LAW, LIABILITY, AND JUSTICE:

CONTEMPORARY APPROACHES TO CRIMINAL RESPONSIBILITY

MARIANA Vatamanita
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PREFACE

Criminal law and justice continue to evolve in response to changing social conditions, technological developments, international conflicts, and growing awareness of individual rights. Contemporary legal research increasingly addresses questions of criminal responsibility, the limits of state action, and the need for justice systems that reflect scientific knowledge and social realities.

The chapters in this volume examine selected issues in criminal law and justice from distinct but complementary perspectives. The first chapter analyzes criminal liability for substandard construction under Article 257 of the Criminal Code of the Republic of Moldova, drawing attention to legal accountability in cases involving public safety. The second chapter discusses the legality of the killing of Ayatollah Ali Khamenei under international law, contributing to debates on the use of force, sovereignty, and legal responsibility in international relations. The third chapter explores the relationship between brain development and criminal law, presenting a neuro-legal framework for juvenile justice reform in Romania.

By bringing together domestic criminal liability, international legal analysis, and juvenile justice, this volume highlights the interdisciplinary character of contemporary legal studies. The chapters demonstrate how legal interpretation, public responsibility, international norms, and scientific perspectives can contribute to a more comprehensive understanding of justice.

It is hoped that this book will serve as a useful academic resource for researchers, legal professionals, students, and scholars interested in criminal law, international law, juvenile justice, and legal reform. We extend our sincere appreciation to all contributing authors for their valuable scholarly efforts.

Editorial Team
June 2026, Türkiye

CHAPTER 1
CRIMINAL LIABILITY FOR THE COMMISSIONING OF SUBSTANDARDCONSTRUCTIONS ANALYSIS OF ARTICLE 257 OF THE CRIMINAL CODE OF THE REPUBLIC OF REPUBLIC OF MOLDOVA

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INTRODUCTION

The construction sector is one of the economic fields with a significant influence on public safety, economic development, and the overall quality of life of the population. The quality of buildings and structures directly affects the safety of individuals, the stability of infrastructure, and the proper functioning of society. In this context, criminal legislation plays an important role by sanctioning behaviors that may jeopardize the integrity of constructions and, consequently, the life and health of individuals.

Within the criminal law of the Republic of Moldova, one of the relevant legal provisions regulating this matter is Article 257 of the Criminal Code, which establishes criminal liability for the poor execution of construction works and for putting buildings into use when they do not meet the required standards. The purpose of this norm is to prevent situations in which constructions are used without complying with technical requirements, safety regulations, or the specifications provided in the approved project.

According to this legal provision, the commissioning or use of residential buildings, industrial facilities, or other constructions in an unfinished or substandard condition by persons responsible for the quality of the works constitutes a criminal offense and is subject to criminal sanctions.

This criminalization reflects the social importance of complying with quality standards in construction and highlights the need to protect the public interest from negligent or fraudulent practices in the construction field.

1. LITERATURE REVIEW

Scholar Snejana Ciochina (2024), provides an extensive and rigorous examination of the legal and penal dimensions of the offense established under Article 257 of the Criminal Code of the Republic of Moldova. Her work focuses on analysing the objective elements that constitute this crime, offering a systematic interpretation of both the material legal objects tangible aspects affected by the offense and the immaterial legal objects, which pertain to broader societal interests and legal protections compromised by such conduct.

Scholar Ciochina’s (2023) analysis emphasizes the conceptual and practical challenges that arise in judicial practice, particularly concerning the precise definition of the offense’s scope and the methodological criteria for assessing its social danger or public risk. By addressing these ambiguities, her research highlights the critical need for doctrinal clarity, which is essential for ensuring a consistent and coherent application of criminal law in Moldova’s justice system and for guiding courts, prosecutors, and legal practitioners in evaluating cases involving the commissioning of substandard or unsafe constructions.

An earlier yet seminal contribution by Vitalie Stati provides a comprehensive examination of Articles 257 and 258 of the Moldovan Criminal Code, with particular attention to core legal and penal concepts such as the notion of subjectivity, the allocation of responsibility, and the normative interpretation of the offenses in question. Stati’s study emphasizes the importance of distinguishing between different categories of potential perpetrators within the construction process. He argues that, in general, technical supervisors, project managers, or specialized consultants should not be considered the primary authors of the criminal act of commissioning substandard constructions. However, under specific circumstances particularly when these individuals contribute knowingly or negligently to the commission of the offense they may incur liability as accomplices. This nuanced perspective provides important doctrinal insights into the complex question of who bears criminal responsibility in cases of defective or unsafe construction work. By clarifying the roles and potential accountability of various actors involved in the construction process, Stati’s analysis contributes to a more precise understanding of criminal liability and informs both legal theory and judicial practice regarding enforcement against professionals involved in construction activities

Collectively, the studies by Ciochina (2023) and Stati (2014), constitute the foundational body of scholarly work in Moldova concerning criminal liability for defective construction practices. These contributions not only provide critical legal analysis but also illuminate the persistent doctrinal and practical ambiguities that characterize this area of criminal law.

In particular, they highlight the challenges in identifying which actors within the construction process may be deemed legally responsible for offenses such as commissioning substandard or unsafe constructions. Moreover, these works underscore the complexity involved in determining how construction deficiencies should be assessed and evaluated from a legal standpoint, including considerations of the severity of the defects, the risk they pose to public safety, and their alignment with technical standards. By systematically addressing these uncertainties, the research emphasizes the need for a coherent framework that can guide both legal practitioners and the judiciary in applying criminal law consistently, ensuring accountability while reflecting the technical realities of construction processes. These scholarly contributions, therefore, provide essential insights that bridge theoretical legal principles with practical enforcement challenges in Moldova's construction sector.

In the broader field of comparative criminal law, although not exclusively focused on the construction sector, a significant body of research has addressed the criminal liability of legal entities, highlighting the growing relevance of corporate accountability for offenses that compromise public safety, including the delivery of low-quality or substandard construction work. These studies demonstrate that legal persons such as construction companies or corporate contractors can be held criminally responsible when the law explicitly provides for organizational liability. Within the context of Moldovan law, research indicates that the Penal Code allows for the prosecution of companies in cases where substandard construction activities pose risks to life, health, or public safety, thereby extending responsibility beyond individual actors to the organizational level. This perspective is particularly significant because it underscores the necessity of understanding how enforcement mechanisms apply differently to firms compared to individuals, reflecting the complexities of attributing intent, negligence, or complicity in corporate settings. By incorporating the notion of corporate criminal liability, these studies provide a critical framework for assessing accountability in contexts where multiple actors and institutional structures contribute to the occurrence of construction-related offenses. This approach also aligns with international trends in criminal law that increasingly recognize the role of organizations in preventing, or being held liable for, socially harmful conduct.

2. METHODOLOGY

This study employs a doctrinal-analytical methodology, combining a comprehensive review of the Moldovan Criminal Code, relevant legal doctrine, and judicial practice with comparative analysis of international and European legal standards. Primary legal sources, including Articles 257 and 258 of the Criminal Code of the Republic of Moldova, were examined alongside secondary sources such as scholarly articles, commentaries, and reports on criminal liability in the construction sector. The analysis focuses on identifying the constitutive elements of the offense, delineating responsibilities among actors, and evaluating mechanisms for enforcing liability, while also considering technical expertise and expert reports used in judicial proceedings. Comparative references to corporate criminal liability in other jurisdictions provide additional context to assess the effectiveness and scope of Moldovan legal provisions. This mixed doctrinal-comparative approach ensures a rigorous evaluation of both theoretical and practical dimensions of criminal liability for substandard constructions.

3. RESULT AND DISCUSSION

A thorough examination of Article 257 of the Criminal Code of the Republic of Moldova reveals that the legislature has designed a comprehensive and multi-layered penal framework to regulate offenses related to substandard construction practices. This framework specifically targets the commissioning or acceptance of incomplete, unsafe, or defective buildings by individuals who bear professional responsibility, such as managers of construction companies, site supervisors, and other authorized officials overseeing construction activities. Under the provisions of this article, the law establishes a spectrum of sanctions that correspond to the gravity of the offense and the extent of harm caused. Penalties range from monetary fines and the suspension or revocation of professional licenses to custodial sentences. In cases where construction defects lead to serious bodily harm, partial or total destruction of the building, or fatalities, the statute provides for imprisonment terms of up to five to ten years. Additionally, legal entities involved in such offenses may face significant administrative and penal measures, including fines, suspension of operational rights, or in extreme cases, the forced liquidation of the organization.

This approach reflects a deliberate legislative intent to ensure accountability at both the individual and organizational levels, thereby reinforcing public safety, compliance with technical standards, and the protection of social and economic interests.

From a doctrinal standpoint, legal scholars have noted that the judicial interpretation and practical application of the offense's objective and material elements under Article 257 present significant challenges. One of the central difficulties lies in precisely identifying the material and immaterial legal objects implicated by the crime. The material objects refer to the physical components of the construction such as structural elements, materials, and workmanship that are compromised by substandard execution, while the immaterial objects encompass broader social interests and values, including public safety, the structural integrity of the building, and the protection of economic and social interests associated with the construction project. Research by Snejana Ciochina (2025), underscores that courts often face practical obstacles in clearly delineating these components, which can result in variable interpretations, inconsistent judicial decisions, and uncertainty regarding the threshold at which a construction deficiency constitutes a punishable offense. This doctrinal ambiguity highlights the need for a more precise framework to guide judicial authorities in assessing the offense, particularly when determining whether defects are sufficiently severe or pervasive to trigger criminal liability, thereby ensuring that the law's protective purpose is applied consistently across cases.

Comparative analyses from European legal systems, particularly in the context of Romanian civil and criminal practice, further underscore the pivotal role of technical expertise in construction-related disputes. Although the specific legal frameworks, procedural norms, and standards vary across jurisdictions, these examples consistently demonstrate that expert assessments are central to determining liability and compliance. In Romania, for instance, both civil litigation and criminal proceedings concerning construction defects almost invariably require the appointment of court-certified technical experts. These experts are tasked with evaluating whether the construction meets the approved project specifications, adheres to relevant quality standards, and complies with safety regulations.

The reliance on such expert analyses ensures that courts can make informed determinations about the presence and severity of construction defects, bridging the gap between legal interpretation and technical realities. This practice highlights the importance of integrating specialized technical knowledge into judicial decision-making in cases involving structural deficiencies, demonstrating a procedural model that could inform and enhance similar processes in other jurisdictions, including Moldova, where the assessment of technical compliance is crucial for establishing criminal liability under laws regulating substandard construction practices.

Taken collectively, the evidence and analyses indicate that, although the legal framework in Republic of Moldova establishes a solid statutory foundation for imposing criminal liability in cases involving substandard or unsafe construction work, substantial practical challenges persist in its implementation. Among the most pressing issues are ambiguities in legal interpretation, which can lead to inconsistencies in determining the scope of criminal responsibility, as well as complexities in evidentiary procedures, particularly when evaluating the causal link between construction defects and potential harm. Another critical challenge concerns the practical application of technical expertise in judicial proceedings, as the assessment of construction quality and compliance with technical standards requires specialized knowledge that is not always readily available or systematically integrated into court processes. To address these issues effectively, it is necessary to consider refinements in doctrinal interpretations of the law, the development of clear and standardized guidelines for expert evaluation, and the provision of targeted training for judges, prosecutors, and legal practitioners. Such measures would help ensure that the law's intended protective function safeguarding public safety, structural integrity, and economic interests is consistently enforced, while also promoting greater clarity, reliability, and fairness in judicial outcomes related to the criminal liability of individuals and legal entities for defective construction practices.

4. THE LEGAL CONTENT OF THE OFFENCES PROVIDED FOR IN ARTICLE 257 OF THE CRIMINAL CODE

The legal object of the offense established under Article 257 encompasses the social relations that ensure the quality, safety, and structural stability of constructions. These social relations are safeguarded not only through general criminal law but also through specialized technical legislation in the construction sector, including regulations governing the reception, certification, and operational use of buildings and other structures. By criminalizing the act of placing substandard or unsafe constructions into use, the legislature seeks to prevent a range of potentially severe consequences, including the collapse of buildings, deterioration of infrastructure, accidents causing injuries or fatalities, and significant economic damages. Consequently, the scope of criminal protection under this provision is dual in nature: it aims both to safeguard public safety and to preserve the integrity of property and the economic interests of construction beneficiaries, ensuring that the delivery of built environments meets legally and technically defined standards. This dual focus reflects a broader legislative intent to balance the protection of societal welfare with the safeguarding of property rights and the stability of economic interests in the construction sector (Ciochina, 2023).

The material object of the offense under Article 257 refers to any construction that is placed into service or operation in a condition that fails to meet required standards. This category encompasses a broad range of structures, including residential buildings, industrial facilities, transportation infrastructure, energy installations, and other types of constructions used for commercial, public, or private purposes. A construction is deemed substandard when it exhibits one or more of several deficiencies: it may deviate from the approved technical project, utilize inappropriate or low-quality materials, be executed with technical flaws or defects, or remain incompletely finished at the time of commissioning. These deficiencies compromise not only the structural integrity and safety of the building but also the broader public interest and the economic value of the property.

The law, therefore, identifies the physical construction itself as the material object of the crime, serving as the tangible element through which the offense manifests, and highlighting the legal and technical thresholds that determine when a construction's condition rises to the level of criminal liability.

The objective aspect of the offense under Article 257 is manifested through the act of putting a substandard or incomplete construction into operational use. This conduct generally involves a series of formal and procedural actions, such as accepting the construction work, signing official reception or handover documents, and permitting the structure to be occupied, operated, or otherwise utilized. In practical terms, the offense most commonly arises when the reception protocol or final acceptance certificate is signed despite the presence of technical defects, structural flaws, or deviations from the approved project design. By completing these formalities, the responsible parties effectively authorize the use of a building or facility that does not meet legally mandated standards, thereby creating potential risks to public safety, property integrity, and economic interests. This objective side highlights the tangible and procedural manifestations of the crime, linking the act of commissioning a construction directly to the resulting social and legal harm, and emphasizing the responsibility of those in supervisory or managerial roles in ensuring that construction projects meet all technical, safety, and regulatory requirements before they are formally accepted and put into use.

Regarding the mental element or form of guilt associated with the offense under Article 257, the crime may be committed through several modalities, including direct intent, indirect intent, or, in certain cases, gross professional negligence. Direct intent occurs when the responsible individual knowingly authorizes or permits the use of a substandard construction with full awareness of its deficiencies and potential consequences. Indirect intent arises when the individual foresees the possible harmful outcomes of approving a defective structure but proceeds regardless, accepting the associated risks. In some instances, the offense may also result from serious professional negligence, where the responsible party fails to exercise the level of care, diligence, and technical oversight required by their role, leading to the commissioning of a building or facility that does not comply with established standards.

