

The Minimum Age of Criminal Responsibility: Interdisciplinary Perspectives

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ABSTRACT The criminal liability of minors represents a complex and sensitive legal issue, involving not only legal aspects but also psychological, social, and ethical dimensions. Children's developmental particularities – especially neurocognitive maturation processes and decision-making capacity – require a constant reassessment of the criteria for criminal responsibility. From this perspective, neuropsychological factors play an essential role in determining the age at which a minor can be considered capable of understanding the nature and consequences of their actions and of acting with free will in relation to them. This raises the question of whether such capacity can truly be assigned to a fixed age and what essential developmental processes must occur in a child in order to justify holding them criminally responsible. The paper examines key international instruments, including UN conventions and Council of Europe recommendations, which provide guidance to member states on establishing a minimum age of criminal responsibility and developing a child-sensitive justice system. Adopting an interdisciplinary approach, the study explores whether legal science incorporates insights from other disciplines when defining the minimum age of criminal responsibility and identifies international trends in this field by analyzing both legal instruments and their practical application.

KEYWORDS Criminal law, Criminal liability of minors, International law, Interdisciplinary approach, Minors, Minimum age, Children's rights.

1. Introduction

All regulations concerning children occupy a prominent place in jurisprudence, as they affect an age group that is still in the developmental stage and thus requires special attention. This paper explores the issue of the minimum age of criminal responsibility in an international and interdisciplinary context, with particular emphasis on the relationship between legal science and neuropsychology.

This paper aims to explore both the theoretical foundations and the practical implications of the criminal liability of minors. The first part analyzes the main

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relevant international documents – including various UN instruments and the recommendations of the Council of Europe – that provide guidance to member states on establishing a minimum age of criminal responsibility and creating a justice system tailored to children.

The second part of the paper examines a practical approach to countries with common law and continental systems. The analysis is conducted using the case of England, complemented by a brief historical overview that highlights the directions of legal development regarding this issue. England represents the average approach of common law legal traditions concerning the minimum age of criminal liability. The aim of the paper is not only to evaluate the internal regulations of each country but also to place them in an international context—with particular emphasis on an interdisciplinary approach that incorporates findings from neuropsychology to gain a deeper understanding of children's criminal responsibility.

The case of common law countries differs from what is conventional in average continental legal systems. Therefore, presenting England's regulation illuminates the criminal responsibility of minors from a different perspective. At the same time, the low age threshold in the regulation makes it particularly relevant to consider whether the law should adopt recommendations from other disciplines. Consequently, the research hypothesis is that jurisprudence does not take into account findings and recommendations from the field of neuropsychology, neither during the legislative process nor in the application of the law. The main aim of this paper is to validate or challenge this hypothesis by examining the pertinent neuropsychological and legal literature.

2. Neuropsychological effects

The criminal liability of minors is a complex issue that can be approached from multiple perspectives to better understand its significance. In addition to sociological, cultural, and historical aspects, psychological and biological development is perhaps the key factor that should be uniformly considered across all regions, countries, and continents. The key questions addressed in this chapter will be:

1. To what extent can science accurately determine the age from which a minor should be held criminally liable?
2. According to the current state of scientific knowledge, what is the minimum age below which a minor should never be subject to criminal punishment? What impact would their inclusion in the criminal justice system have?
3. What significant differences exist between the cognitive and perceptual processes of children and adults regarding criminal proceedings and the consequences of criminal offenses?
4. Has children's development truly accelerated in recent times, according to scientific findings?

A main condition for determining the minimum age of criminal responsibility (MACR) is that individuals must be capable of recognizing the unlawfulness of

their actions, as well as understanding their effects and consequences on both others and themselves. In the case of minors, the brain's developmental processes must be compared to those of an adult to fully grasp the role and impact of these crucial changes. According to neuroscience and developmental psychology, these abilities are limited in childhood and adolescence. During this period, important changes occur in brain maturation that affect executive functioning, emotional processing, and social cognition. Additionally, this stage is characterized by emotional instability, sensation-seeking behavior, and inadequate inhibitory self-control.¹

During adolescent development, three key areas are worth highlighting: executive functioning, emotional processing and social cognition.² Executive functioning (EF) skills play a crucial role in regulating and coordinating thoughts and behavior. They include working memory (the ability to retain and manipulate information), selective attention, and inhibition of emotional responses.³ The improvement of EF skills throughout adolescence is closely linked to dramatic changes in the prefrontal cortex, which may also include transformations in abilities related to future orientation.⁴ The prefrontal cortex matures progressively throughout adolescence and reaches near full development around the age of 18.⁵ Young individuals gradually develop the capacity to plan ahead and consider future consequences in their decision-making processes. The ability to focus attention emerges during early school years (from the age of 6 to 10/11). During this period, self-control also develops, which is based on the child's ability to tolerate frustration, delay gratification, feel competent in their actions, and build confidence in their own effectiveness.⁶

During adolescence, the child becomes more developed. However, social relationships have a greater influence on them, which can impact both their present and future criminal behavior.⁷ Self-esteem and the desire to fit into a social group become more significant during this stage.

