widely publicized UK case of Valdo Calocane, who was found guilty of three counts of manslaughter but received a hospital order without restrictions due to his diagnosis of paranoid schizophrenia (Murray 2024). This case illustrates a significant form of judicial bias within the criminal justice system - namely, leniency toward individuals with disabilities (Murray 2024). The outcome was met with substantial public criticism, prompting the Attorney General to refer the case to the Court of Appeal under the “unduly lenient sentence” scheme (Murray 2024).

The case underscores a broader tension: while the public perceived the sentence as a failure to deliver justice, the judiciary viewed the hospital order as a more appropriate and humane response given the defendant’s mental health condition (Murray 2024). This example highlights how disability-related leniency, though often well-intentioned, can be both legally contentious and socially misunderstood.

Similarly, judges in Ireland have increasingly prioritized individualized sentencing over automatic custodial penalties (Gallagher 2021). Judicial authorities frequently place greater emphasis on mitigating factors such as substance addiction, mental health conditions, and cognitive impairments, with the aim of encouraging community-based alternatives to imprisonment (Gallagher 2021). However, the absence of clearly defined sentencing frameworks and a lack of comprehensive empirical data mean that such decisions often rely heavily on judicial discretion. This reliance may result in inconsistent outcomes across different courts and regions (Gallagher 2021).

Evidence from outside Europe (particularly the United States) indicates that bias related to leniency persists in judicial decision-making. Administrative Law Judges (ALJs) often evaluate an individual's ability to perform routine daily activities, such as eating, shopping, or bathing, as grounds to reject disability claims (Griffin 2020). This reasoning is based on the assumption that if an individual is capable of independent living, they are also capable of employment or meaningful societal participation (Griffin 2020).

Conversely, the opposite bias may also emerge in the form of judicial leniency: individuals with disabilities who appear highly dependent, vulnerable, or socially isolated may be viewed as lacking full moral agency or responsibility (Griffin 2020). This perception can influence court decisions by

favoring alternatives to incarceration, such as medical treatment or rehabilitative services, rather than traditional punitive measures (Griffin 2020).

Judicial decisions also vary according to the specific type of disability presented by the defendant (Wiethmann et al. 2019). Empirical research consistently indicates that individuals diagnosed with psychotic disorders, such as schizophrenia, are significantly more likely to be found “not guilty by reason of insanity” (NGRI) compared to those diagnosed with personality disorders or psychopathy, who are typically regarded as more culpable and less amenable to treatment (Wiethmann et al. 2019).

**Perceptions of treatability and the degree of control over one’s actions have emerged as critical factors in sentencing decisions involving defendants with disabilities.** Notably, six out of thirteen studies analyzing sentence length concluded that individuals perceived as treatable or as having diminished control were more likely to receive reduced sentences or be diverted to treatment-based alternatives (Fazel and Seewald 2012). These findings underscore the presence of a cognitive bias in judicial reasoning, wherein certain mental illnesses, particularly those involving delusions or cognitive impairments, are more likely to be viewed as mitigating circumstances.

Overall, individuals with disabilities continue to face significant and multifaceted inequalities within the criminal justice system, despite the legal protections enshrined in European and international human rights frameworks. While disability is often framed either as a risk factor or as an indicator of vulnerability, both interpretations contribute to judicial outcomes that deviate from principles of consistency and fairness. Judges may extend undue leniency to those perceived as vulnerable or morally diminished, while imposing disproportionately severe sentences on individuals regarded as dangerous due to psychosocial or intellectual impairments.

This duality, rooted in outdated medical models of disability and exacerbated by the absence of coherent and standardized legal frameworks, results in inconsistent sentencing practices across jurisdictions. These disparities are further entrenched when the social and environmental dimensions of disability are disregarded, reinforcing discriminatory outcomes and undermining the pursuit of equal justice.

## 5. Discrimination in existing recidivism predicting models

The implementation of Artificial Intelligence (AI) models and Actuarial Risk Assessment Instruments (ARAI) for predicting recidivism in the United States and Europe presents critical considerations. These include the resulting instances of discrimination and the various methods researchers have proposed to mitigate such bias, particularly at the intersection of gender and recidivism prediction.