In practice, it is common for managers, technical supervisors, or other authorized officials to recognize the existence of construction defects yet still authorize its use, often motivated by a desire to avoid additional expenses, prevent delays in project completion, or meet contractual deadlines. This element underscores the importance of evaluating both the subjective awareness and professional responsibility of the actors involved, highlighting that criminal liability in such cases is not limited to overt negligence but can extend to situations where actors consciously prioritize economic or operational considerations over public safety and regulatory compliance.

5. DISTINCTION BETWEEN CRIMINAL, ADMINISTRATIVE AND CIVIL LIABILITY

One of the most significant difficulties encountered in the practical application of Article 257 of the Criminal Code of the Republic of Moldova concerns the clear differentiation between the various forms of legal liability that may arise in connection with construction defects or irregularities. In the field of construction regulation, the same factual situation may potentially generate criminal, administrative, or civil liability, depending on the severity of the violation, the degree of risk created, and the consequences produced. As a result, determining the appropriate legal framework for sanctioning such conduct often requires a careful evaluation of both the technical circumstances of the construction activity and the legal criteria used to assess the gravity of the offense.

From the perspective of criminal law, liability is triggered only in situations where the conduct demonstrates a particularly high level of social danger. This threshold is generally considered to be met when construction deficiencies seriously undermine the structural stability, safety, or functional integrity of the building, thereby exposing individuals, property, or public infrastructure to substantial risk. Criminal liability may also arise where the defects create a real and foreseeable danger of severe accidents, including injuries, loss of life, or large-scale material damage.

Furthermore, criminal sanctions are justified when the responsible parties commit serious violations of technical construction standards, such as deliberately disregarding approved project specifications, using substandard materials, or approving incomplete structures for use.

In such circumstances, the harmful conduct goes beyond mere administrative non-compliance and becomes a matter of criminal concern, as it directly threatens fundamental social values protected by criminal law. These values include public safety, the protection of human life and health, the stability of infrastructure, and the safeguarding of property and economic interests. Consequently, the imposition of criminal sanctions reflects the legislator's intention to respond more severely to actions that pose significant risks to society and that cannot be adequately addressed through administrative penalties alone. By establishing this higher threshold for criminal liability, the legal system aims to ensure that only the most serious violations of construction regulations are subject to penal intervention, while less severe infractions may be addressed through other legal mechanisms (Ciochina, 2023).

In contrast to situations that justify criminal prosecution, when violations of construction regulations are less serious in nature and do not reach the level of social danger required for criminal liability, the responsible individuals or entities may instead be held administratively liable. This form of liability applies in circumstances where the unlawful conduct, although prohibited by law, does not pose a sufficiently grave threat to public safety or social order to warrant the intervention of criminal sanctions. In the legal system of the Republic of Moldova, such acts are regulated by the Contravention Code, which establishes a separate framework for addressing unlawful conduct characterized by a lower degree of social danger than that of criminal offenses.

According to the principles underlying administrative law, a contravention represents an illicit act that violates legal norms intended to protect essential social values, including the rights and freedoms of individuals, the protection of property, public order, and the proper functioning of administrative regulations. However, unlike criminal offenses, these acts are considered less harmful to society and therefore require a more proportionate and corrective form of legal response rather than punitive criminal measures.

In the field of construction, administrative liability may arise in cases involving procedural irregularities, minor deviations from technical standards, or administrative non-compliance, such as failure to observe certain documentation requirements, delays in obtaining approvals, or other regulatory oversights that do not compromise the structural integrity or safety of a building. Because such violations typically do not create an immediate or significant risk to public safety, the legal system addresses them through administrative sanctions designed primarily to ensure compliance rather than punishment.

The sanctions imposed within this framework generally include monetary fines, formal warnings, corrective measures, or the temporary suspension of certain professional or business activities. These penalties aim to discourage future violations and encourage adherence to regulatory standards without imposing the more severe consequences associated with criminal liability. In this way, the administrative system serves as an intermediate mechanism of legal accountability, allowing authorities to address regulatory breaches effectively while reserving criminal prosecution for situations involving serious harm or substantial danger to society.

Finally, civil liability arises in situations where an unlawful action or omission causes material or non-material damage to another person, thereby creating a legal obligation for the responsible party to compensate the injured party for the losses incurred. In the context of construction activities, this form of liability typically emerges when defects in the construction process or failures to comply with technical and legal standards lead to financial losses, property damage, or moral harm suffered by owners, beneficiaries, or third parties. The purpose of civil liability is not primarily punitive, but rather restorative, aiming to place the injured party, as far as possible, in the position they would have been in had the harmful act not occurred.

Compensation under civil liability may take several forms depending on the nature and extent of the damage. It may include reimbursement for the costs required to repair or remedy construction defects, compensation for economic losses resulting from the inability to use the property as intended, or financial redress for non-material harm, such as distress or inconvenience caused by unsafe or defective construction. In many cases, courts may also order the responsible party to undertake specific remedial actions, such as correcting the defects or completing unfinished construction work, in addition to paying monetary compensation.

An important characteristic of civil liability is that it operates independently from other forms of legal responsibility, such as criminal or administrative liability. This means that the existence of criminal proceedings or administrative sanctions does not eliminate the obligation of the offender to compensate for damages caused. On the contrary, civil liability may coexist with criminal or administrative liability, allowing victims to seek compensation even when the perpetrator is simultaneously subject to criminal penalties or administrative sanctions. In practice, therefore, a person found guilty of a construction-related offense may be required both to bear the consequences of criminal punishment and to repair the damage caused to affected parties, ensuring that justice addresses not only the violation of legal norms but also the restoration of the victims' rights and interests.

In practical legal situations, criminal, administrative (administrative), and civil liability may frequently overlap, particularly in complex fields such as the construction sector, where the same conduct can generate multiple legal consequences. Construction activities involve numerous regulatory obligations, technical standards, and contractual responsibilities; therefore, a single violation may simultaneously trigger different forms of legal accountability depending on the nature of the breach, the level of social danger involved, and the consequences produced.

For instance, a participant in the construction process such as a contractor, site manager, or developer may initially be subjected to administrative or administrative sanctions for failing to comply with procedural requirements, documentation rules, or technical regulations. Such measures may include fines, warnings, or temporary suspension of professional activities. However, if subsequent investigations reveal that these violations resulted in serious risks to structural safety, significant economic damage, or harm to human life and health, the matter may escalate to the level of criminal prosecution.

In these circumstances, the same factual situation that initially appeared to constitute a regulatory breach may ultimately be reclassified as a criminal offense due to the seriousness of the consequences and the degree of social danger involved.

At the same time, the existence of administrative or criminal proceedings does not exclude the possibility of civil claims for damages brought by individuals or entities affected by the defective construction. Victims such as property owners, occupants, or investors may seek compensation for financial losses, repair costs, or other damages through civil litigation, even while criminal proceedings against the responsible parties are ongoing. As a result, the responsible actor may face parallel legal consequences, including administrative sanctions, criminal penalties, and civil obligations to compensate for the harm caused.

For this reason, clearly distinguishing between these different forms of liability is essential for ensuring that the appropriate legal framework is applied in each case. Proper differentiation allows legal authorities to respond proportionally to the seriousness of the offense, ensures that the interests protected by each branch of law such as public safety, regulatory compliance, and the protection of private rights are adequately safeguarded, and promotes coherence and fairness in the overall administration of justice.

6. EVIDENTIARY ISSUES AND TECHNICAL EXPERTISE

The investigation of criminal offenses arising in the construction sector presents considerable evidentiary difficulties, primarily because construction activities are technically complex and involve numerous specialized processes, materials, and professional responsibilities. In order to establish whether a criminal offense has occurred, investigative authorities must not only analyse legal norms but also understand the technical aspects of construction work. A key challenge in such cases is demonstrating the causal relationship between construction defects and the risks or damages that may result from them, such as structural instability, safety hazards, or material losses. Establishing this connection often requires a detailed reconstruction of the construction process and an evaluation of whether the deficiencies identified are directly responsible for the harmful consequences.

Within this context, technical expertise constitutes the most important form of evidence in construction-related criminal proceedings. Because many of the relevant issues involve engineering principles, construction standards, and structural assessments, they cannot be properly evaluated through legal reasoning alone. Technical expert reports provide the specialized scientific and professional knowledge necessary to clarify complex factual circumstances, enabling investigators, prosecutors, and judges to understand the nature and seriousness of the alleged defects.

Expert examinations therefore play a central role in judicial proceedings, as they help authorities determine objective technical facts that are essential for resolving the case. Through these evaluations, experts can assess whether the construction complies with the approved project, identify the presence and causes of structural defects, and evaluate the potential impact of those defects on the safety and stability of the building. In this way, technical expertise acts as a bridge between engineering analysis and legal decision-making, allowing courts to base their conclusions on reliable, scientifically grounded findings when determining criminal liability in construction-related offenses (Zestrea & Chintea, 2025).

The primary purpose of technical expertise in cases related to construction activities is to provide a detailed and scientifically grounded assessment of the technical circumstances surrounding a building project that is suspected of containing defects or irregularities. Because the evaluation of construction quality involves specialized engineering knowledge, technical expertise becomes an essential instrument through which courts and investigative authorities can obtain objective and reliable information about the condition of a structure and the manner in which the construction works were carried out.

First, technical expertise is intended to determine whether construction defects or structural deficiencies actually exist. Experts carefully examine the building, its structural elements, and the materials used in the construction process in order to identify any deviations from normal standards of quality or safety. This analysis may involve on-site inspections, measurements, laboratory testing of materials, and the examination of structural components such as foundations, load-bearing walls, beams, and other critical elements.

Second, the expert evaluation aims to establish the causes that led to the appearance of these defects. Determining the origin of construction deficiencies is essential for identifying whether they resulted from design errors, poor execution of construction works, the use of inadequate or low-quality materials, improper supervision during construction, or unauthorized modifications made during the building process. By identifying the technical causes, experts help clarify how and at what stage of the construction process the problems emerged.

Another important objective of technical expertise is to assess the impact of the identified deficiencies on the structural stability and safety of the building. Experts must determine whether the defects are merely minor irregularities or whether they pose a serious threat to the integrity of the construction. This evaluation includes analysing the potential risks that the defects may create, such as structural instability, accelerated deterioration of building components, or the possibility of accidents that could endanger the life, health, or property of individuals who use the building.

Finally, technical expertise examines the extent to which the construction complies with the approved technical project and the applicable construction standards and regulations. Experts compare the actual condition of the building with the design documentation, engineering plans, and technical specifications that were officially approved before construction began. Through this comparison, they can determine whether the works were executed in accordance with the project requirements or whether there were deviations, omissions, or violations of established technical norms.

By addressing these essential aspects, technical expertise provides a comprehensive technical evaluation that supports judicial authorities in understanding the nature, seriousness, and consequences of construction deficiencies, thereby playing a crucial role in establishing legal responsibility in cases involving defective or unsafe construction practices.

Such technical assessments are generally conducted by highly qualified professionals, including construction experts or engineers who specialize in structural engineering. These specialists possess the advanced technical knowledge and practical experience required to thoroughly evaluate the physical condition of buildings and other structures.

Their expertise allows them to analyse a wide range of construction components, including foundations, load-bearing elements, structural frameworks, materials used, and the execution of various construction processes. By applying established engineering principles, codes, and industry standards, these experts can determine whether the construction work has been carried out in compliance with the approved technical project and relevant regulations. Moreover, their evaluations are essential for identifying deviations, defects, or deficiencies that could compromise the safety, stability, or functionality of the structure. Through detailed reports and professional opinions, structural engineers and construction experts provide judicial authorities with objective, evidence-based assessments that inform legal determinations regarding liability, responsibility, and potential sanctions for substandard construction practices.

A significant challenge that frequently arises during investigations of construction-related offenses is accurately determining which individuals bear responsibility for observed defects or deficiencies in a structure. The construction process is inherently complex and involves multiple actors, each of whom plays a distinct role and carries specific obligations throughout the lifecycle of the project. These actors typically include designers or architects, who are tasked with preparing the technical plans and ensuring that the project meets regulatory and safety standards; contractors, who are responsible for executing the construction work in accordance with the approved designs and technical specifications; site supervisors or project managers, who monitor the day-to-day implementation of the works and ensure adherence to construction protocols; state inspectors, who are charged with verifying compliance with legal, technical, and safety regulations; and the beneficiaries or investors, who commission the project and may influence decisions regarding timelines, budgets, and material choices. Determining the precise degree of responsibility for each participant requires a meticulous analysis of project documentation, construction records, and the specific actions taken (or omitted) by each party at various stages of the building process. This complexity is compounded when multiple deficiencies exist, making it essential to distinguish between direct causation, contributory factors, and oversight failures in order to assign liability accurately.

Establishing the precise allocation of responsibility among the various participants in a construction project necessitates a thorough and detailed examination of all relevant technical documentation and the sequential stages of the construction process. Investigators are required to meticulously review architectural and engineering plans, construction contracts, site supervision reports, regulatory inspection records, and any other technical or administrative documents that may provide evidence regarding the execution and oversight of the works. This comprehensive analysis allows authorities to identify the specific points at which defects or deficiencies emerged and to determine which parties were legally and professionally obligated to prevent or rectify these issues. By tracing the chronology of construction activities and evaluating the roles and actions of each actor, investigators can establish a clear causal link between the deficiencies and the decisions or omissions of responsible individuals. Such a methodical approach is essential not only for accurately attributing liability but also for ensuring that accountability aligns with both technical realities and legal standards, thereby strengthening the effectiveness of criminal, administrative, or civil proceedings in cases involving substandard or unsafe constructions.

In the course of judicial practice, investigations into construction-related offenses often encounter a variety of evidentiary challenges that can complicate the establishment of facts and the attribution of responsibility. One of the most frequent problems is the absence or incompleteness of technical documentation, which may include missing project plans, incomplete engineering drawings, or insufficient records of construction activities. Another recurring issue involves unauthorized modifications to the approved construction projects, such as changes made without proper approval from relevant authorities, which can obscure the original design intentions and complicate the determination of compliance with technical standards. Additionally, the falsification or retroactive alteration of reception, handover, or acceptance documents presents a serious obstacle to proving the true state of the construction at the time of commissioning. These manipulated records may create the false impression that the building met required standards, thereby undermining the evidentiary basis for both criminal and civil proceedings.

Collectively, these challenges highlight the intricate and technical nature of proving offenses in the construction sector, emphasizing the need for meticulous document verification, expert analysis, and a methodical approach to reconstructing the sequence of construction activities and decisions.

These issues collectively create substantial obstacles in accurately determining the factual circumstances of construction-related offenses. The absence or manipulation of key documentation, unauthorized project alterations, and incomplete records make it considerably more challenging for investigators and prosecutors to reconstruct the actual sequence of events, identify the responsible parties, and establish the causal links between construction deficiencies and potential harm. As a result, these evidentiary difficulties can undermine the reliability and efficiency of criminal investigations, potentially delaying or weakening prosecutions. In practice, they demand a heightened level of scrutiny, extensive technical analysis, and close collaboration with specialized construction experts to ensure that the investigation produces a thorough and legally sound understanding of the offense, thereby maintaining the integrity of the criminal justice process in the construction sector.