In the 2000s, Miyake and his colleagues defined and differentiated between the three main components of executive functions: (a) shifting between tasks or mental sets; (b) updating and monitoring of working memory representations,

¹ Jana Hulmáková, Jiří Tomášek, and Eva Krulichová, "Public Opinion on the Minimum Age of Criminal Responsibility: The Role of Cognition and Emotions," *International Criminal Justice Review* (2024): 1–18, <https://doi.org/10.1177/10575677241282285>.

² Elly Farmer, "The Age of Criminal Responsibility: Developmental Science and Human Rights Perspectives," *Journal of Children's Services* 6, no. 2 (2011): 86–95, <https://doi.org/10.1108/17466661111149385>.

³ Adele Diamond, "Executive Functions," *Annual Review of Psychology* 64 (2013): 135–168, <https://doi.org/10.1146/annurev-psych-113011-143750>.

⁴ Farmer, "The Age of Criminal Responsibility," 90.

⁵ Farmer, "The Age of Criminal Responsibility," 90.

⁶ Katalin Visontai-Szabó, "Fejlődéslélektani alapismeretek," in *Improving Decisions through Empowerment and Advocacy* (2018), 8.

⁷ Yolisha Singh, "Old Enough to Offend but Not to Buy a Hamster: The Argument for Raising the Minimum Age of Criminal Responsibility," *Psychiatry, Psychology and Law* 30, no. 1 (2023): 51–67, <https://doi.org/10.1080/13218719.2022.2134229>.

and (c) inhibition of dominant or prepotent responses.⁸ Shifting between tasks or mental sets involves the ability to alternate between different tasks, operations, or cognitive sets, essentially referring to the process of attention or task switching. The second executive function, updating and monitoring of working memory representations, is closely related to the concept of working memory itself. Finally, inhibition of prepotent responses, the third executive function, refers to the capacity to consciously suppress dominant, automatic, or habitual responses when required.⁹

These analyses were necessary to understand the mechanisms occurring in children's brains, especially given their development stage. Several studies have found that EFs differentiate with age. In preschoolers, EF is best understood as a single, unified ability. By primary school, working memory starts to emerge as a distinct component, separate from inhibition and shifting.¹⁰ During adolescence, typically around 13–14 years, a fully differentiated three-factor model – comprising inhibition, shifting, and updating – becomes evident, highlighting the progressive refinement of cognitive control processes.¹¹ In fact, EF is in a constant state of development during childhood and touches on a number of important areas that contribute to a fundamental understanding of the criminal justice process and its implications.

The second key area, where adolescence develops, as mentioned, is the emotional processing. Based on advancements in neurodevelopmental research an individual's brain does not fully develop until their early twenties, many of the limbic structures (frontal lobe, amygdala) are also involved in a person's emotional processing.¹² Children experience emotions more intensely than adults because of the immaturity of inhibitory pathways in their brains.¹³ When these strong emotions impair a child's judgement, it is not fair to hold them fully responsible for their actions, as they are not able to regulate and rationalize their impulses in the same way as adults. The frontal lobe of the brain is the slowest-developing area. Research shows that the frontal lobes develop rapidly until the age of 25, with further development continuing until the age of 35.¹⁴ This is why

⁸ Akira Miyake et al., "The Unity and Diversity of Executive Functions and Their Contributions to Complex 'Frontal Lobe' Tasks: A Latent Variable Analysis," *Cognitive Psychology* 41 (2000): 49–100, <https://doi.org/10.1006/cogp.1999.0734>.

⁹ Miyake et al., "The Unity and Diversity of Executive Functions," 49–100.

¹⁰ Thalia Theodoraki, Sarah McGeown, Sinead Rhodes, and Sarah E. MacPherson, "Developmental Changes in Executive Functions During Adolescence: A Study of Inhibition, Shifting, and Working Memory," *British Journal of Developmental Psychology* 38, no. 1 (2020): 74–89, <https://doi.org/10.1111/bjdp.12307>.

¹¹ Theodoraki et al., "Developmental Changes in Executive Functions," 77.

¹² Anthony L. Pillay, "The Minimum Age of Criminal Responsibility, International Variation, and the Dual Systems Model in Neurodevelopment," *Journal of Child and Adolescent Mental Health* 31, no. 3 (2019): 224–235, <https://doi.org/10.2989/17280583.2019.1692851>.