Europe has exhibited greater caution than the United States in adopting such models within criminal justice systems, leading to the majority of practical data on discriminatory outcomes originating from the United States (Ünver 2024: 45-54). Nevertheless, several European countries have begun introducing similar programmes for this purpose.

One such risk assessment tool is the **OxRec Tool (Oxford Risk of Recidivism)**,<sup>12</sup> a model designed to predict the likelihood of individuals reoffending within one or two years of their release from prison in England. The tool was initially developed and tested using Swedish data, where it was designed based on routinely collected criminal, sociodemographic, and clinical variables. Subsequently, it was tested in the Netherlands and England, where it showed moderate levels of gender and minority-based discrimination, characterising it as effective but in need of adjustments based on local conditions (Fazel et al. 2019; Beaudry et al. 2023).

The tool accounts for factors such as gender, age, mental disorders, alcohol and drug abuse and criminal histories (Fazel et al. 2016). While most models are prohibited from collecting sensitive characteristics such as race and class, alternative variables such as neighbourhood location are used as proxies, allowing for the prediction of individual traits. This model has raised **ethical concerns**, as it analyses factors such as disposable income and tracks socioeconomic status, including race, education, employment, immigrant and civil status and neighbourhood deprivation (Braverman et al. 2017). Furthermore, it has been found to **discriminate against lower-income individuals**, with each incremental decline in socioeconomic status corresponding to a higher risk of recidivism. This practice has been criticised for “running counter to the principles of justice and fairness” by relying on “factors beyond an individual’s control” (Braverman et al. 2017).

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<sup>12</sup> <https://oxrisk.com/oxrec-9/>

Another example of a comparable tool is the **Harm Assessment Risk Tool (HART)**,<sup>13</sup> which is utilised by Durham police in the United Kingdom in 2016. HART employs predictive policing methods that incorporate an individual's prior offending history, age, postcode, and other personal characteristics. The tool has been evaluated as 98% accurate in avoiding “false negatives”, defined as instances in which an offender, classified as relatively low risk, later commits a serious violent crime (University of Cambridge 2018). However, the model is based on the premise that “not all errors are equal”, positioning a “false negative” as more problematic than the erroneous arrest of an individual who does not reoffend in the future. This assumption, combined with the tool’s reported accuracy rate of 63% (which represents its actual effectiveness in predicting recidivism rather than simply minimising false negatives), **raises concerns about the fairness of its judgment and whether the sensitive information it collects contributes to the discrimination of individuals based on protected characteristics**. Similar to the OxRec system, HART is criticised for its potential to make judgments that rely on socio-demographic characteristics, thereby perpetuating biases within the criminal justice system (Burgess & Oswald 2018; Burgess 2018).

**COMPAS (Correctional Offender Management Profiling for Alternative Sanctions)**<sup>14</sup> is one of the most prominent and widely utilised algorithmic risk assessment programmes in the United States. First implemented in 2012, it has gained significant attention despite its reputation for being highly discriminatory. In addition to collecting socioeconomic data to predict individual traits, COMPAS has been **found to rely on deeply biased datasets**. Such algorithms raise particular ethical concerns due to their creation of “runaway feedback loops”, wherein “historical biases are reflected in an algorithm’s outcomes, further distorting data against marginalised groups, which is then processed by algorithms to produce even more biased results” (Park 2019).

On one hand, the implementation of these programmes has exposed significant structural biases, including those related to gender. On the other hand, research suggests that the introduction of such tools can help mitigate gender bias in traditional sentencing, where judges have historically demonstrated greater leniency toward female offenders (Ho et al. 2023). By addressing gender bias

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<sup>13</sup> <https://ai-watch.github.io/AI-watch-T6-X/service/90142.html>

<sup>14</sup> [https://en.wikipedia.org/wiki/COMPAS\\_\(software\)](https://en.wikipedia.org/wiki/COMPAS_(software))

in conventional sentencing, these systems have been shown to increase the likelihood of alternative sentencing, reduce incarceration rates, and shorten the duration of imprisonment.