CONCLUSION

Crimes in the construction sector constitute a complex phenomenon with significant implications for public safety and economic development. The regulation established under Article 257 of the Criminal Code of the Republic of Moldova aims to prevent the commissioning and use of substandard or unsafe constructions.

An analysis of this provision, however, highlights several practical challenges, particularly concerning the distinction between criminal liability and other forms of legal responsibility, as well as the management and evaluation of evidence within the criminal process.

To enhance the effectiveness of criminal law enforcement in this field, it is necessary to:

- Strengthen construction oversight and control mechanisms;
- Develop and expand judicial technical expertise;

- Clarify the responsibilities of all participants involved in the construction process.

By improving both the legislative framework and judicial practice, it is possible to increase the safety of constructions and prevent tragedies arising from technical deficiencies in buildings and other structures.

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CHAPTER 2
THE LEGALITY OF KILLING AYOTOLLAH ALI KHAMENEI UNDER INTERNATIONAL LAW

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INTRODUCTION

The prohibition against assassinating state leaders has long been embedded within the normative framework of international law and international relations. Historically, the assassination of political leaders has been regarded not merely as a violent act but as a direct assault on the sovereignty and political independence of a state. In the modern international legal order, which is grounded in the principles of sovereign equality and the prohibition of the use of force, targeting the head of another state raises profound legal and ethical concerns. The development of the United Nations system after the Second World War reinforced these norms by emphasizing peaceful dispute resolution and the protection of state sovereignty. Consequently, the deliberate killing of foreign political leaders has traditionally been treated as incompatible with the legal order established by the United Nations Charter (Milanovic & Schmitt, 2026).

The taboo against political assassination is closely connected to the broader prohibition on the use of force under Article 2(4) of the United Nations Charter. This provision prohibits states from using force against the territorial integrity or political independence of other states, thereby establishing one of the cornerstones of contemporary international law. Targeting a foreign leader can be interpreted as an act designed to destabilize or overthrow the political authority of a sovereign state, which may amount to a violation of this fundamental principle. Such actions undermine the stability of the international system and threaten the delicate balance that sustains peaceful relations among states (Çoban, 2022).

Beyond the legal framework of the United Nations Charter, customary international law has also contributed to the emergence of a strong normative prohibition against assassination. Throughout history, even during times of armed conflict, political assassination has often been regarded as dishonorable or illegitimate. While warfare has always involved violence against military targets, the deliberate targeting of political leadership has been widely viewed as crossing a moral and legal boundary. This historical stigma has shaped international expectations and contributed to the development of a customary norm discouraging the use of assassination as a tool of statecraft (Großklaus, 2017).

However, the rise of targeted killing in contemporary security policy has begun to challenge this long-standing taboo. In recent decades, states have increasingly relied on precision military operations, including drone strikes and covert operations, to eliminate individuals perceived as threats to national security. These practices have blurred the traditional distinction between lawful military targets and protected political figures. In situations involving armed conflict or imminent threats, certain individuals including high-ranking political actors may become legitimate targets under international humanitarian law (United Nations High Commissioner for Refugees, 2025). Yet this position remains highly contested among scholars and international legal experts.

The debate over the legality of assassinating state leaders is further complicated by the intersection between international humanitarian law and international human rights law. Under human rights law, the right to life is a fundamental principle that prohibits arbitrary deprivation of life. Extrajudicial killings, including targeted assassinations carried out outside the context of lawful armed conflict, are generally considered violations of this right. Even in situations of armed conflict, international humanitarian law imposes strict requirements regarding distinction, proportionality, and military necessity. Consequently, the deliberate killing of a political leader who does not directly participate in hostilities may still be regarded as unlawful under international legal standards (TRIAL International, n.d.).

1. AYOTOLLAH ALI KHAMENEI AS A TARGET

Ayatollah Ali Khamenei holds one of the most powerful and distinctive leadership positions in the contemporary international system. Since becoming the Supreme Leader of the Islamic Republic of Iran in 1989, he has exercised extensive authority over the political, military, and ideological institutions of the state. His power originates from the political system established after the 1979 Iranian Revolution, which transformed Iran from a monarchy under Shah Mohammad Reza Pahlavi into an Islamic republic guided by religious principles. The revolutionary leadership introduced the doctrine of Velayat-e Faqih (Guardianship of the Islamic Jurist), which places ultimate political and religious authority in the hands of a senior Islamic scholar.

Within this structure, the Supreme Leader is not merely a symbolic head of state but the central decision-maker in matters of national security, foreign policy, and ideological direction. Khamenei therefore embodies both the political sovereignty of the Iranian state and the religious legitimacy of the Islamic system. This fusion of authority raises important questions in international law regarding whether a leader who simultaneously holds religious and political power possesses a unique legal status when discussions arise about the legality of targeting such an individual.

The Iranian constitutional framework gives the Supreme Leader extraordinary institutional authority. Khamenei appoints key positions such as the head of the judiciary, the commanders of the armed forces, and members of the Guardian Council, which supervises elections and legislation. He also exercises ultimate control over the Islamic Revolutionary Guard Corps and the country's broader security apparatus. In practice, this means that the Supreme Leader stands above other political institutions, including the president and parliament. Such concentration of power reinforces his role as the central symbol of Iranian sovereignty. From the perspective of international law, the leadership of a sovereign state is closely connected to the principle of political independence protected by the United Nations Charter. Article 2(4) of the Charter prohibits the use of force against the territorial integrity or political independence of any state. Targeting a leader who represents the highest authority of a state could therefore be interpreted as an attack on the state itself. For this reason, the assassination of foreign political leaders has historically been treated as a serious violation of international norms governing state sovereignty and non-intervention (Diaaeldin, 2024).

Khamenei's position becomes even more complex because his authority is also religious in nature. Unlike secular political systems in which religion is institutionally separated from governance, the Iranian state integrates religious doctrine into its constitutional structure. The concept of Velayat-e Faqih provides the Supreme Leader with theological legitimacy as a guardian of Islamic governance. As a senior cleric, Khamenei is regarded by many supporters not only as a political leader but also as a religious authority responsible for guiding the moral and ideological direction of the state.

This dual role distinguishes him from most heads of state in the modern international system. International law itself generally treats all political leaders equally, regardless of religious status. However, the combination of religious legitimacy and political sovereignty increases the symbolic significance of Khamenei's leadership. Any attempt to target such a figure would not only affect the political leadership of Iran but could also be interpreted by many observers as an attack on religious authority. Consequently, the potential consequences of such an action would likely extend beyond conventional political conflict and could contribute to broader ideological or regional instability (United Nations, 2023).

The tension between Iran and the United States during Khamenei's leadership further intensifies the debate about the legality of targeting him. Since the early years of the Islamic Republic, relations between the two countries have been characterized by deep strategic rivalry. During Khamenei's tenure, this rivalry has been shaped by disputes over Iran's nuclear program, regional influence in the Middle East, and support for non-state armed groups in the region. In response, the United States has pursued a variety of foreign policy strategies aimed at limiting Iran's power, including economic sanctions, diplomatic isolation, and military pressure. These measures have often been justified as necessary to address security concerns and prevent nuclear proliferation. Nevertheless, such policies have also generated controversy in international law because they raise questions about the limits of coercive measures against sovereign states. The persistence of these tensions has contributed to speculation in political and academic discussions about whether high-level Iranian leadership, including Khamenei, could ever be considered a legitimate target within the framework of modern security strategies (Al Jazeera Media Network, 2026).

The debate became particularly significant in the context of targeted killing as a counterterrorism strategy. Over the past two decades, some states have increasingly relied on targeted killings using advanced military technology, including drones, to eliminate individuals considered security threats. Reagan (2022) supporters this strategy, arguing that targeted killing can prevent larger conflicts by neutralizing key actors responsible for planning or directing hostile actions.

However, applying this doctrine to a political leader such as Khamenei would raise profound legal challenges. International humanitarian law allows the targeting of individuals who directly participate in hostilities or who qualify as lawful military objectives during armed conflict. Although the Supreme Leader serves as commander-in-chief of Iran's armed forces, his role remains primarily political and strategic rather than operational on the battlefield. Expanding the concept of lawful targets to include heads of state would risk eroding one of the fundamental restraints in international law, which seeks to prevent assassination from becoming a normal instrument of international politics (Grzebyk, 2022).

From a human rights perspective, the issue becomes even more controversial. International human rights law strongly protects the right to life and prohibits arbitrary deprivation of life by state authorities. The deliberate killing of an individual outside a recognized armed conflict would generally be considered an extrajudicial execution. Even within armed conflict, international humanitarian law requires strict adherence to principles of necessity, proportionality, and distinction between military objectives and civilians. Because Khamenei's role is primarily that of a political and religious leader rather than an active combatant, targeting him would raise serious legal concerns under these principles. Moreover, normalizing the targeting of political leaders could destabilize the international system by encouraging states to eliminate rival leadership through force rather than diplomacy. For these reasons, international law should continue to treat the assassination of state leaders as fundamentally incompatible with the principles of sovereignty, stability, and the rule of law in international relations.

2. THE GLOBAL PROHIBITION OF POLITICAL ASSASSINATION

The prohibition of political assassination has long been considered one of the unwritten but deeply embedded norms of the international system. Although international law does not contain a single comprehensive treaty explicitly banning the assassination of foreign political leaders, the practice has historically been constrained by a network of legal doctrines, diplomatic norms, and moral expectations.

These constraints are rooted primarily in the principles of state sovereignty, the prohibition of the use of force, and the protection of political independence. In modern international law, these principles are codified most prominently in the United Nations Charter, particularly Article 2(4), which prohibits the use of force against the territorial integrity or political independence of any state. The assassination of a foreign political leader would almost certainly be interpreted as a violation of this principle because such an act directly interferes with the internal governance and leadership of another sovereign state. Consequently, the global norm against political assassination reflects a broader commitment within international law to preserve the stability of state institutions and prevent violent interference in the leadership structures of other nations (Thomas, 2000).

Historically, the prohibition of assassination has evolved alongside the development of the modern state system. During earlier periods of international relations, especially in the era of imperial rivalry and covert warfare, assassination and political intrigue were occasionally used as tools of statecraft. However, as the modern international legal order emerged during the nineteenth and twentieth centuries, the legitimacy of such practices increasingly declined. States gradually recognized that the targeted killing of foreign leaders could destabilize international relations and provoke uncontrolled escalation of conflict. One of the earliest modern expressions of this principle emerged in the diplomatic practices of European powers, where the assassination of rulers or high officials was widely condemned as an illegitimate method of conducting foreign policy. Over time, this norm evolved into a broader expectation that political leaders, even those representing rival or hostile states, should not be targeted for assassination. This transformation reflects the recognition that the security of political leadership is a necessary condition for the stability of international diplomacy and peaceful interaction between states (United Nations, 2024).

A particularly important dimension of this prohibition arises from the concept of sovereignty. Sovereignty is the cornerstone of the international legal system and refers to the authority of a state to govern itself without external interference.

The assassination of a foreign leader represents one of the most extreme forms of intervention in the internal affairs of another state. Unlike conventional military operations directed at strategic military targets, the killing of a head of state or senior political leader aims directly at the political structure of the targeted country. Such an act may be interpreted as an attempt to destabilize or change the leadership of a sovereign state. For this reason, political assassination constitutes a form of unlawful intervention and could even qualify as an act of aggression under certain circumstances. The international community has therefore developed strong normative resistance to such actions because they threaten the fundamental principle of sovereign equality among states. If assassination were widely accepted as a legitimate instrument of foreign policy, the result could be a world in which political leaders constantly faced the threat of elimination by rival governments, severely undermining international stability.

The prohibition of assassination is also reinforced by principles derived from international humanitarian law and human rights law. International humanitarian law governs the conduct of hostilities during armed conflict and requires parties to distinguish between lawful military targets and civilians. Political leaders who do not directly participate in hostilities are generally considered civilians and therefore protected from deliberate attack. Even when a leader holds formal authority over military forces, such as serving as commander-in-chief, this does not automatically make that person a lawful target under the law of armed conflict. The principle of distinction requires that attacks be directed only at individuals who are actively engaged in hostilities or who constitute legitimate military objectives. Similarly, international human rights law strongly protects the right to life and prohibits arbitrary deprivation of life by state authorities. Extrajudicial killings, including politically motivated assassinations, are widely condemned as violations of fundamental human rights norms. These legal frameworks reinforce the broader international consensus that assassination should not be normalized as a legitimate method of resolving political conflict (O'Connell, 2024).

Despite these strong legal and normative prohibitions, the practice of targeted killing has become increasingly controversial in contemporary international relations.

Some states have argued that targeted killing may be justified as part of the right of self-defense against individuals who pose imminent security threats. In the context of counterterrorism operations, several governments have conducted targeted strikes against leaders of non-state armed groups. Proponents of these operations claim that such actions are necessary to prevent attacks and protect national security. However, critics argue that expanding the doctrine of targeted killing risks blurring the line between lawful military action and unlawful assassination. The danger is particularly significant when the concept is applied to political leaders rather than members of non-state armed groups. For example, the 2020 killing of Iranian General Qasem Soleimani by the United States sparked intense international debate about whether the operation constituted lawful self-defense or an unlawful act of political assassination. Although Soleimani was a military commander rather than a head of state, the incident illustrated how targeted killing can challenge the traditional boundaries of international law and raise serious questions about the erosion of norms protecting political leadership (Hinterleitner & Sager, 2023).

Another example illustrating the controversy surrounding political assassination involves historical attempts to eliminate foreign leaders during periods of intense geopolitical rivalry. During the Cold War, intelligence agencies occasionally explored covert operations aimed at removing rival leaders, including reported plots against figures such as Fidel Castro of Cuba. Although many of these operations remained secret for decades, their later disclosure generated significant criticism because they contradicted the principles of international law and diplomatic conduct. In response to such controversies, several governments formally adopted policies prohibiting assassination as an instrument of foreign policy. In the United States, for instance, Executive Order 12333 explicitly prohibits employees of the U.S. government from engaging in or conspiring to engage in political assassination (The President, 2008). The adoption of such policies reflects an acknowledgment that assassination undermines international norms and risks destabilizing global political order. Even when states face serious security threats, the use of assassination against foreign leaders remains widely regarded as incompatible with the principles of lawful international conduct.

Nevertheless, the prohibition of political assassination is not without critics. Traditional taboo against targeting political leaders may be increasingly difficult to maintain in an era of asymmetric warfare and technological change. Advances in surveillance technology, cyber capabilities, and drone warfare have significantly expanded the ability of states to conduct precise operations against specific individuals. In situations where a political leader is directly responsible for planning or directing violent actions, some analysts argue that targeted killing may be justified as a necessary form of self-defense. From this perspective, rigid adherence to the prohibition of assassination might prevent states from responding effectively to serious threats. However, critics of this argument warn that relaxing the prohibition could create a dangerous precedent. If states begin to justify the assassination of foreign leaders on the basis of security concerns, the distinction between lawful military action and unlawful political violence could quickly collapse.