¹³ Pillay, "The Minimum Age of Criminal Responsibility," 224–235.

¹⁴ Jerome Amir Singh et al., "World Health Organization Guidance on Ethical Considerations in Planning and Reviewing Research Studies on Sexual and Reproductive

children are more risk-taking than adults, their primary concern being the pursuit of reward, immediate emotions and desires.

The last field is the social cognition where researchers indicate that as young people transition from early adolescence to adulthood, they become more adept at understanding different perspectives and recognizing others' mental states.¹⁵ In young school-aged children, especially early adolescents, a strong attachment to parents can be observed. However, this attachment becomes more challenging in the second half of adolescence, as one aspect of identity formation involves separating from parents and developing social skills. Initially, children prioritize following rules set by their parents without questioning them and take pleasure in receiving praise for their obedience.¹⁶ Criminal law acknowledges that individuals are not fully accountable for their actions if their cognitive functioning was significantly impaired at the time of the offense.

In addition, the "Dual Systems Model" proposes that risk-taking behavior intensifies during adolescence due to an imbalance in brain development. The "socioemotional system" which matures earlier, drives the pursuit of rewards, excitement, and risky activities, while the "cognitive control" system develops more gradually, leaving adolescents with insufficient regulation to curb impulsive or potentially hazardous actions.¹⁷ This model suggests that adolescents experience a temporary disconnect between an affective system that matures relatively early and a cognitive control system that lags behind in development.¹⁸

The criminal prosecution of minors is also a sensitive issue. Beyond the fact that a minor may not fully comprehend the legal process or may do so only to a limited extent, they also risk being stigmatized. This stigma can have two major consequences.¹⁹ First, labeling a minor as a criminal influences their identity, increasing the likelihood that they will associate with this role and engage in future offenses. Second, it poses significant challenges to reintegration, complicating their reinsertion into society at an early stage. Socially legalized adulthood is postponed until later and later, making the moral norms associated with this stage of life increasingly blurred and uncertain.²⁰

In the current social context, adolescence has become a significantly extended period. Although sexual maturation begins earlier, it does not signal full maturity, as psychological development follows a separate trajectory. Over the past

Health in Adolescents," *Journal of Adolescent Health* 64, no. 4 (2019): 427–429, <https://doi.org/10.1016/j.jadohealth.2019.01.008>.

¹⁵ Farmer, "The Age of Criminal Responsibility," 88.

¹⁶ Zsuzsanna Vajda, *A gyermek pszichológiai fejlődése* (Budapest: Helikon, 2004), 198.

¹⁷ Pillay, "The Minimum Age of Criminal Responsibility," 224–235.

¹⁸ Teena Willoughby et al., "Examining the Link between Adolescent Brain Development and Risk Taking from a Social–Developmental Perspective," *Brain and Cognition* 83, no. 3 (2013): 315–323, <https://doi.org/10.1016/j.bandc.2013.09.008>.

¹⁹ Tim Bateman, "Criminalising Children for No Good Purpose: The Age of Criminal Responsibility in England and Wales," *NAYJ Campaign Paper* (2012): 13.

²⁰ Mária Roth-Szamosközi and Andrea E. Vincze, *Bevezetés a fejlődéslélektanba* (Cluj-Napoca: Presa Universitară Clujeană, 2010), 240.

century, the physical growth of children and teenagers has accelerated, with puberty beginning earlier than in previous generations—a phenomenon known as the secular trend, often attributed to better nutrition and overall health conditions.²¹ However, these biological changes should not be mistaken for cognitive and emotional maturity, as these aspects of development progress at a much slower and more variable pace. Socially legalized adulthood, on the other hand, is postponed until later and later, making the moral norms associated with this stage of life increasingly blurred and uncertain.²² Consequently, redefining adolescence to encompass the ages of 10 to 24 better aligns with modern developmental science and contemporary understandings of this life phase.²³

2. 1 The answers

A brief review of the research reveals that the field of neuropsychology does not establish a specific age limit, meaning that the first two questions cannot be answered with an exact number. However, examining different regions of the brain makes it clear that a complex set of processes is required for healthy development. It can be stated with certainty that some of these transformative processes are completed by the age of 18, while others continue to change at ages 25 and even 35. In light of this, the lower the age of criminal responsibility is set, the more questionable its scientific foundation becomes. During adolescence, typically around the age of 13-14, a gradual refinement of cognitive control processes has been observed, encompassing inhibition, shifting, and updating. Therefore, in my opinion, this age group could represent the threshold below which a minor should not be held criminally responsible.