For instance, the **PATTERN Risk Assessment Tool (Prisoner Assessment Tool Targeting Estimated Risk and Needs)** evaluates an inmate's progress during incarceration and provides opportunities for individuals to lower their risk scores through periodic reassessments. This tool is considered more gender-sensitive than its counterparts due to its **gender-differentiated assessment of inmates**, incorporating **separate risk-scoring models** for male and female offenders. This approach acknowledges that different genders may exhibit distinct predictors of recidivism (Federal Bureau of Prisons 2025).

Findings on the influence of gender in decision-making models related to sentence duration and severity remain inconclusive, reflecting the broader ambiguity in research and theoretical frameworks concerning convicted women. Scholars suggest that while algorithmic risk-prediction programmes may counteract the leniency traditionally afforded to women in sentencing, these methods could ultimately result in systemic discrimination against them. This is evident in Hamilton's study, which analyses data from 6,172 individuals arrested and assigned a recidivism-risk score using COMPAS in Florida in 2013 and 2014 (Hamilton 2019: 148). Hamilton found that while COMPAS effectively identifies recidivists among both men and women, it systematically categorises women into higher-risk groups. The author concludes that COMPAS is inadequately calibrated for women, as it fails to account for their lower base rate of recidivism. This article thus underscores the **risks of so-called "gender-neutral" programmes and legislation**, namely when tools like COMPAS are calibrated with men as the normative baseline, they may inadvertently discriminate against women by neglecting their unique circumstances (Hamilton 2019: 147-148).

The feasibility of creating a fair and non-discriminatory AI system is a central concern in academic discourse addressing the intersection of technology-assisted legislative decision-making and the ethical implications of predicting individuals' criminal trajectories based on personal characteristics and the assumptions tied to such attributes. This issue assumes heightened significance for developers of artificial intelligence programmes, as they must explicitly define the **criteria used to assess bias and discrimination**. In exploring these issues, scholars often focus on the **concept of base rates**, which represent the initial probability that a member of a given group will reoffend. These base

rates vary across groups; for instance, in the article *'Fairness in Criminal Justice Risk Assessments: The State of the Art'*, the recidivism base rate is reported as 0.65 for men and 0.55 for women, indicating that approximately 65% of male offenders and 55% of female offenders are likely to reoffend (Berk et al. 2018). The authors mathematically demonstrate that when base rates differ between groups, it is impossible to simultaneously satisfy all fairness criteria – such as equal false positive rates, equal false negative rates, and equal predictive accuracy (conditional use accuracy equality) – while maximising overall predictive accuracy. Consequently, practitioners must decide **which fairness standard to prioritise**, with the understanding that **other fairness measures will inevitably be compromised**. However, the authors caution that even when a single fairness standard is prioritised, new challenges may arise. For example, if practitioners seek to equalise conditional use accuracy across groups with unequal base rates, the algorithm may need to apply different classification thresholds for men and women when assessing risk levels. This could be perceived as unfair or discriminatory, as it subjects individuals to different criteria based on their gender. The article underscores the inherent difficulties in developing a “bias-free” AI system, noting that it is impossible for a programme to meet all fairness criteria simultaneously, and efforts to address bias may inadvertently introduce further complexities (Berk et al. 2018).

The notion that **fairness and accuracy are often in tension** is further exemplified in the article, *'Evaluating Causes of Algorithmic Bias in Juvenile Criminal Recidivism'*, which investigates the application of AI programmes to predict recidivism among juvenile offenders in Spain (Miron et al. 2020). The study analyses data from 855 juvenile defendants in Catalonia, who were released in 2010 and assessed for recidivism risk using the SAVRY (Structured Assessment of Violence Risk in Youth) formula prior to release, with their recidivism status reassessed in December 2015. SAVRY is a structured, professional risk-assessment tool, applied by practitioners on a case-by-case basis to calculate risk. As such, it represents a human-driven approach, contrasting with artificial intelligence tools such as COMPAS. The authors processed the data for these juvenile offenders using a general-purpose machine learning algorithm to generate AI-determined risk assessments. Their findings revealed that machine learning models were more effective than SAVRY in predicting recidivism but did not meet group fairness metrics (e.g., equal false positive and false negative rates) to the same extent. Equalising base rates between males and females, or between foreign and national offenders, resulted in an average performance reduction of 0.01. Additionally, the authors experimented with a **pre-processing technique known as “learning fair representations” (LFR)**, which aims to eliminate

information linked to protected group membership from the data. The application of LFR mitigation led to an average decrease in accuracy of 0.06 across all groups (Miron et al. 2020). This study thus underscores the persistent trade-off between fairness and accuracy in AI systems.