3. TARGETED KILLING IN CONTEMPORARY WARFARE FROM COUNTERTERRORISM TO STATE LEADERSHIP

Targeted killing has stirred up quite a bit of debate in the realm of modern warfare, particularly when it comes to counterterrorism efforts. Over the last twenty years, countries have increasingly turned to this tactic to deal with perceived security threats. Thanks to advancements in surveillance technology, drones, and precision weaponry, it's now possible to carry out targeted strikes on individuals rather than relying on broader military operations. However, this approach brings with it significant legal and ethical dilemmas, as its growing normalization could jeopardize fundamental principles of international law, such as state sovereignty, the protection of civilians, and the ban on political assassinations. When the logic of targeted killing begins to extend beyond non-state actors to high-ranking officials or political leaders, the implications become even more serious, raising profound questions about the future of international legal order (Senn & Troy, 2017). The use of targeted killings as a military tactic really took off after the terrorist attacks on September 11, 2001.

Governments argued that they could go after individuals involved in planning or supporting terrorism as a form of self-defense, often in places that aren't traditional battlefields. Take the U.S., for instance; they employed drone strikes against Al-Qaeda and various armed groups in countries like Afghanistan, Pakistan, Yemen, and Somalia. Supporters of these strikes argue that they effectively eliminate threats while minimizing harm to civilians. However, critics raise concerns about the legal basis for these actions, especially when they occur outside of recognized armed conflicts. The normalization of targeted killing in counterterrorism operations risks blurring the distinction between legitimate military actions and unlawful extrajudicial executions, especially when decisions about life and death are made through secret intelligence processes rather than transparent legal procedures (Office of the United Nations High Commissioner for Human Rights, n.d.).

The legal debate becomes even more complex when targeted killing involves high-ranking officials of sovereign states. International humanitarian law allows attacks against lawful military targets during armed conflict, including members of an enemy's armed forces and individuals directly participating in hostilities. However, the status of political leaders or senior state officials is fundamentally different from that of combatants on the battlefield. Even when political leaders possess formal command authority over the military, they are generally regarded as civilians under international humanitarian law unless they directly participate in hostilities. The expansion of targeted killing doctrines to include high-ranking officials therefore raises serious concerns about the erosion of legal protections traditionally afforded to political leadership. If states begin to treat senior government officials as legitimate targets simply because they influence military strategy, the line between military operations and political assassination could become dangerously blurred. Such a development would undermine one of the longstanding norms of international relations: the general prohibition against the deliberate killing of political leaders as a tool of foreign policy (Schmitt, 2021a). The hypothetical targeting of Ayatollah Ali Khamenei illustrates the profound legal and political challenges associated with this issue.

As the Supreme Leader of Iran, Khamenei occupies the highest position in the Iranian political system and serves as the ultimate authority over the country's armed forces, judiciary, and major strategic policies. Although he holds formal command authority as the commander-in-chief of Iran's military forces, his role is primarily political and ideological rather than operational in the conduct of military operations. Under international humanitarian law, this distinction is crucial. A person who exercises strategic leadership over a state does not automatically become a lawful military target unless they directly participate in hostilities. If a state were to justify the killing of Khamenei on the basis that he influences military decisions or supports regional security policies, such reasoning could set a dangerous precedent in international law. Many heads of state around the world hold similar authority over their armed forces, yet the deliberate targeting of such leaders has historically been regarded as an illegitimate and destabilizing act.

Recent events in international politics demonstrate how easily the boundaries between targeted killing and political assassination can become blurred. The 2020 killing of Iranian General Qasem Soleimani by the United States in Baghdad provides a relevant example. Soleimani was a high-ranking military commander and head of Iran's Quds Force, a unit responsible for external military operations. The United States justified the operation by claiming that Soleimani was planning imminent attacks against American personnel. However, the strike sparked intense international debate about whether the killing was a legitimate act of self-defense or a violation of international law. Critics argued that the attack occurred outside an active battlefield and therefore risked undermining the legal framework governing the use of force. The controversy surrounding the Soleimani case illustrates how targeted killings can escalate geopolitical tensions and raise serious questions about the limits of state authority in the use of lethal force. If the logic applied in the Soleimani case were extended to include political leaders such as Khamenei, the implications for international law would be far more dramatic (Shaw, 2021).

The targeted killing doctrine risks normalizing assassination as a policy tool. Justifying strikes against high-ranking officials based on security threats could prompt rival states to adopt similar measures, fueling retaliation.

In an already competitive international system, this undermines stability, complicates diplomacy, and erodes the legitimacy of international law, as powerful states may reinterpret legal norms to serve immediate security interests.

Another important critique concerns the relationship between targeted killing and human rights law. International human rights law strongly protects the right to life and requires that lethal force be used only as a last resort when absolutely necessary. Extrajudicial executions are widely condemned because they bypass judicial oversight and undermine the rule of law. Targeted killings conducted outside active armed conflicts often fall into a legal gray area where accountability mechanisms are weak or nonexistent. When such operations are justified through classified intelligence assessments rather than transparent legal standards, the risk of abuse becomes significant. Applying this approach to political leaders would be particularly troubling because it could allow states to justify assassinations on the basis of political disagreement or ideological rivalry rather than genuine security threats. The protection of the right to life therefore serves as an important legal barrier against the expansion of targeted killing doctrines into the realm of political leadership.

At the same time, proponent of targeted killing argue that modern security challenges require flexible responses (Messukeskus, 2025). Non-state armed groups, transnational terrorism, and asymmetric warfare have created situations in which traditional military strategies may be ineffective. According to this view, the targeted elimination of individuals responsible for planning attacks may sometimes be necessary to protect national security. However, even within this framework, the extension of targeted killing to state leaders remains highly controversial. The killing of a political leader such as Ayatollah Ali Khamenei would not simply remove an individual actor but could fundamentally alter the political structure of a sovereign state. Such an act could easily be interpreted as an attempt at regime change and therefore constitute a violation of the prohibition on the use of force under the United Nations Charter.

4. SELF-DEFENCE, PRE-EMPTIVE WARS AND THE POSSIBILITY OF LEADERSHIP TARGETING

The doctrine of self-defence occupies a central place in international law governing the use of force between states. Article 51 of the United Nations Charter recognizes the inherent right of states to defend themselves if an armed attack occurs. However, the application of this principle has generated intense debate, particularly in situations where states claim the right to act before an attack actually takes place. The emergence of pre-emptive and preventive self-defence doctrines has significantly expanded the scope of security strategies in contemporary international relations. These doctrines raise particularly difficult questions when they are used to justify targeted killing operations, especially those directed at high-ranking officials or political leaders. The hypothetical targeting of a leader such as Ayatollah Ali Khamenei brings these debates into sharp focus. As the Supreme Leader of Iran, Khamenei occupies the highest political and strategic authority within the Iranian state. O'Meara (2022) points out that any attempt to justify the killing of such a figure under the doctrine of self-defence would therefore raise fundamental questions about the limits of international law, the protection of sovereignty, and the risk of normalizing political assassination as a tool of international politics.

Traditionally, international law has interpreted self-defence in a restrictive manner. The classical understanding of the doctrine derives from the nineteenth-century Caroline incident, which established that self-defence is lawful only when the threat is "instant, overwhelming, and leaving no choice of means." This standard requires the presence of an imminent attack before force can be used in self-defence. Under this interpretation, states cannot lawfully resort to force based merely on speculation or long-term strategic concerns. Applying this standard to the targeting of a foreign political leader would require clear and compelling evidence that the individual is directly responsible for an imminent armed attack. In practice, meeting such a threshold would be extremely difficult. Political leaders generally operate within complex governmental systems, and their decisions are often collective rather than individual. Even if a leader exercises strategic authority over military operations, this does not necessarily mean that they are personally directing an imminent attack.

For this reason, argument that targeting a political leader under the doctrine of self-defence would almost always exceed the limits of lawful force under international law (The Law Institute, 2025).

Despite these traditional restrictions, some states have increasingly adopted broader interpretations of self-defence in the context of modern security threats. The concept of pre-emptive self-defence allows states to strike first when there is credible evidence that an attack is about to occur. In theory, this approach remains consistent with the requirement of imminence because it seeks to neutralize a threat before it materializes. However, the doctrine becomes far more controversial when states invoke preventive self-defence. Preventive self-defence involves the use of force against a potential threat that may emerge in the future but is not necessarily imminent. It is argued that this doctrine fundamentally undermines the legal framework established by the United Nations Charter. If states are allowed to use force based on perceived future threats, the prohibition on the use of force becomes almost meaningless. In such a system, powerful states could justify military action against weaker states simply by claiming that those states might become dangerous in the future. The possibility of targeting political leaders under preventive self-defence would represent an even more dramatic expansion of this doctrine, potentially legitimizing assassination as a form of strategic risk management.

The debate becomes particularly complex in the context of tensions between the United States and Iran. For decades, the two countries have maintained a deeply adversarial relationship shaped by geopolitical rivalry, ideological conflict, and disputes over regional influence. The United States has frequently expressed concerns about Iran's nuclear program, missile development, and support for armed groups in the Middle East. From the perspective of some policymakers, these factors may create a perception of long-term strategic threat. In this context, hypothetical arguments have occasionally emerged suggesting that eliminating key Iranian leaders could disrupt decision-making structures and reduce the threat posed by the Iranian state. However, such reasoning encounters serious legal obstacles. The killing of a political leader such as Ayatollah Ali Khamenei would almost certainly be interpreted as an attack against the sovereignty and political independence of Iran.

Even if the action were framed as self-defence, the absence of an imminent armed attack would make it extremely difficult to justify under the traditional legal framework governing the use of force (O'Meara, 2022a).

It is equally crucial to consider how Iran might invoke the doctrine of self-defense when it feels threatened. International law acknowledges that every state has the right to defend itself against armed attacks, including those aimed at its political leaders. If a foreign nation were to target Iran's Supreme Leader, the Iranian government could see this as an attack on the nation itself and assert its right to retaliate with force. This kind of situation could escalate quickly, transforming a specific strike into a larger military conflict and throwing the region into chaos. While the principle of self-defense is meant to shield states from aggression, in reality, it could actually fuel conflict, highlighting why international law typically discourages actions that directly target the leadership of sovereign nations.

Another significant issue is the fading line between combatants and civilians under international humanitarian law. Political leaders, even those who oversee military operations, aren't considered combatants unless they actively engage in hostilities. Broadening the definition of legitimate targets to include political leaders would muddy the waters between military actions and political violence, setting a dangerous precedent where states justify attacks by claiming that leaders influence military decisions. This rationale could extend to many heads of state, including commanders-in-chief, undermining the protections that international law offers to civilians and political figures during times of armed conflict.

Historical examples highlight the dangers of overly broad interpretations of self-defense. The 2003 invasion of Iraq, which was partly justified as a preventive measure against supposed weapons of mass destruction, demonstrated how speculative threats can be used to legitimize military action. With advancements in technology like drones and sophisticated intelligence systems, these risks are heightened, making it easier to target leadership and potentially encouraging pre-emptive strikes instead of diplomatic solutions. Critics caution that this trend could lead to the normalization of assassination attempts.

5. INTERNATIONAL HUMAN RIGHTS LAW AND THE PROHIBITION OF EXTRAJUDICIAL KILLING

International human rights law establishes one of the most fundamental legal protections in the global legal order: the right to life. This principle is recognized in major international instruments such as the Universal Declaration of Human Rights and the International Covenant on Civil and Political Rights (ICCPR). Article 6 of the ICCPR clearly states that every human being has the inherent right to life and that no one shall be arbitrarily deprived of this right. The significance of this principle extends beyond ordinary criminal law and applies directly to the conduct of states in their use of force. When states deliberately take the life of an individual without due legal process, the act may constitute an extrajudicial killing. In contemporary debates surrounding targeted killing, this legal framework becomes highly relevant, especially when considering the possibility of eliminating political leaders or high-ranking officials of another state. The intentional killing of a foreign leader outside a lawful battlefield or judicial process raises serious questions under international human rights law, particularly concerning whether such an act represents an unlawful and arbitrary deprivation of life (Rogers & McGoldrick, 2011).

The concept of extrajudicial killing refers to the deliberate killing of individuals by state authorities without judicial authorization or due process of law. International human rights law strongly condemns such actions because they undermine the rule of law and the fundamental principle that individuals should not be deprived of life without legal justification. Extrajudicial killings have historically been associated with authoritarian regimes, death squads, and political repression. However, in the modern era, the debate has expanded to include targeted killing operations conducted by states in the name of national security or counterterrorism. When states conduct lethal operations outside recognized armed conflicts, the legality of those actions must be evaluated primarily under human rights law rather than the law of armed conflict. In such contexts, the use of lethal force must meet strict requirements of necessity and proportionality. If a state deliberately kills an individual without demonstrating that lethal force was absolutely necessary to protect life, the action may constitute an unlawful extrajudicial execution (Council of Europe/European Court of Human Rights, 2025).

The possibility of targeting a foreign political leader raises particularly serious legal concerns within this framework. Political leaders, even those who hold significant authority over military and security institutions, remain protected by the right to life under international human rights law. Unlike combatants actively participating in hostilities, political leaders generally perform strategic and administrative functions rather than engaging directly in armed conflict. The targeted killing of a leader in a context outside active battlefield operations could therefore be interpreted as an extrajudicial execution. This interpretation becomes even stronger if the operation occurs in a territory where no armed conflict legally exists. For example, the use of drones or covert operations to eliminate a political figure in a third country would likely be considered an unlawful use of lethal force under international human rights law. In such situations, the absence of judicial oversight or transparent legal procedures reinforces the argument that the killing represents an arbitrary deprivation of life (Sommer & Asal, 2019).

Critics of targeted killing policies argue that these practices create a dangerous precedent by allowing governments to bypass legal safeguards designed to protect human rights. When states rely on secret intelligence assessments to determine who should be targeted, individuals are effectively deprived of the opportunity to challenge accusations or defend themselves before an impartial tribunal. This absence of due process contradicts the core principles of international human rights law, which emphasize accountability, transparency, and judicial oversight in matters involving the deprivation of life. The problem becomes even more serious when the targeted individual is a political leader of another sovereign state. In such cases, the killing does not merely affect the rights of one individual but also threatens the political independence and stability of the targeted state. The intersection between human rights law and international law governing the use of force therefore becomes particularly sensitive when leadership targeting is involved.

A striking example that showcases the clash between targeted killings and human rights law is the 2020 assassination of Iranian General Qasem Soleimani by the United States. While Soleimani held a military position rather than a political one, the operation sparked a heated debate about its alignment with international law.

The U.S. argued it was acting in self-defense against an imminent threat, but human rights experts raised concerns about whether there was enough evidence to back this claim. The UN Special Rapporteur on extrajudicial executions determined that the legal justification provided fell short of the rigorous standards set by international law. This incident illustrates how targeted strikes on high-ranking officials can quickly become contentious, especially when the need for lethal force is called into question.