The early involvement of children in criminal proceedings can affect them not only on a psychological level but also in terms of social attitudes. The appropriate determination of the minimum age for criminal responsibility can also affect further brain development, as, discussed above, the participation of a minor in a criminal procedure may influence later brain processes. As with adults, stigmatization can be actively present for minors as well, regardless of the outcome of the case. This reaction can also have an impact on their further development and integration in the future.

Answering question three, it is evident that some of these developmental processes do not fully mature even in adulthood, highlighting the significant developmental differences between minors and adults. For minors, the three core components of EF develop gradually, with all three typically emerging together around the ages of 13-14. In contrast, in adults, these functions ideally operate at a highly efficient level. Whereas most adults are capable of making decisions based on careful consideration and planning, minors tend to be significantly more influenced by emotions and the pursuit of immediate rewards. When committing a criminal act, minors primarily act under the influence of immediate emotions

²¹ Bateman, “Criminalising Children for No Good Purpose: The Age of Criminal Responsibility,” 6.

²² Roth-Szamosközi and Vincze, *Bevezetés a fejlődéslélektanba*, 240.

²³ Susan M. Sawyer et al., “The Age of Adolescence,” *The Lancet Child & Adolescent Health* 2, no. 3 (2018): 224, [https://doi.org/10.1016/S2352-4642\(18\)30022-1](https://doi.org/10.1016/S2352-4642(18)30022-1).

and potential rewards, with a significantly weaker cognitive control function to regulate their impulses. Another crucial factor is the stronger influence of the environment on minors. Their heightened need for parental approval, the power of attachment, and their susceptibility to emotional influence can contribute to parent-child criminal involvement, where the parent may act as the instigator while the minor becomes the perpetrator. These differences also extend to criminal proceedings. A key consideration is that minors may be more susceptible to external pressures during interrogations, increasing the likelihood that they might confess to crimes they did not commit due to environmental influence.

Regarding the fourth question, it has become evident that minors have been maturing faster in certain biological aspects, particularly in terms of sexual development, for over a decade. However, it is crucial to emphasize that this acceleration does not occur in parallel with their overall maturity level. Consequently, it cannot be concluded that they are more advanced in all areas, which means there is no justification for lowering the minimum age of criminal responsibility on this basis. While these physical changes may suggest increased development, they are not reliable indicators of emotional or cognitive maturity.

3. International Legal Frameworks

In parallel with scientific recommendations, it is pertinent to examine the guidance provided by various international documents, particularly with regard to the age of the offender. Maintaining chronological order, the first relevant document to highlight is the Geneva Declaration of the Rights of the Child, adopted on September 26, 1924, by the League of Nations, the predecessor of the United Nations. In the form of general principles, it encouraged states to engage in international cooperation for the protection of children's rights. Based on the vulnerability of children, this document was the first to articulate—through a paternalistic approach—the necessity of general legal protection for children and the resulting duties, focusing on ensuring and safeguarding the conditions required for children's healthy development.²⁴ In 1959, the UN General Assembly issued a resolution consisting of 10 principles – the Declaration of the Rights of the Child, 1389 (XIV) – which addresses children's rights, including the right to education, the right to healthy development, and the right to be free from discrimination. The two international documents mentioned so far marked the beginning of the recognition of children's rights; however, they did not have binding authority on states, as they were recommendations, primarily specifying guidelines and objectives to be achieved.

On 16 December 1966 the International Covenant on Civil and Political Rights (ICCPR) was adopted by the United Nations. Several relevant provisions were introduced here, including in Article 6, paragraph 5, which highlights the protection of juvenile offenders and pregnant women. Specifically, it states that the death penalty shall not be imposed for crimes committed by persons under

²⁴ Ildikó Bereczki, "Gyermekek jogok és szülői felelősség nemzetközi magánjogi perspektívából" (PhD diss., Pázmány Péter Katolikus Egyetem, 2020), 13.

the age of eighteen, nor shall it be carried out on pregnant women. The provision of Article 10, paragraph 2 (b) is as follows: “*Accused juvenile persons shall be separated from adults and brought as speedily as possible for adjudication.*” Furthermore, paragraph 3 of this article declares that “*Juvenile offenders shall be segregated from adults and be accorded treatment appropriate to their age and legal status.*” These provisions underscore the importance of protecting juvenile offenders by ensuring that they are treated in a manner that is suitable for their age and legal circumstances, separate from adult offenders. It is clearly noticeable that in the latter recommendation, more specific legal remedies emerge, rather than merely addressing the issue at the level of principles, as was the case with the 1924 and 1959 documents.