In the 2023 article *'Fairness of AI in Predicting the Risk of Recidivism: Review and Phase Mapping of AI Fairness Techniques'*, the authors examine various methods to address discrimination in risk prediction programmes. They detail the ways in which bias is introduced into the COMPAS algorithm and assess the effectiveness of several mitigation strategies. The authors emphasise that the **primary source of bias and discrimination lies in the datasets used to train the algorithms** (Farayola et al. 2023). Even if algorithms do not explicitly account for factors such as gender or race, training datasets may reflect biased human decisions or perpetuate historical and societal inequalities. For instance, in relation to gender, a training dataset might reflect shorter sentences for female offenders due to a judge's personal bias. However, the authors also note that bias can be introduced during the model development or evaluation processes. Thus, any AI system must be scrutinised for potential bias at every stage of its design and implementation (Farayola et al. 2023).

The authors further explore a technique known as **"One-vs.-One mitigation"**, which is specifically designed to address intersectional discrimination. This method involves dividing the dataset into four subgroups based on gender and race (female/non-white, female/white, male/non-white, male/white), with the algorithm trained separately on each subgroup. The authors conclude that One-vs.-One mitigation shows promise in addressing intersectional biases. However, they caution that the dataset analysed was disproportionately male (92.5%), which may have skewed the results, as the limited representation of women could hinder the identification of reliable patterns. This issue is common in many AI systems, as women are underrepresented in the criminal justice system and, consequently, in training datasets, leading to difficulties in identifying trends or formulating strategies related to female offenders. However, research indicates that **even if an AI developer successfully implements a mitigation strategy to effectively address gender discrimination, it may inadvertently create ripple effects that negatively impact other protected groups** (Farayola et al. 2023).

## 6. Conclusion

Ultimately, **protected characteristics have shown to have a significant impact on individuals' entry into the criminal justice system**, their experiences within it (including sentence length, severity, and the prejudice and bias encountered in legislative decision-making processes) and their likelihood of reoffending and returning to recidivism. Furthermore, newly developed AI tools designed to support judicial decision-making risk perpetuating human biases by replicating gendered prejudices, thereby contributing to further discrimination and exacerbating existing vulnerabilities.

Theoretical frameworks and statistical analyses both indicate **significant disparities in incarceration rates among individuals with diverse characteristics**, including gender, race, ethnicity, age, religion, and disability status. These disparities are evident across various forms of confinement, such as prisons, jails, detention centers, house arrest, parole, and probation. Scholarly research offers a range of explanations for these disparities, primarily attributing them to conscious and unconscious biases embedded in socially constructed norms and stereotypes, which in turn shape legislative decisions. Although existing research does not conclusively establish a linear relationship between an individual's characteristics and biased sentencing outcomes, statistical data on incarceration and recidivism reveal marked disparities in crime commission, reoffending rates, and sentencing outcomes. These disparities, particularly among individuals whose characteristics diverge from those of the dominant population, suggest the presence of systemic bias.

Given these realities, decision-makers must remain aware of the **potential for bias in their judgments, as well as in the ARAI and AI-driven tools** they rely on for support. Ultimately, achieving a legal and technological system free from bias requires a heightened awareness of both innate and socially constructed prejudices, which influence perceptions and decision-making. These biases, shaped by factors such as gender, race, ethnicity, age, religion and disability status, among others, necessitate rigorous critical examination to uphold fairness and impartiality while acknowledging their potential to contribute to a more equitable judicial process.

## 7. Annex: Bibliography

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