The legal and ethical implications become even more complex when we consider a political figure like Ayatollah Ali Khamenei. As Iran's Supreme Leader, Khamenei holds considerable political and military sway, but his influence is more ideological than operational. Targeting him outside of an armed conflict could be seen as an extrajudicial execution under international human rights law, infringing on the right to life and the principles of sovereignty. If such actions become normalized, it could blur the lines between legitimate military operations and politically motivated assassinations, ultimately undermining global protections for the right to life and the credibility of international law.

6. SOVEREIGNTY, REGIME CHANGE AND THE CRIMINALIZATION OF LEADERSHIP TARGETING

The targeting of political leaders in international relations raises profound legal and ethical questions about the nature of sovereignty and the limits of lawful use of force. At the core of the modern international legal system lies the principle of state sovereignty, which guarantees that each state possesses the authority to govern itself without external interference. This principle is reflected in the United Nations Charter, particularly Article 2(1), which affirms the sovereign equality of all states, and Article 2(4), which prohibits the use of force against the territorial integrity or political independence of any state. When a foreign state deliberately targets the leadership of another government, the act may be interpreted not only as a military operation but also as an attempt to undermine the political structure of that state. Leadership targeting therefore raises the possibility that such actions could constitute illegal regime change, aggression, or violations of sovereignty under international law (Miller, 2023).

One of the strongest legal arguments against leadership targeting is that it may represent a direct attempt to alter or destabilize the governing authority of another state. Political leaders often embody the institutional and symbolic authority of the state they represent. Eliminating such figures through targeted killing may have the practical effect of weakening or collapsing the leadership structure of the targeted country. From the perspective of international law, such actions could be interpreted as efforts to impose regime change by force. Historically, international law has strongly opposed attempts by states to overthrow or manipulate the governments of other sovereign states. The principle of non-intervention prohibits states from interfering in the internal political affairs of another state, particularly when such interference aims to influence the outcome of political leadership or governmental organization. If leadership targeting is intended to remove or destabilize a government, it could therefore be considered a violation of this fundamental norm (Senn & Troy, 2017).

The legal classification of leadership targeting may also fall within the broader concept of aggression. The crime of aggression, recognized in international law and incorporated into the Rome Statute of the International Criminal Court, refers to the use of armed force by a state against the sovereignty, territorial integrity, or political independence of another state. Although aggression is often associated with large-scale military invasions, the definition also encompasses actions that undermine the political independence of a state through the use of force. The targeted killing of a head of state or senior political leader could potentially fall within this category because such an act directly attacks the governing authority of a sovereign state. In this sense, leadership targeting may represent a more subtle but equally serious form of aggression. By removing or attempting to remove the central figure of political power, a state may effectively be engaging in coercive regime change without formally declaring war.

A historical example that illustrates the dangers of leadership targeting is the series of covert operations conducted during the Cold War. Intelligence agencies from several powerful states reportedly explored plans to eliminate rival leaders in order to weaken opposing governments.

For instance, declassified documents later revealed attempts to assassinate Cuban leader Fidel Castro during periods of intense geopolitical rivalry. Although these operations were often justified as necessary to counter perceived threats, they were widely criticized because they violated the principles of sovereignty and non-intervention. The international backlash against such practices contributed to the emergence of a strong normative taboo against political assassination. This historical experience demonstrates that leadership targeting is not merely a tactical military action but a deeply destabilizing form of political intervention.

The possibility of targeting leaders such as Ayatollah Ali Khamenei further illustrates the complexity of this issue. As the Supreme Leader of Iran, Khamenei occupies the highest authority within the Iranian political system and exercises significant influence over national policy and military strategy. Any attempt by a foreign state to eliminate him would almost certainly be interpreted as an attack on the sovereignty of Iran itself. Such an action would not simply remove an individual but could disrupt the institutional structure of the Iranian state. In practical terms, leadership targeting could trigger political instability, internal power struggles, and broader regional tensions. From a legal perspective, the act could be viewed as an attempt to impose regime change by force, particularly if it were motivated by the desire to weaken or transform the political system of Iran. This interpretation would place the action in direct conflict with the principles of international law governing state sovereignty and political independence.

Such practices undermine the stability of the international system by encouraging reciprocal behavior among states. If powerful states claim the right to eliminate the political leaders of their rivals, other states may adopt similar strategies. This could lead to a dangerous environment in which political leaders constantly face the threat of assassination by foreign governments. Such a scenario would significantly undermine diplomatic engagement and peaceful conflict resolution. Political leaders would become less willing to participate in negotiations or international cooperation if they feared that their personal security could be compromised by hostile states. The normalization of leadership targeting would therefore erode the institutional foundations of international diplomacy.

7. THE FUTURE OF LEADERSHIP ASSASSINATION NORMS IN INTERNATIONAL LAW

The growing debate over leadership targeting presents one of the most serious challenges to the stability of the international legal order. If states begin to treat the killing of foreign political leaders as a legitimate security strategy, the consequences could fundamentally reshape the structure of international law. For decades, the international system has relied on the principles of sovereignty, political independence, and the prohibition of the use of force as the foundation of peaceful relations between states. These principles were designed to prevent powerful states from interfering violently in the internal affairs of weaker states. However, the increasing acceptance of targeted killing in modern warfare raises the possibility that these protections could gradually erode. If the elimination of political leaders becomes normalized, the distinction between lawful military action and political assassination could collapse, creating a far more unstable and unpredictable international system (Watkin, 2024).

One of the biggest dangers of targeting political leaders is the risk of undermining state sovereignty. Sovereignty has long been a protective barrier for nations against outside interference, especially when it comes to influencing their political leadership. When a head of state or a supreme authority is targeted for assassination, it can be seen as a direct assault on a nation's political independence. In reality, it often resembles a covert attempt at regime change, even if it's framed as a security operation. Taking out a leader can throw governance structures into chaos, spark internal unrest, and disrupt institutional continuity, especially in areas where leadership is deeply intertwined with national identity or ideological legitimacy. In these situations, assassination might escalate conflict instead of easing tensions.

One significant worry is how political assassination is becoming more accepted in international relations. It used to be seen as illegitimate and destabilizing especially during the Cold War, but now with the rise of drones and advanced intelligence technologies, the targeted killing of foreign leaders is facing new pressures. These technologies enable precise strikes without the need for full military operations. Often framed as counterterrorism, this reasoning could dangerously extend to political figures.

If countries start to justify assassinations as essential for security, we could see cycles of retaliation that destabilize international relations, weaken diplomacy, and undermine the credibility of international law, particularly if powerful nations openly flout the rules against targeting foreign leaders.

CONCLUSION

Targeting a political figure like Ayatollah Ali Khamenei brings up a host of legal, political, and ethical dilemmas under international law. Assassinating leaders goes against the principles that safeguard state sovereignty and political independence, which are outlined in the UN Charter's ban on the use of force and the commitment to peaceful conflict resolution. As Iran's Supreme Leader, Khamenei holds significant political, military, and religious power, meaning that any attack on him could be seen as an assault on the state itself, potentially leading to regional instability and serious humanitarian and human rights issues.

The increasing trend of targeted killings in modern warfare adds another layer of complexity to this issue. With advancements in technology and intelligence, states can now carry out precise strikes against specific individuals, often framed as counterterrorism efforts. However, applying this rationale to political leaders risks undermining the established norm against assassination, blurring the lines between legitimate military action and political murder. Such actions could be seen as attempts at regime change or meddling in the internal affairs of another country.

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CHAPTER 3
THE DEVELOPING BRAIN AND THE CRIMINAL LAW: A NEURO-LEGAL FRAMEWORK FOR JUVENILE JUSTICE REFORM IN ROMANIA

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INTRODUCTION

The Limits of Chronological Age as a Legal Proxy

The assessment of criminal responsibility in minors has historically been anchored in juridical constructs such as discernment, intent, and volitional capacity. These constructs, interpreted through philosophical and cognitive paradigms, have traditionally been operationalized via statutory age thresholds. In Romania, as in many European jurisdictions, the age of criminal responsibility is legally defined, with a supplementary evaluation of discernment required for minors within a specific age range. However, this categorical approach is fundamentally challenged by the discoveries of modern developmental neuroscience.

Adolescence is no longer viewed merely as a period of psychosocial transition but as a distinct neurobiological stage characterized by profound structural and functional neural reorganization. The brain does not simply grow in size; it undergoes a dynamic process of synaptic pruning and myelination that refines neural circuits and enhances processing efficiency. Crucially, this maturation occurs asynchronously across different brain regions. The socio-emotional and reward-seeking systems, anchored in limbic structures like the amygdala and ventral striatum, mature earlier and become hyper-reactive during mid-adolescence. In contrast, the prefrontal cortex (PFC), which governs executive functions such as impulse control, planning, and foresight, continues its development well into the third decade of life.

This developmental mismatch creates a neurobiological vulnerability. A minor may possess the cognitive capacity to understand the legal and moral wrongfulness of an act (a traditional measure of discernment) yet lack the fully developed executive machinery to regulate impulses, resist peer pressure, or fully appreciate long-term consequences under conditions of emotional arousal or stress. The Romanian legal scholar Dan Lutescu has noted that "the lack of life experience and self-control, as well as the immaturity and the unawareness of the importance of social values determine a psychological incapacity, both at the intellectual level (that is of conscience) and at the volitional level".

The Emergence of Neurolaw in International Jurisprudence

Internationally, the past two decades have witnessed what might be termed a "neuroscientific turn" in criminal jurisprudence. Preliminary assessments by legal scholars indicate a rapid rate of growth in the use of neuroscientific evidence in courtrooms, with twice as many reported cases involving such evidence in 2009 as in 2006. Brain images are increasingly proffered by the defense at the criminal responsibility phase, in an effort to prove incapacity, and at the sentencing phase, in an effort to support a more lenient sentence.

The most dramatic impact has been in the United States, where developmental neuroscience of adolescent behavior has offered important legally relevant insights. In the landmark case of Roper v. Simmons (2005), the Supreme Court ruled that the Eighth and Fourteenth Amendments prohibit the imposition of the death penalty for offenders who were under 18 years of age at the time of their crime. Several amicus briefs presented developments in psychology and brain science demonstrating fundamental differences between juvenile and adult minds, particularly noting that parts of the brain involved in behavior control continue to mature through late adolescence.

In Europe, similar developments are underway. The Netherlands, in a globally unique legislative initiative, extended the application of juvenile criminal law to young adults up to and including the age of 23, drawing explicit causal links between neurobiology and responsible behavior. The Dutch Ministry of Justice's explanatory memorandum stated: "Recent scientific findings on the development of important brain functions during adolescence support the intention to take a separate approach to adolescents... The fact that specific risk behavior occurs between the ages of 15 and 23 can be attributed in part to the incomplete development of important brain functions".

Scope and Structure of the Chapter

This chapter aims to construct a translational bridge between this neuroscientific evidence and the legal praxis of Romanian juvenile justice.

It proposes a dimensional, developmentally informed model of forensic responsibility that moves beyond binary categorizations, offering an empirically grounded and ethically robust framework for evaluating minors in conflict with the law.

The chapter proceeds as follows: Section 2 provides an extensive review of the neurodevelopmental foundations of legal capacity. Section 3 analyzes the current legal architecture of juvenile responsibility in Romania. Section 4 proposes a reconceptualization of discernment as a dimensional construct. Section 5 identifies behavioral biomarkers and proposes an empirical methodology for operationalizing this model. Section 6 examines comparative European jurisprudence and legislative reforms. Section 7 analyzes the relevant jurisprudence of the European Court of Human Rights. Section 8 examines the influence of American case law. Section 9 proposes specific policy reforms for Romania. Section 10 addresses ethical safeguards and methodological limits. Sections 11 and 12 offer discussion and conclusions.

1. NEURODEVELOPMENTAL FOUNDATIONS OF LEGAL CAPACITY

To understand the implications for forensic responsibility, it is essential to dissect the specific neurodevelopmental systems that underpin the capacities relevant to legal decision-making and behavioral control. This section provides an extensive scientific foundation for the translational framework.

1.1 Prefrontal Cortex Maturation and Executive Control

The prefrontal cortex (PFC), particularly its dorsolateral and ventromedial regions, is the seat of higher-order executive functions. These functions are critical for the type of volitional, goal-directed behavior presupposed by criminal law. Maturation of the PFC involves two key processes: synaptic pruning, which eliminates unused neural connections to increase efficiency, and myelination, which insulates neural axons to dramatically speed up signal transmission.

Longitudinal neuroimaging studies have demonstrated that the PFC continues to undergo structural maturation well into the third decade of life.

Giedd and colleagues, in their pioneering longitudinal MRI study, showed that gray matter volume in the frontal lobes peaks at around age 11 in girls and 12 in boys, followed by a decline during adolescence due to synaptic pruning. This pruning is not random but is an experience-dependent process that refines neural circuits, eliminating weaker connections while strengthening those that are frequently used.

The functional consequences of this protracted maturation are significant. The PFC governs:

- Impulse inhibition: The capacity to suppress prepotent but inappropriate responses.
- Working memory: The ability to hold and manipulate information online.
- Cognitive flexibility: The capacity to shift between mental sets and adapt to changing contingencies.
- Planning and foresight: The ability to anticipate future consequences and formulate goal-directed strategies.
- Error monitoring: The capacity to detect and correct errors in real-time.

All of these functions are essential for the type of reasoned, voluntary conduct that criminal law presupposes. The developmental trajectory of these functions is linear and gradual, with adult levels of performance typically not achieved until the early-to-mid-20s.

1.2 The Dual Systems Model: Asynchronous Brain Development

The dual systems model, developed primarily by Laurence Steinberg and colleagues, provides the most compelling neurodevelopmental explanation for adolescent behavior. This model posits that adolescent risk-taking and poor decision-making are not simply due to a lack of knowledge, but to a developmental imbalance between two competing neural systems:

- The Socioemotional System: Located in limbic and paralimbic regions (e.g., amygdala, ventral striatum, orbitofrontal cortex), this system is hypersensitive to social and emotional stimuli, particularly rewards. Its functionality, as measured by activation in response to appetitive cues, peaks during early to mid-adolescence.

This heightened reactivity is thought to be driven by pubertal hormones and reflects the evolutionary importance of seeking rewards and social status during this developmental period.

- The Cognitive Control System: Primarily located in the lateral PFC and parietal cortex, this system is responsible for self-regulation, planning, and impulse control. Its functionality increases gradually and linearly from adolescence into young adulthood, reflecting the protracted maturation of prefrontal circuitry.

This asynchrony creates a window of vulnerability during mid-adolescence where the "accelerator" (socioemotional system) is pressed to the floor while the "brakes" (cognitive control system) are still being installed. Neuroimaging studies have provided direct support for this model. For example, when adolescents view appetitive stimuli (such as attractive faces or monetary rewards), they show exaggerated activation in the ventral striatum compared to children or adults. Simultaneously, they show reduced activation in prefrontal regions during tasks requiring cognitive control.

This neurobiological reality directly challenges binary legal interpretations of discernment. A minor may possess the cognitive capacity to understand the wrongfulness of an act—a capacity that relies on relatively mature semantic knowledge and basic moral reasoning—yet lack the regulatory capacity to inhibit impulses or resist temptations in emotionally charged situations.