The issue of the specific minimum age of criminal responsibility was first addressed in more detail at the international level in 1985. Under the auspices of the United Nations, the Standard Minimum Rules for the Administration of Juvenile Justice (“The Beijing Rules”) were formulated. This was the first international document to summarize all of the United Nations’ principles on crime prevention and the circumstances shaping juvenile delinquency.²⁵ This resolution, adopted by the General Assembly, outlines more specific provisions, primarily providing guidance on how children should be treated while within the criminal justice system. Upon further analysis, it is essential to mention Article 4 and its commentary. Article 4 says that: “*In those legal systems recognizing the concept of the age of criminal responsibility for juveniles, the beginning of that age shall not be fixed at too low an age level, bearing in mind the facts of emotional, mental and intellectual maturity.*”

The establishment of a MACR is necessary, but the resolution emphasizes that this age should be reasonable and not set too low. Due to cultural and historical reasons, the approach to criminal responsibility varies significantly from country to country. The setting of age limits provides a stable point of reference for law enforcement and is an essential element of the institution of accountability. The Rules recommend that national legal systems develop regulations specifically applicable to juvenile offenders, including the creation of measures and bodies to represent the rights and interests of minors.²⁶ Given the importance of rehabilitation, Article 8 addresses the need to prevent the disclosure of information that could lead to the identification of juvenile offenders. This measure is necessary to ensure that minors are not stigmatized, as they have the right to privacy. From a criminological perspective, one of the primary issues with labeling juveniles as offenders lies in the profound social stigma that such categorization entails.²⁷

²⁵ Bálint Majoros, *A fiatalok bünelkövetők kezelésének hazai és nemzetközi áttekintése* (Budapest: Károli Gáspár Református Egyetem Állam- és Jogtudományi Kar, 2014), 6.

²⁶ Petra Vucskics, “A büntethetőség alsó korhatára és a belátási képesség,” *Jogi Fórum*, 2023, 7. https://www.jogiforum.hu/wp-content/uploads/2023/03/vucskics-petra_buntethetoseg-also-korhatara-es-belatasi-kepesseg_cimlappal.pdf.

²⁷ Mohammad A. Masoun, Mohammad T. Wamiq, and Ali A. Modaber, “Criminological Examination of Juvenile Presence in Criminal Proceedings (With a Perspective on the

The Beijing Rules paved the way for the adoption of several international legal instruments concerning juveniles, such as the UN Guidelines for the Prevention of Juvenile Delinquency.

A milestone in the field of child protection is the adoption of the Convention on the Rights of the Child (CRC) by the UN General Assembly, which is the first binding international legal instrument in this area. UNICEF, which played a key role in the drafting of the convention, is listed as an expert source in the document. With the growing emphasis on the international protection of human rights, the regulation of children's status at a higher legal level has increasingly come to the forefront.²⁸ The Convention guarantees and establishes minimum standards for the protection of children's rights in all respects. The preamble of the Convention affirms the necessity of providing children with special support, protection, and care.²⁹ Like the Beijing Rules, this document does not specify a minimum age that states are required to adopt. Instead, Article 40(3) provides general guidance.

Article 3 of the CRC must be highlighted, as it enshrines the “best interests of the child” principle, first articulated in the 1958 Declaration.³⁰ This principle requires that all authorities, including courts, prioritize the child's interests in all proceedings. The CRC creates a synthesis among various legal systems, traditions, and cultures, while establishing universal human rights for children. These rights, grounded in the child's vulnerability and limited maturity, justify special protection and support.³¹

The document known as the Riyadh Guidelines was adopted by the United Nations General Assembly during its plenary session on 14 December 1990, under the title “United Nations Guidelines for the Prevention of Juvenile Delinquency.” Similar to the Beijing Rules, it seeks to explore what measures can be taken—beyond the criminal justice system—to effectively address and prevent juvenile delinquency.³² The guidelines stress that policies should avoid criminalizing and imposing criminal sanctions for behaviors that does not cause serious harm to the child or others' development.³³ It highlights that juvenile

2014 Afghanistan Offenses Adjudication Law),” *Science and Education* 5, no. 8 (2024): 72–86.

²⁸ Barbara Igaz and Attila Kenese, “A gyermekbűnözők, avagy a büntethetőségi korhatár kérdései,” accessed April 20, 2025, [http://www.jogiforum.hu/files/publikaciok/igaz_barbara_kenese_attila_a_gyermekbunozok\[jogi_forum\].pdf](http://www.jogiforum.hu/files/publikaciok/igaz_barbara_kenese_attila_a_gyermekbunozok[jogi_forum].pdf).

²⁹ Miklós Tóth, “A büntethetőségi korhatár a társadalmi elvárások tükrében, szabályozásának hazai és nemzetközi története,” *Belügyi Szemle* 65, no. 2 (2017): 20–34. <https://doi.org/10.38146/BSZ.2017.2.2>.

³⁰ Tóth, “A büntethetőségi korhatár a társadalmi elvárások tükrében,” 26.

³¹ Bereczki, *Gyermekek jogok és szülői felelősség*, 16.

³² Erika Csemáné Váradi, *Nemzetközi és hazai tendenciák a fiatalkorúak büntető igazságszolgáltatásban* (Miskolc: Miskolci Egyetem Állam- és Jogtudományi Kar, 2000).

³³ Raymond Arthur, “The Youth Justice System in England and Wales: Complying with International Human Rights Law,” *International Family Law* 9 (2005): 157–160.

delinquency and other forms of deviant behavior are most significantly influenced by factors such as family dynamics, the school environment, residential settings, and peer groups.³⁴ It also underscores the harmful consequences of stigmatizing minors, a perspective widely endorsed by experts (Point 6 in the Fundamental Principles).

On the same day, the United Nations Rules for the Protection of Juveniles Deprived of their Liberty (Havana Rules) were also adopted. These rules focus on the protection of juveniles who are deprived of their liberty, stipulating that juvenile offenders should be released as soon as possible.³⁵ As with the previous documents, the 18-year age limit is also defined here, establishing the juvenile person.

The spirit of the previously mentioned documents—the 1989 UN Convention on the Rights of the Child, the Beijing Rules, the Riyadh Guidelines, and the Havana Rules—remains consistent. They reflect the same principles advocating for the distinct treatment of juvenile offenders in criminal justice systems, providing an approach that allows for “different treatment” compared to adult offenders, thereby supporting the maintenance of a separate juvenile justice system.³⁶

The Council of Europe Recommendation R (2000) 20 on the role of early psychosocial intervention in the prevention of criminality emphasizes the importance of respecting the right to privacy of children and their families, ensuring equal opportunities, and avoiding stigmatization.³⁷ The Recommendation also addresses the dilemma concerning the extent to which children are competent to make decisions in matters affecting them and how they can be held criminally responsible. At the same time, it emphasizes the importance of enabling the child to recognize and understand the consequences of their actions.³⁸

According to Recommendation R (2003) 20 of the Council of the European Union, from the moment of contact with the justice system or other competent authorities, children and their parents must be promptly and appropriately informed about their rights, the applicable procedures and systems, relevant child protection mechanisms, and the availability of protective measures. The explanatory memorandum explicitly notes that the Recommendation may also be applied to children below the age of criminal responsibility, in recognition of the

³⁴ Katalin Ligeti, “A fiatakorúak büntető igazságszolgáltatási törvényének koncepciója,” *Büntetőjogi Kodifikáció* 6, no. 2 (2006): 21–38.

³⁵ Gábor Duda, *A büntethetőségi korhatár alapkérdései* (Budapest: Károli Gáspár Református Egyetem Állam- és Jogtudományi Kar, 2014), 6.

³⁶ Erika Csemáné Váradi and Miklós Lévy, “A fiatakorúak büntetőjogának kodifikációs kérdéseiről – történeti és jogösszehasonlító szempontból,” *Büntetőjogi Kodifikáció* 2, no. 1 (2002): 12–27.

³⁷ Máté Nánási, “A belátási képesség megközelítése a jogtörténet és az új Btk. tükrében,” *Magyar Bírói Egyesület* (2017): 13.

³⁸ Mária Herczog, “Gyerek elkövetők, felnőtt bűnösök,” *Beszélő* 2008, no. 4 (2008): 5.

significant challenges many countries face in addressing offenses committed by children who cannot be held criminally liable.³⁹

The next relevant document was issued in 2008, the European Rules for Juvenile Offenders Subject to Sanctions or Measures. Although this document does not explicitly use the term “*minimum age of criminal responsibility*,” Rule 4 states that “*the minimum age for the imposition of sanctions or measures as a result of the commission of an offence shall not be too low and shall be determined by law.*” The accompanying Commentary clarifies that this rule implicitly refers both to the establishment of the minimum age of criminal responsibility and to the age from which more punitive sanctions may be applied. The importance of age is further emphasized in paragraph 5, under the section Basic Principles, where it is stated that in addition to the best interests of the juvenile offender, several individual factors must be taken into account when imposing sanctions or other measures. In the section on definitions, the term young adult offender is also given a more specific interpretation: it refers to any person between the ages of 18 and 21 who is alleged to have committed, or has been found to have committed.

The Guidelines of the Committee of Ministers of the Council of Europe on Child-Friendly Justice (2010) reflect and reinforce international standards set by the United Nations regarding juvenile justice. In line with the UN's position, Guideline 23 states that “*the minimum age of criminal responsibility should not be too low and should be determined by law.*” As in the previously discussed documents, the juvenile's age must be taken into account throughout various stages of the criminal justice process.