1.3 The Social Brain: Peer Influence and Decision-Making

One of the most robust findings in developmental psychology is that adolescent risk-taking increases significantly in the presence of peers. Laboratory studies using driving simulation tasks have demonstrated that adolescents take twice as many risks when driving with peers in the room compared to when driving alone, whereas adults show no such peer effect. Neuroimaging studies have elucidated the neural basis of this phenomenon. When adolescents believe they are being observed by peers, they show heightened activation in the ventral striatum and orbitofrontal cortexregions involved in reward processing during risky decision-making tasks.

This suggests that the presence of peers increases the salience of potential rewards, tipping the balance even further toward risky choices.

The legal implications are profound. Many juvenile offenses are committed in groups, and the presence of co-offending peers may fundamentally alter the decision-making calculus of the adolescent. A minor who would not commit an offense alone may do so in the presence of peers, not because of coercion in the traditional legal sense, but because the peer context amplifies the reward value of the risky act while the immature cognitive control system is insufficient to restrain it.

1.4 Stress Neurobiology and Hippocampal Modulation

The interaction between a minor's developing brain and the environment is critical, and no environment is more stressful than the criminal justice system itself. Understanding stress neurobiology is therefore essential for a fair evaluation.

Exposure to stress activates the hypothalamic-pituitary-adrenal (HPA) axis, culminating in the release of cortisol from the adrenal glands. While acute cortisol release is adaptive, mobilizing resources to meet challenges, chronic or severe stress can have detrimental effects on brain structure and function. The hippocampus, a region critical for memory formation and contextual processing, is particularly vulnerable to stress hormones.

Elevated cortisol levels can impair neurogenesis (the birth of new neurons), alter synaptic plasticity, and, over time, lead to hippocampal atrophy. The hippocampus plays a crucial role in:

- Contextual memory consolidation: Binding together the various elements of an experience into a coherent memory trace.
- Temporal integration: Organizing memories in time and understanding sequences of events.
- Autobiographical coherence: Maintaining a sense of self across time and integrating personal experiences into a life narrative.

For minors involved in the justice system, many of whom have histories of trauma and adversity, this has profound implications.

Chronic early-life stress can program a hyper-reactive HPA axis, making them more susceptible to future stressors and impairing the very cognitive functions memory, contextual reasoning, emotional regulation—that are under scrutiny in a forensic evaluation.

The forensic implications are direct and significant. Judicial settings constitute acute stress environments. The interrogation room, the courtroom, the presence of authority figures, and the adversarial process itself can trigger a significant stress response in a minor. Research indicates that stress during encoding can enhance memory for central, emotionally salient information (the "gist") while impairing memory for peripheral, contextual details. This means that a minor's testimony may be fragmented, inconsistent, or focused on emotional highlights.

Within a traditional legal framework, such narrative inconsistencies might be misinterpreted as deception or poor credibility. A neurodevelopmentally informed perspective, however, recognizes these as potential consequences of stress-induced hippocampal modulation. This understanding is crucial for the fair evaluation of witness testimony and the assessment of a minor's capacity to form coherent intent (mens rea).

1.5 Summary: A Developmentally Vulnerable System

In summary, the adolescent brain is characterized by:

- Protracted prefrontal maturation: The cognitive control system is still developing, limiting the capacity for impulse control, planning, and emotion regulation.
- Heightened limbic reactivity: The socioemotional reward system is hyper-responsive, increasing sensitivity to rewards and social influences.
- Asynchronous development: The imbalance between these systems creates a period of vulnerability during mid-adolescence.
- Stress sensitivity: The developing HPA axis and hippocampus are vulnerable to stress, which can impair memory and decision-making.

These neurodevelopmental characteristics do not excuse criminal behavior, but they provide essential context for understanding it.

They suggest that adolescent offending may be qualitatively different from adult offending more situational, more peer-influenced, and more likely to desist as the brain matures.

2. THE LEGAL ARCHITECTURE OF JUVENILE RESPONSIBILITY IN ROMANIA

To understand the gap between neuroscience and legal practice, it is necessary to examine the current legal framework governing juvenile responsibility in Romania.

2.1 Statutory Framework: Articles 113-115 of the Romanian Criminal Code

Romanian criminal law establishes a graduated system of criminal responsibility for minors, codified in Articles 113-115 of the Criminal Code. This system is based on chronological age thresholds, with presumptions of capacity or incapacity that shift depending on the minor's age at the time of the offense.

2.2 The Three Age Tiers and Presumptions of Discernment

The Romanian system establishes three distinct age tiers:

- Under 14 years: Minors who have not yet reached the age of 14 at the time of the offense cannot be held criminally liable. This is an absolute, irrebuttable presumption (praesumptio juris et de jure) that minors below this age lack the intellectual and volitional capacity necessary for criminal responsibility.
- 14 to 16 years: For minors aged 14 to 16, criminal liability is conditional on the establishment of discernment at the time of the offense. The presumption is relative (praesumptio juris tantum), and judicial authorities are obligated to determine the presence of discernment based on a forensic psychiatric examination. As Lutescu explains, "the judicial authorities being obliged by the law to establish the presence of discernment during the offending act, based on a psychiatric examination".

- 6 to 18 years: For minors aged 16 to 18, the presumption reverses. Discernment is presumed, and the absence of discernment must be proven. This is also a relative presumption, but the burden of proof shifts to the defense to demonstrate that the minor lacked the capacity to understand or control their actions.

This graduated system reflects an implicit recognition that capacity develops with age, but it remains tethered to chronological age as a proxy for maturity. The legal scholar Cristi Danileț has characterized this as a "legal fiction," arguing that "establishing a fixed age for imputability constitutes a legal fiction, since discernment is not a biological fact but the result of an educational and emotional process".

2.3 The Role of Forensic Psychiatric Expertise

For minors in the 14-16 age range, the determination of discernment requires a forensic psychiatric examination. This examination is typically conducted by a panel of forensic psychiatrists and psychologists, who evaluate the minor's intellectual and volitional capacity at the time of the offense.

However, the current framework for these evaluations has significant limitations:

- Lack of standardization: There are no standardized protocols for assessing discernment, leading to variability in practice.
- Focus on psychopathology: The evaluation is often framed in terms of psychiatric diagnosis rather than developmental maturity. A minor may be found to have discernment simply because they do not meet criteria for a mental disorder.
- Neglect of neurodevelopmental factors: The evaluation typically does not incorporate knowledge about normative adolescent brain development or the specific neurocognitive capacities relevant to legal decision-making.
- Binary outcome: The evaluation produces a binary conclusion—discernment present or absent—which maps onto the legal binary but fails to capture the dimensional nature of capacity.

2.4 The Special Procedural Framework for Minors

Beyond substantive criminal law, Romanian procedural law establishes special protections for minors involved in the justice system. As noted by Oroveanu-Hantiu and Moraru, "the minor does not possess the mental maturity, intellectual development and experience required for the efficient use of procedural rights granted by the law" [27]. Consequently, Articles 480-493 of the Code of Criminal Procedure establish a special procedure for the prosecution and judgment of minors.

Key procedural protections include:

- Mandatory participation of parents or guardians: When a minor under 16 is heard or confronted, the prosecution may call upon parents, guardians, or child protection services to be present.
- Assessment reports: Obligations to conduct evaluation reports on the minor's social and psychological circumstances.
- Specialized judges: Cases involving minors should ideally be heard by judges with specialized training.
- Educational measures: A preference for educational measures over punitive sanctions.

Despite these procedural protections, the substantive determination of responsibility remains anchored to the binary discernment construct and the age-tiered presumption system.

2.5 Tensions Between Legal Categories and Scientific Reality

The tension between the legal framework and neuroscientific evidence is evident at multiple levels:

- The assumption of categorical maturity at 14: The absolute presumption that all minors under 14 lack capacity ignores the substantial variability in developmental trajectories. Some 13-year-olds may possess mature decision-making capacities, while some 15-year-olds may be significantly immature.
- The binary discernment construct: The legal system requires a binary determination discernment present or absent that does not reflect the dimensional nature of neurocognitive capacity.

- The neglect of context: The law assesses discernment as a trait-like characteristic of the individual, largely independent of context. Neuroscience suggests that capacity is highly context-dependent, with performance varying dramatically based on emotional arousal, peer presence, and stress.
- The age 18 cutoff: The assumption that full adult capacity emerges at 18 is contradicted by neurodevelopmental evidence showing continued maturation of prefrontal systems well into the 20s.

As Danileț argues, "the criminal responsibility of minors should be determined through individual psychological assessment rather than by arbitrary age thresholds" [26]. This chapter endorses this view and seeks to provide a scientific framework for such individualized assessment.

3. DISCERNMENT AS A DIMENSIONAL CONSTRUCT: A NEW FORENSIC MODEL

Synthesizing the neuroscientific and legal analysis, this chapter proposes a fundamental reconceptualization of "discernment." Traditional jurisprudence often treats discernment as a binary, categorical state—the minor either possesses it or does not. Neuroscience compels us to view it as a dimensional construct, existing on a continuum and varying across contexts.

3.1 Beyond the Binary: Defining Discernment Capacity

The proposed construct of discernment capacity is defined as: The multidimensional neurocognitive capability to understand the factual nature and legal wrongfulness of an act, to regulate impulses and emotions in accordance with that understanding, and to resist contextual pressures that might otherwise lead to unlawful behavior.

This construct is dimensional rather than categorical, meaning that individuals can possess varying degrees of capacity along multiple dimensions. It is also developmental, meaning that capacity changes over time as the brain matures and as the individual accumulates experience.

3.2 Component 1: Cognitive Comprehension

The first component of discernment capacity is cognitive comprehension the traditional core of discernment. This includes:

- Factual understanding: The ability to understand the physical nature and consequences of one's actions.
- Moral understanding: The ability to appreciate that the act is wrong by societal standards.
- Legal understanding: The ability to understand that the act is prohibited by law.

Cognitive comprehension is the aspect of discernment most closely aligned with traditional legal constructs. It is also the aspect that matures earliest. Research indicates that by mid-adolescence, most individuals have achieved adult-level capacities for basic factual and moral reasoning [28]. However, as the dual systems model makes clear, comprehension alone is insufficient for responsible behavior.

3.3 Component 2: Executive Inhibition

The second component is executive inhibition—the neurocognitive capacity to inhibit prepotent impulses and regulate behavior in accordance with one's understanding. This includes:

- Response inhibition: The ability to suppress automatic or prepotent responses.
- Interference control: The ability to resist distracting or interfering stimuli.
- Impulse control: The ability to delay gratification and resist immediate temptations.

Executive inhibition is directly dependent on the maturity of prefrontal cortical systems. It develops gradually throughout adolescence and into young adulthood, with adult levels of performance typically not achieved until the early-to-mid-20s [14]. This creates a dissociation: an adolescent may know what they should do (cognitive comprehension) but lack the capacity to do it (executive inhibition).

3.4 Component 3: Emotional Regulation

The third component is emotional regulation—the ability to modulate emotional arousal to prevent it from overwhelming cognitive control. This includes:

- Emotion recognition: The ability to identify and label emotional states.
- Emotion modulation: The ability to regulate the intensity and duration of emotional responses.
- Stress tolerance: The ability to maintain cognitive function under conditions of stress.

Emotional regulation depends on the interaction between prefrontal systems and limbic structures, including the amygdala and hypothalamus. It is particularly vulnerable during adolescence due to the combination of heightened limbic reactivity and immature prefrontal control.

3.5 Component 4: Contextual Susceptibility

The fourth component is contextual susceptibility the degree to which the individual's decision-making and behavior are influenced by situational factors. This includes:

• Peer susceptibility: The degree to which the presence of peers influences risk-taking and decision-making.

• Authority influence: The degree to which authority figures (or their absence) affect behavior.

• Situational press: The degree to which environmental cues trigger impulsive or automatic responses.

Contextual susceptibility is heightened during adolescence due to the combination of increased reward sensitivity, social salience, and immature self-regulation. An adolescent who would not offend alone may do so in the presence of peers; an adolescent who would not offend under low-stress conditions may do so under high-stress conditions.

3.6 Operationalizing the Model in Forensic Practice

Under this dimensional model, the forensic question shifts from the binary "Did they know right from wrong?" to the more nuanced and scientifically grounded:

"Did they possess the integrated neurocognitive capacity to conform their conduct to the law at the moment of the offense, given their developmental stage and the specific circumstances?"

This requires a multi-method assessment that evaluates each component of discernment capacity:

- Cognitive comprehension: Assessed through clinical interview, review of the minor's understanding of the offense, and standardized measures of moral reasoning.
- Executive inhibition: Assessed through neuropsychological tests such as the Stroop Color-Word Test, Go/No-Go tasks, and Delay Discounting paradigms.
- Emotional regulation: Assessed through self-report measures, physiological monitoring (e.g., heart rate variability), and behavioral observations.
- Contextual susceptibility: Assessed through structured interviews about peer relationships, review of the circumstances of the offense, and experimental paradigms assessing peer influence.

This dimensional approach allows for a more individualized, proportionate, and just assessment. It recognizes that a minor may possess high cognitive comprehension but low executive inhibition, and that this pattern has different implications for culpability than the reverse pattern.

4. BEHAVIORAL BIOMARKERS AND EMPIRICAL OPERATIONALIZATION

To translate the dimensional model into practical forensic tools, we must identify measurable behavioral indicators—or biomarkers—that correlate with neurodevelopmental stage and can be assessed in an individual minor. A translational framework relies on the empirical operationalization of these markers.

4.1 The Concept of Behavioral Biomarkers

A biomarker, in the medical sense, is a measurable indicator of a biological state or condition.

In the forensic context, behavioral biomarkers are standardized, empirically validated behavioral measures that provide information about the maturity of underlying neurocognitive systems. These are not direct measures of brain structure or function, but they are reliable proxies that can be assessed in clinical settings without access to neuroimaging technology.

4.2 Executive Inhibition: Stroop and Go/No-Go Paradigms

Executive inhibition can be reliably assessed using well-validated neuropsychological tasks:

- Stroop Color-Word Test: This task measures interference control, a component of executive inhibition. The participant must name the color of ink in which a color word is printed, while ignoring the word itself (e.g., the word "RED" printed in blue ink). The interference effect—the difference in reaction time between congruent and incongruent trials—provides a measure of inhibitory control. Performance on the Stroop task improves throughout adolescence, with adult levels achieved in the early 20s.
- Go/No-Go Tasks: These tasks measure response inhibition. Participants must respond quickly to frequent "Go" stimuli but withhold responses to infrequent "No-Go" stimuli. The error rate on No-Go trials provides a measure of inhibitory control. Adolescents show higher error rates than adults, particularly under conditions of emotional arousal or reward .

4.3 Delay Discounting and Future Orientation

Delay discounting refers to the tendency to devalue future rewards based on the delay in receiving them. The delay discounting paradigm presents participants with a series of choices between smaller, immediate rewards and larger, delayed rewards (e.g., "Would you prefer €10 today or €20 in a month?"). The discounting rate the degree to which the delayed reward is devalued provides a measure of future orientation and impulse control.