In its General Comment No. 24 (2019), the Committee on the Rights of the Child provides a detailed analysis of children's rights within the juvenile justice system, including specific guidance on the minimum age of criminal responsibility, as outlined in paragraphs 11 and 20–27. Among the objectives of this General comment is the establishment of an appropriate minimum age of criminal responsibility, as well as the assurance that children on both sides of this age threshold receive appropriate and differentiated treatment. Children who are below the minimum age of criminal responsibility at the time an offence is committed cannot be held criminally liable or subjected to criminal proceedings. Article 40(3) of the Convention obliges States Parties to establish a minimum age of criminal responsibility, although it does not prescribe a specific age. Following the ratification of the Convention, more than 50 States have raised their minimum age thresholds, with the most frequently adopted age internationally being 14. The Committee underscores that while setting the MACR at a reasonably high level is essential, it is equally important to ensure that appropriate legal and procedural safeguards are applied to children both below and above that threshold. States Parties are encouraged to consider recent scientific findings and to raise their MACR to at least 14 years of age. In this context, the Committee

³⁹ Miklós Lévy, “Az Európa Tanács R (2003) 20. számú ajánlása a fiatalkorú bűnelkövetőkre vonatkozó igazságszolgáltatási rendszerről,” *Család, Gyermek, Ifjúság* 2005, no. 3 (2005): 21–23.

commends those States that have adopted a higher minimum age—such as 15 or 16—and strongly advises that under no circumstances should the MACR be lowered, in accordance with Article 41 of the Convention.

In summary, a wide range of international legal instruments address the question of criminal responsibility in childhood. Over time, these have evolved from general principles to more concrete recommendations and authoritative interpretations. One of the key shortcomings of these documents, however, is that the majority of them are non-binding in nature; they take the form of guidelines or recommendations rather than enforceable legal norms. As a result, despite their relevance and the urgency of the issues they address, they lack mandatory effect on States.

4. Practical approach

Despite the insights provided by neuropsychological expert opinions and international legal recommendations, a uniform regulatory framework concerning this issue has yet to be established. Consequently, a brief comparative analysis is undertaken to examine how countries operating under common law and continental legal systems approach and regulate this matter. The following table offers a non-exhaustive classification of selected countries according to their respective legal systems:

Table 1: Countries with a Common Law System (Source: UNICEF)

Countries with Common Law System	Minimum age of criminal responsibility
Australia	10
Ireland	10
United Kingdom (England, Wales)	10
Scotland	12

Table 2: Countries with a Continental Law System (Source: UNICEF)

Countries with Continental Law System	Minimum age of criminal responsibility
Albania	14
Andorra	12
Austria	14
Belgium	12
Bosnia and Herzegovina	14
Bulgaria	14
Croatia	14
Czech Republic	15
Denmark	14
Finland	15

The Minimum Age of Criminal Responsibility

France	13
Greece	13
Hungary	12
Luxembourg	16
Netherlands	12
Norway	15
Poland	15
Portugal	12
Serbia	14
Slovakia	14
Spain	14
Switzerland	10

From a preliminary review of the data, it becomes apparent that countries within the common law tradition tend to establish a lower minimum age of criminal responsibility, often falling below the thresholds recommended by the aforementioned international guidelines.

4. 1 England

The low age threshold of the common law legal system has attracted numerous criticisms; therefore, it is particularly relevant to examine the reasons for the establishment of the 10-year age limit and its historical background using England as an example. In this jurisdiction, since 1999, children can be held fully criminally responsible from the age of 10.⁴⁰ This low minimum threshold has drawn criticism both domestically and internationally, due to its implications on the rate of juvenile criminalization. For a brief period, there was hope that English courts would once again recognize the defense based on the presumption of *doli incapax* (lack of capacity to understand the wrongful nature of the act) for children between 10 and 14 years old. However, these hopes were quickly dashed.⁴¹ In the past, children aged 7 to 14 benefited from the *doli incapax* presumption, being considered lacking in discernment unless the prosecution could prove that the child understood the wrongful nature of their act. The social strata of children in early 19th-century England, for instance, generated a significantly higher number of offenders than other population segments, due in part to the absence of a differentiated approach and the ineffective application of punishment.⁴²

These age thresholds remained relatively constant throughout history until the 20th century, when a statutory minimum age was introduced: it was set at 8 years

⁴⁰ Terry McGuinness, *The Age of Criminal Responsibility* (Briefing Paper, 2016), accessed April 23, 2025, <https://dera.ioe.ac.uk/id/eprint/27170/>.