Adolescents consistently show steeper delay discounting rates than adults, meaning they are more likely to choose immediate rewards even when delayed rewards are substantially larger.

This has direct implications for legal capacity: an adolescent may understand the long-term consequences of their actions in the abstract (cognitive comprehension) but be unable to weigh those consequences effectively when faced with immediate temptations.

4.4 Peer Modulation: The Virtual Presence Effect

Assessing susceptibility to peer influence in a forensic setting presents practical challenges, as it is not possible to recreate the peer context of the offense. However, laboratory paradigms have been developed that assess peer susceptibility in standardized ways.

The "virtual presence" paradigm involves having participants complete decision-making tasks alone and then again while believing they are being observed by peers (through a video link or by being told that peers are watching). The change in risk-taking behavior between the alone and peer conditions provides a measure of peer susceptibility.

While this paradigm may not be directly transferable to clinical forensic assessment, it suggests the possibility of developing standardized measures of peer susceptibility that could be administered in clinical settings.

4.5 Emotional Reactivity and Psychophysiology

Emotional reactivity can be assessed through both self-report and physiological measures:

- Self-report measures: Standardized questionnaires assessing emotional lability, negative affect, and stress reactivity.
- Heart rate variability (HRV): HRV, particularly the high-frequency component (respiratory sinus arrhythmia), provides an index of parasympathetic nervous system activity and emotional regulation capacity. Lower HRV is associated with poorer emotion regulation and increased impulsivity.
- Skin conductance response: Electrodermal activity provides an index of sympathetic arousal in response to emotional stimuli.
- Salivary cortisol: Cortisol levels provide an index of HPA axis activation and stress reactivity. Baseline cortisol and cortisol reactivity to stress can be assessed through salivary samples.

4.6 A Proposed Empirical Methodology for Romania

To robustly assess these biomarkers in a forensic context, a mixed-method, cross-sectional study design is proposed. This model can serve as a blueprint for developing standardized national protocols.

Study Design: A prospective, comparative study involving three groups:

- Group A (Forensic Group): Minors (e.g., aged 14-16) currently involved in the justice system for serious offenses (N=100).
- Group B (Developmental Control): Minors (aged 14-16) with no criminal record, matched for socio-demographic variables (N=100).
- Group C (Maturity Comparison): Young adults (aged 18-21) with no criminal record, serving as a neurodevelopmental endpoint comparison (N=100).

Assessment Instruments: A comprehensive battery including:

- Neuropsychological Tests: Wisconsin Card Sorting Test (cognitive flexibility), Stroop Test (inhibition), computerized Go/No-Go task, Delay Discounting paradigm.
- Clinical Interviews: Structured Clinical Interview for DSM-5 (SCID-5), Trauma History Questionnaire, peer relationship interview.
- Self-Report Measures: Barratt Impulsiveness Scale (BIS-11), Difficulties in Emotion Regulation Scale (DERS), peer influence susceptibility scale.
- Biological Measures: Salivary cortisol samples (baseline and reactivity), heart rate variability monitoring (resting and during stress tasks).
- Experimental Paradigms: Virtual peer presence manipulation during decision-making task.

Statistical Analysis:

- Multivariate analysis of variance (MANOVA) to compare groups across measures.
- Logistic regression to identify which combination of biomarkers best predicts group membership (forensic vs. control).
- Structural equation modeling to test a theoretical model integrating stress exposure, executive function, contextual factors, and regulatory capacity.

- Receiver operating characteristic (ROC) analysis to identify optimal cut scores for forensic decision-making.

Ethical Considerations:

- Informed consent from minors and parents/guardians.
- Confidentiality protections.
- Debriefing and referral for participants experiencing distress.
- Oversight by institutional ethics board.

Such an empirical framework would move the assessment of minors beyond unstructured clinical judgment, providing an evidence-based foundation for evaluating maturity and its impact on legal capacities [6].

5. COMPARATIVE EUROPEAN JURISPRUDENCE AND LEGISLATIVE REFORMS

European legal systems increasingly acknowledge developmental vulnerability, though they vary in the extent to which they explicitly incorporate neuroscientific evidence. This section provides a detailed comparative analysis.

5.1 The Netherlands: Adolescent Criminal Law (Adolescentenstrafrecht)

The Netherlands represents the most explicit legislative incorporation of developmental neuroscience in Europe. The Dutch "Adolescent Criminal Law" (Adolescentenstrafrecht), which came into force on April 1, 2014, extended the application of juvenile criminal law to young adults up to and including the age of 23.

The legislative history is remarkable for its explicit reliance on neuroscientific evidence. The State Secretary for Security and Justice, in his explanatory memorandum of December 13, 2012, stated:

"Recent scientific findings on the development of important brain functions during adolescence support the intention to take a separate approach to adolescents. These findings stem from developmental psychology and are confirmed by recent neurobiological research... The fact that specific risk behavior occurs between the ages of 15 and 23 can be attributed in part to the incomplete development of important brain functions.

The main thing that science teaches on this topic is that the mental development of adolescents does not stop at the age of 18, but that important developments only take place after this age".

The memorandum specifically cited:

- The incomplete development of impulse inhibition and interference control until after age 20.
- The heightened influence of peers on risky decision-making up to age 20.
- The development of long-term consequence appreciation only after age 20.
- The maturation of emotion regulation and empathy between ages 20 and 25.
- Neuroimaging evidence showing that adolescents are guided more by reward-sensitive brain regions (nucleus accumbens) than adults .

The resulting legislation, Article 77c of the Dutch Criminal Code, provides:

"With respect to the young adult who has attained the age of eighteen but not yet twenty-three years at the time of the commission of the offense, the court may, if it finds grounds for doing so in the personality of the offender or in the circumstances in which the offense was committed, dispense justice in accordance with Articles 77g to 77hh."

This allows courts to apply juvenile sanctions including community service, youth detention, or long-term placement in juvenile institutions to young adults up to age 23. The decision is made at the request of the public prosecutor's office, based on an assessment of the individual's developmental maturity.

The Dutch example demonstrates that legislative incorporation of neuroscientific evidence is not only possible but has been implemented in a major European jurisdiction. It provides a model for Romania to consider.

5.2 Germany: Maturity Assessment and Cannabis Legislation

Germany's approach to juvenile justice has long emphasized the need to consider psychological and developmental maturity.

The Federal Constitutional Court (Bundesverfassungsgericht) has consistently held that juvenile sentencing must be based on an individualized assessment of the offender's maturity, not merely on retributive principles.

The German Juvenile Courts Act (Jugendgerichtsgesetz) applies to adolescents (14-17) and, in certain circumstances, to young adults (18-20). Section 105 of the Act provides that juvenile law may be applied to young adults if:

- A comprehensive assessment of the offender's personality indicates that they were developmentally equivalent to an adolescent at the time of the offense; or
- The nature of the offense indicates adolescent-typical behavior.

This requires courts to conduct a individualized maturity assessment, considering the offender's psychological, social, and emotional development. While the German law does not explicitly reference neuroscience, the assessment framework is compatible with a neurodevelopmental approach.

More recently, Germany's cannabis legislation (2024) introduced age-related restrictions that implicitly recognize developmental vulnerability. Adults are permitted to grow and possess cannabis, but with various age-related restrictions reflecting concerns about the impact of cannabis on the developing brain.

5.3 The United Kingdom: Subjective Foresight and Developmental Vulnerability

In the United Kingdom, the House of Lords' decision in R v G and R [2003] UKHL 50 represented a significant shift toward recognizing developmental limitations in minors' capacity for foresight.

The case involved two boys, aged 11 and 12, who set fire to newspapers in the backyard of a shop, threw them under a wheelie bin, and left. The fire spread, causing approximately £1 million in damage. They were convicted of arson under the objective "recklessness" standard established in R v Caldwell [1982], which asked whether a reasonable person would have foreseen the risk.

The House of Lords overruled Caldwell, holding that the test for recklessness should be subjective requiring that the defendant themselves actually foresaw the risk.

Lord Bingham, delivering the leading judgment, emphasized that the objective test could lead to injustice when applied to children, who may not have the capacity for foresight that a reasonable adult would possess.

While the decision did not explicitly cite neuroscience, it implicitly recognized that children's cognitive capacities differ from adults'. The shift to a subjective standard allows for consideration of the individual minor's developmental stage in assessing culpability.

5.4 France: The Primacy of the Educative Approach

France has long maintained a distinct approach to juvenile justice, codified in the Ordonnance of 2 February 1945, which establishes the primacy of educational measures over punitive sanctions. The French system is based on the principle that minors are not fully responsible for their actions and that the justice system's primary role is educative and rehabilitative [37].

The age of criminal responsibility in France is 13, but minors between 13 and 16 benefit from reduced sentences (excuse atténuante de minorité). The assessment of discernment is required, but the emphasis remains on the minor's capacity for rehabilitation rather than on retributive punishment.

5.5 Synthesis: A European Trend Toward Developmental Proportionality

Synthesizing these comparative examples, several trends emerge:

- Flexible age thresholds: European systems are moving away from rigid age thresholds toward more flexible frameworks that allow for individualized maturity assessment.
- Extended juvenile jurisdiction: The Netherlands has extended juvenile jurisdiction to age 23; Germany allows juvenile sanctions for young adults up to 20. This reflects recognition that brain maturation continues beyond 18.
- Emphasis on individualized assessment: Courts are increasingly required to conduct individualized assessments of maturity, not merely rely on chronological age.

- Preference for educational measures: European systems consistently prioritize educational and rehabilitative measures over punitive sanctions for minors.
- Implicit neuroscientific influence: While explicit neuroscientific citations remain rare outside the Netherlands, the underlying principles—that adolescents are developmentally different from adults—are increasingly accepted.

6. THE JURISPRUDENCE OF THE EUROPEAN COURT OF HUMAN RIGHTS

The European Court of Human Rights (ECtHR) has developed a substantial body of case law regarding the treatment of minors in the justice system. While the Court does not explicitly cite neuroscientific evidence, its jurisprudence reflects a doctrine of developmental protection that aligns with neuroscientific findings.

6.1 T. and V. v. The United Kingdom (1999): Procedural Justice for Children

The cases of T. and V. v. the United Kingdom (Applications nos. 24724/94 and 24888/94) arose from the notorious murder of two-year-old James Bulger by two ten-year-old boys, Robert Thompson and Jon Venables. The applicants were tried in an adult Crown Court, in public, with the full formality of adult criminal proceedings. They were unable to see the courtroom from their seats, and the proceedings were intensely stressful and intimidating.

The ECtHR unanimously held that there had been a violation of Article 6 (right to a fair trial). The Court emphasized that:

"In the case of a young child charged with a serious offence attracting high levels of media and public interest, it would be necessary to conduct the hearing in such a way as to reduce as far as possible the child's feelings of intimidation and inhibition".

The Court further noted that the public nature of the proceedings, the intimidating courtroom environment, and the inability of the applicants to participate effectively in their defense all contributed to a violation of their fair trial rights.

While the Court did not reference developmental neuroscience, its emphasis on reducing "feelings of intimidation and inhibition" implicitly recognizes the developmental vulnerability of minors in high-stress legal contexts.

6.2 Blokhin v. Russia (2016): Heightened Protection and Developmental Vulnerability

In Blokhin v. Russia (Application no. 47152/06), the ECtHR addressed the placement of a minor in a temporary detention center for juvenile offenders [39]. The applicant, aged 13 at the relevant time, was detained for 30 days based on allegations of extortion.

The Court reiterated that minors are entitled to heightened protection in the justice system. It emphasized that:

"The vulnerability of minors, in particular their level of maturity and cognitive and emotional capacity, must be taken into account and leads to a need for special protection, including in relation to criminal proceedings" [39].

The Court found violations of Article 5 (right to liberty and security), Article 6 (right to a fair trial), and Article 8 (right to respect for private life). It emphasized that the proceedings failed to provide adequate safeguards for the applicant as a minor, including the absence of legal representation, the failure to consider alternative measures, and the lack of effective review of the detention.

The Court's explicit reference to "level of maturity and cognitive and emotional capacity" reflects an understanding that developmental factors are relevant to the fair treatment of minors in the justice system.

6.3 I.G.D. v. Bulgaria (2022): Periodic Review and the Child's Best Interests

In I.G.D. v. Bulgaria (Application no. 70139/14), the ECtHR addressed the placement of an 11-year-old boy in specialized institutions for four years. The Court found violations of Article 5 §4 (right to have lawfulness of detention reviewed speedily by a court), Article 8 (right to respect for private and family life), and Article 13 (right to an effective remedy).

Critically, the Court stated:

"The Court sees fit to note that a measure depriving a child or adolescent of liberty, even if educational in nature, would have an impact on his or her physical, emotional, social and cognitive development. The Court therefore regards it as paramount for the national legal system to offer sufficiently regular periodic review of the lawfulness of any such measure".

The Court explicitly linked deprivation of liberty to its impact on "cognitive development," recognizing that detention itself may affect the developmental trajectory of the minor. It further emphasized that the authorities' prime motive had been punitive rather than educative, and that they had failed to apply the "best interests of the child" test.

This represents a significant step in the Court's jurisprudence, explicitly acknowledging that justice system interventions can affect developmental trajectories and must be reviewed with that in mind.

6.4 The ECtHR's Implicit Neuroscience: A Doctrine of Developmental Protection

Synthesizing these cases, the ECtHR has developed a doctrine of developmental protection that includes the following principles:

- Procedural accommodation: Proceedings must be adapted to the developmental capacities of minors, reducing intimidation and enabling effective participation.
- Individualized assessment: Decisions must be based on individualized assessment of the minor's maturity, not merely on chronological age.
- Best interests of the child: The child's best interests must be a primary consideration in all decisions affecting them.
- Last resort principle: Deprivation of liberty must be a last resort, used only when necessary and for the shortest appropriate period.
- Periodic review: Detention must be subject to regular judicial review, with particular attention to its impact on development.
- Rehabilitative purpose: The justice system's response to minors should prioritize rehabilitation and education over punishment.

While the Court does not cite neuroscientific evidence, these principles are entirely consistent with a neurodevelopmental approach.

They recognize that minors are not simply smaller adults, that development is ongoing, and that justice system interventions must be tailored to developmental needs.

7. THE AMERICAN INFLUENCE: ROPER, GRAHAM, MILLER AND THE NEUROSCIENTIFIC TURN

The most dramatic impact of developmental neuroscience on criminal jurisprudence has occurred in the United States, where the Supreme Court has issued a series of landmark decisions restricting harsh punishments for juvenile offenders. These decisions have explicitly relied on neuroscientific and psychological evidence about adolescent brain development.

7.1 Roper v. Simmons (2005): Abolishing the Juvenile Death Penalty

In Roper v. Simmons, 543 U.S. 551 (2005), the Supreme Court held that the Eighth and Fourteenth Amendments prohibit the execution of offenders who were under the age of 18 at the time of their crime [10]. The Court overruled its previous decision in Stanford v. Kentucky (1989), which had allowed the juvenile death penalty.

The majority opinion by Justice Kennedy identified three general differences between juveniles and adults that demonstrate juvenile offenders are less culpable:

- Immaturity and irresponsibility: "A lack of maturity and an underdeveloped sense of responsibility are found in youth more often than in adults. These qualities often result in impetuous and ill-considered actions and decisions."
- Vulnerability to negative influences: "Juveniles are more vulnerable or susceptible to negative influences and outside pressures, including peer pressure."
- Formative character: "The character of a juvenile is not as well formed as that of an adult. The personality traits of juveniles are more transitory, less fixed."

Crucially, the Court relied on amicus briefs from the American Psychological Association and the American Medical Association, which presented evidence from developmental psychology and neuroscience showing that "parts of the brain involved in behavior control continue to mature through late adolescence".

7.2 Graham v. Florida (2010): Life Without Parole for Non-Homicide Offenses

In Graham v. Florida, 560 U.S. 48 (2010), the Supreme Court held that the Eighth Amendment prohibits the imposition of life without parole sentences on juvenile offenders for non-homicide crimes.

The Court again relied on developmental science, citing research showing that:

"Developments in psychology and brain science continue to show fundamental differences between juvenile and adult minds. For example, parts of the brain involved in behavior control continue to mature through late adolescence... Juveniles are more capable of change than adults, and their actions are less likely to be evidence of irretrievably depraved character".

The Court emphasized that juveniles have "diminished culpability" and "greater prospects for reform" than adults, and that the State's legitimate interests in retribution and deterrence are less compelling when applied to juveniles.

7.3 Miller v. Alabama (2012): Mandatory Life Sentences Unconstitutional

In Miller v. Alabama, 567 U.S. 460 (2012), the Supreme Court held that mandatory life without parole sentences for juvenile homicide offenders violate the Eighth Amendment. The Court required that sentencing authorities consider the offender's age and its "hallmark features" before imposing such a sentence.

Justice Kagan's majority opinion extensively reviewed developmental science, noting that:

"Mandatory life without parole for a juvenile precludes consideration of his chronological age and its hallmark features among them, immaturity, impetuosity, and failure to appreciate risks and consequences.

It prevents taking into account the family and home environment that surrounds him and from which he cannot usually extricate himself no matter how brutal or dysfunctional. It neglects the circumstances of the homicide offense, including the extent of his participation in the conduct and the way familial and peer pressures may have affected him" .

7.4 The Role of Amicus Briefs: Neuroscience in the Supreme Court

The American cases are notable for the extensive use of scientific evidence presented through amicus briefs. Organizations including the American Psychological Association, the American Medical Association, and the American Academy of Child and Adolescent Psychiatry submitted briefs summarizing the scientific consensus on adolescent brain development.

These briefs presented evidence that:

- The prefrontal cortex, responsible for impulse control and decision-making, continues developing into the early 20s.
- Adolescents show heightened sensitivity to rewards and peers compared to adults.
- Adolescent offending is often transient and desists with maturation.
- Juveniles have greater capacity for rehabilitation and change.

The Supreme Court's explicit reliance on this evidence represents a landmark in the integration of neuroscience into constitutional jurisprudence.

7.5 Implications for European and Romanian Jurisprudence

While American constitutional law differs significantly from European civil law systems, the underlying principles are transferable. The American cases establish that:

- Adolescents are categorically different: As a class, adolescents differ from adults in ways that are relevant to culpability.
- Diminished culpability: These differences justify reduced punishment for adolescents compared to adults committing the same offenses.
- Individualized assessment: Sentencing must consider individual developmental factors, not merely the offense.

- Proportionality: Punishment must be proportional to both the offense and the offender's culpability, which is diminished by developmental immaturity.

These principles are consistent with the ECtHR's developmental protection doctrine and with emerging European legislative trends. They provide a framework for reforming Romanian juvenile justice.

8. POLICY IMPLICATIONS FOR ROMANIAN JUVENILE JUSTICE

The translational evidence presented in this chapter argues for a series of evidence-based policy reforms to enhance the Romanian juvenile justice system's fairness, proportionality, and rehabilitative legitimacy.

8.1 Reform Proposal 1: Amending Article 113 of the Criminal Code

The most fundamental reform would be to amend Article 113 of the Romanian Criminal Code to replace the rigid age-tiered presumption system with a maturity-informed evaluation framework. Drawing on the proposal by Danileț , we recommend:

Proposed Amendment to Article 113:

- A minor who has not attained the age of 14 at the time of the offense shall not be subject to criminal liability.
- A minor between the ages of 14 and 18 at the time of the offense shall be subject to criminal liability only if, based on a comprehensive forensic psychological and neuropsychological assessment, they possessed the capacity for discernment, understood as the integrated neurocognitive capacity to understand the nature and wrongfulness of their act and to regulate their behavior in accordance with that understanding, given their developmental stage and the specific circumstances of the offense.

The assessment of discernment capacity shall consider, at minimum:

- Cognitive comprehension of the act and its consequences;
- Executive functions, including impulse control and planning;
- Emotional regulation capacity;

- Susceptibility to peer and contextual influences;
- The presence of trauma or adverse developmental experiences;
- Any other factors relevant to the minor's developmental maturity.

This amendment would shift the legal framework from a categorical age-based system to an individualized, developmentally informed assessment of capacity.

8.2 Reform Proposal 2: Introducing Standardized Neuropsychological Assessment Protocols

To implement the amended Article 113, standardized assessment protocols must be developed and validated for the Romanian population. These protocols should:

- Include validated instruments: Incorporate the neuropsychological tests, behavioral paradigms, and clinical interviews identified in Section 5.
- Establish normative data: Collect normative data on Romanian minors to establish age-appropriate expectations for performance.
- Provide training: Train forensic psychologists and psychiatrists in the administration and interpretation of the protocols.
- Ensure quality control: Establish mechanisms for ongoing quality control and protocol refinement.
- Integrate with legal decision-making: Develop guidelines for translating assessment findings into legal determinations, ensuring that judges understand the significance of different assessment outcomes.

8.3 Reform Proposal 3: Developing Trauma-Informed Judicial Procedures

Based on the understanding of stress neurobiology presented in Section 2.4, judicial procedures must be adapted to minimize stress and accommodate developmental vulnerabilities. This includes:

- Pre-trial accommodations: Conducting interviews and assessments in developmentally appropriate settings, with support persons present.

- Courtroom adaptations: Modifying courtroom procedures to reduce intimidation, including allowing minors to sit with support persons, using plain language, and taking regular breaks.
- Specialized training: Training judges, prosecutors, and defense attorneys on the impact of stress and trauma on minors' behavior, memory, and testimony.
- Interpretive guidelines: Developing guidelines for interpreting testimonial inconsistencies in light of stress effects, rather than automatically equating inconsistency with deception.
- Therapeutic jurisprudence: Incorporating principles of therapeutic jurisprudence, which seeks to minimize the negative psychological impacts of legal proceedings.

8.4 Reform Proposal 4: Establishing Interdisciplinary Forensic Training Programs

The successful implementation of a translational framework requires that all actors in the juvenile justice system understand both the legal principles and the scientific foundations. This requires:

- Mandatory training: Require mandatory, ongoing training for judges, prosecutors, defense attorneys, and forensic experts.
- Interdisciplinary curriculum: Develop curricula co-taught by legal scholars, developmental neuroscientists, and forensic psychologists.
- Practical application: Include case-based learning that applies scientific principles to real forensic scenarios.
- International exchange: Facilitate exchanges with jurisdictions that have implemented similar reforms (e.g., Netherlands) to learn from their experience.

8.5 Reform Proposal 5: Creating a Specialized Juvenile Judiciary

Many European jurisdictions have specialized juvenile courts or judges with expertise in adolescent development. Romania should consider:

- Specialized juvenile judges: Designate judges with specialized training to hear all cases involving minors.
- Multi-disciplinary teams: Establish multi-disciplinary teams including judges, psychologists, social workers, and educators to advise on juvenile cases.
- Regular rotation with expertise: If rotation is necessary, ensure that judges rotating into juvenile assignments receive intensive training before assuming their duties.

9. ETHICAL SAFEGUARDS AND METHODOLOGICAL LIMITS

The integration of neuroscience into law must proceed with extreme caution. To prevent misuse and protect minors' rights, robust ethical safeguards are paramount.

9.1 Avoiding Neurobiological Determinism

Neuroscience can describe developmental tendencies and vulnerabilities, but it cannot determine an individual's actions. The fact that the adolescent brain is immature does not mean that every adolescent lacks capacity, nor does it mean that adolescents are not responsible for their choices. As neuroscientists Beatriz Luna and Catherine Wright emphasize:

"It is important to note that brain immaturity is not meant to remove responsibility for decision making. It describes a predisposition but does not determine behavior".

The assessment must focus on the minor's functional capacities, not on deterministic predictions based on brain structure. Neuroscientific evidence should inform, not replace, legal and moral judgment.

9.2 Preventing Stigmatization Through Biological Labeling

Biological information is highly sensitive and can be stigmatizing. There is a risk that labeling a minor's brain as "immature" or "underdeveloped" could lead to negative labeling and self-fulfilling prophecies. Safeguards include:

- Confidentiality: Strict protections for the confidentiality of neuropsychological and biological data.

- Avoidance of biological reductionism: Emphasizing that brain development is just one factor among many, and that it interacts with environment, experience, and choice.
- Strengths-based framing: Framing assessments in terms of developmental strengths and needs, not deficits.

9.3 Restricting Neuroimaging as Corroborative, Not Determinative, Evidence

Given the significant methodological and interpretive limitations of applying individual-level fMRI data in a legal context, neuroimaging should never be used as determinative evidence of (non-)responsibility. As Steinberg notes:

"Neuroimaging evidence is most appropriately used to support generalizations about age differences in brain development that are relevant to legal arguments about categorical differences between juveniles and adults, not to make points about individual defendants".

Neuroimaging should be used, if at all, strictly as corroborative evidence within a broader psychological assessment, and only when its methodological limitations are clearly explained to the court.

9.4 Maintaining Judicial Primacy

The ultimate legal decision on responsibility rests with the judge. Neuroscience and psychology serve to inform that decision by providing a more complete and accurate picture of the individual's capacities, but they cannot replace the legal and moral judgment of the court. As developmental psychologists Thomas Grisso and Laurence Steinberg observe:

"The scientists' authority to enter the policy arena rests largely on the credibility of their research findings".

The role of science is to provide credible, relevant information; the role of law is to apply that information within the normative framework of justice.

9.5 Addressing Interindividual Variability

One of the most significant methodological limits is the substantial interindividual variability in developmental trajectories.

While group-level data show clear age trends, individuals vary widely in their rate of maturation. Some 16-year-olds may have more mature brains than some 22-year-olds. This variability means that:

- Age is an imperfect proxy: Chronological age remains an imperfect proxy for developmental maturity.
- Individualized assessment is essential: The only way to address variability is through comprehensive individualized assessment.
- Confidence intervals matter: Assessment results should be interpreted with appropriate confidence intervals, acknowledging measurement error and variability.

9.6 The Danger of Overinterpretation

Finally, there is a danger of overinterpreting neuroscientific evidence of expecting it to answer questions it cannot answer. Neuroscience cannot tell us:

- Whether a particular minor had discernment at a particular moment.
- Whether a particular minor is blameworthy for their actions.
- What the appropriate punishment or intervention should be.

Neuroscience can tell us about developmental tendencies, about the capacities that are typically present or absent at different ages, and about the factors that influence decision-making. Translating this information into legal decisions requires careful judgment, humility, and respect for both scientific and legal limits.

10. DISCUSSION: TOWARDS A DEVELOPMENTAL MODEL OF JUSTICE

The integration of developmental neuroscience into juvenile justice represents a paradigm shift—from a categorical, retributive model to a developmental, rehabilitative model of justice. This shift has profound implications for how we conceptualize responsibility, culpability, and the purposes of punishment.

First, the developmental model suggests that adolescent offending is qualitatively different from adult offending. It is more situational, more peer-influenced, and more likely to desist with maturation.

This does not mean that adolescent offending should be excused, but that it should be understood within its developmental context.

Second, the developmental model suggests that culpability is not a binary trait but a dimensional one. Adolescents may possess some capacities (cognitive comprehension) while lacking others (executive inhibition). The law should be capable of recognizing this complexity, adjusting consequences accordingly.

Third, the developmental model suggests that the justice system's primary response to adolescent offending should be rehabilitative rather than punitive. Because adolescents are still developing, they are more capable of change. Interventions that address the underlying causes of offending—trauma, cognitive deficits, social skills—are more likely to be effective than purely punitive responses.

Fourth, the developmental model suggests that justice system interventions themselves can affect developmental trajectories. As the ECtHR recognized in I.G.D. v. Bulgaria, deprivation of liberty can impact cognitive development. The justice system must be designed to minimize these negative impacts and to support positive development.

For Romania, adopting a developmental model would align its juvenile justice system with the best available scientific evidence and with emerging European standards. It would enhance the system's fairness, proportionality, and effectiveness, while respecting the rights and dignity of minors.

CONCLUSION

Adolescent neurodevelopment fundamentally challenges categorical notions of criminal responsibility. The protracted maturation of the prefrontal cortex, the asynchronous development of limbic and cognitive control systems, and the heightened sensitivity to stress and peers create a developmental landscape incompatible with strictly adult models of responsibility.

The Romanian juvenile justice system, with its age-tiered presumptions and binary discernment construct, does not adequately capture this neurodevelopmental reality. A translational neuropsychological framework, grounded in the best available science and attentive to legal principles and ethical constraints, offers a path forward.

This chapter has proposed such a framework, anchored in a dimensional model of discernment capacity that integrates cognitive comprehension, executive inhibition, emotional regulation, and contextual susceptibility. It has identified behavioral biomarkers that can be empirically operationalized through standardized assessment protocols. It has examined comparative jurisprudence from Europe and the United States, identifying trends toward developmental proportionality. It has analyzed the relevant case law of the European Court of Human Rights, which increasingly reflects a doctrine of developmental protection. And it has proposed specific policy reforms for Romania, including amendments to the Criminal Code, introduction of standardized assessment protocols, trauma-informed procedures, interdisciplinary training, and specialized judicial expertise.

The adoption of such a framework would not collapse science into law or replace legal judgment with neurobiological data. Rather, it would inform legal judgment with the best available knowledge about adolescent development. It would enhance the epistemic accuracy of discernment assessments and the normative fairness of legal responses. And it would strengthen the proportionality, procedural fairness, and rehabilitative legitimacy of Romanian juvenile justice.

As Laurence Steinberg has observed, "The influence of neuroscience on law is most likely to be productive when it is used to inform general policy debates about the treatment of adolescents as a class, rather than to make determinations about individual defendants". This chapter has sought to contribute to that policy debate, providing a scientific and legal foundation for a more developmentally informed, just, and effective juvenile justice system in Romania.

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