⁴¹ Thomas Crofts, "Catching Up with Europe: Taking the Age of Criminal Responsibility Seriously in England," *European Journal of Crime, Criminal Law and Criminal Justice* 17, no. 4 (2009): 267–291, <https://doi.org/10.1163/157181709X470956>.

⁴² Vitalie Rusu, "Procesul penal în cauzele cu minori: Reflecții de ordin istoric," *Analele Științifice ale Universității „Alexandru Ioan Cuza” din Iași* 67, no. 1 (2021): 89–102, <https://doi.org/10.47743/jss-2021-67-1-6>.

in 1933 and raised to 10 in 1963. The upper threshold of 14 years remained governed by common law until 1994, when the Divisional Court ruled that this presumption no longer formed part of English law.⁴³ This decision was made in a context marked by growing concerns over juvenile delinquency and increasing calls for a tougher stance on young offenders. Public panic was heightened by the murder of a two-year-old child, James Bulger, by two ten-year-old boys—a case that received massive media attention.⁴⁴

The Labour Party, newly in power, reacted swiftly to demonstrate its toughness on youth crime by adopting the Crime and Disorder Act 1998, which formally abolished the *doli incapax* presumption.⁴⁵ This low age of criminal responsibility has been heavily criticized. In the case of *R (A Child) v. Whitty* (1993), Judge Harper stated: “*No civilized society regards children as accountable for their actions to the same extent as adults. The wisdom of protecting young children against the full rigor of the law is beyond argument.*”⁴⁶ Nevertheless, following the convictions, section 34 of the Crime and Disorder Act 1998 was enacted in the UK, formally abolishing the *doli incapax* presumption.

In this context, a lack of logic becomes evident, as, for example, it is not permitted to buy a pet under the age of 12, to purchase a lottery ticket under the age of 16, or to buy alcohol under the age of 18.⁴⁷ In these cases, it is presumed that the minor does not have the necessary capacity to make a proper decision, and their judgment cannot be considered equivalent to that of an adult. However, when a 10-year-old child commits a criminal offense, this same logic is no longer applied, and the same assumption is not made.

5. Conclusions

The question of the MACR remains one of the most sensitive and complex challenges for contemporary legal systems. It lies at the intersection of law, psychology, neuroscience, ethics, and child protection. This paper has demonstrated that assigning criminal responsibility to minors requires more than the mere application of formal legal norms. It necessitates a deep understanding of the child’s cognitive, emotional, and social development and the recognition that children are qualitatively different from adults in their capacity for moral reasoning, impulse control, and future orientation.

Scientific research, particularly from the fields of developmental neuroscience and psychology, confirms that crucial brain structures involved in judgment, self-

⁴³ Rusu, “Procesul penal în cauzele cu minori,” 89–102.

⁴⁴ Laura M. Guerrero Puerta, “James Bulger, a Case of Juvenile Criminality Key for the Change of the Legislative System of the United Kingdom. A Case Study,” *Publicaciones Didácticas* (2017).

⁴⁵ Crofts, “Catching Up with Europe,” 267–291.

⁴⁶ Ayodhya Prabhashini Rathnayake, “A Juvenile Homicide: A Criminological Summary of the Murder of James Bulger,” *Sri Lanka Journal of Forensic Medicine, Science & Law* 14, no. 2 (2023): 24–27, <https://doi.org/10.4038/sljfmsl.v14i2.7935>.

⁴⁷ Bateman, *Criminalising Children for No Good Purpose*, 9.

regulation, and decision-making – such as the prefrontal cortex – do not reach maturity until the late teenage years or even beyond. This knowledge challenges traditional punitive approaches and calls into question the legitimacy of low MACR thresholds. The evidence further supports the conclusion that children under the age of 14 should not be held criminally responsible, as they lack the full cognitive and emotional maturity necessary to understand and internalize the consequences of their actions in a meaningful legal sense.

The review of international legal instruments reflects a growing consensus among global and regional bodies: justice systems must be child-sensitive, rehabilitative in nature, and grounded in the principle of the best interests of the child. While these instruments often refrain from imposing a fixed minimum age, many now emphasize that the MACR must not be set too low and recommend a minimum of 14 years. These legal developments illustrate an important normative shift from retribution toward rehabilitation and child protection. In conclusion, the analysis highlights that jurisprudence does not necessarily follow the recommendations of other disciplines regarding this issue. While international recommendations suggest a higher age threshold, they do not directly refer to the positions formulated in neuropsychology (or other fields of science). Observing the criminal age limit regulations in the aforementioned continental and common law systems, it becomes evident that most national legislations certainly do not take into account the current neuropsychological findings available to date.

The consequences of premature criminalization are far-reaching. Subjecting children to formal criminal proceedings at an early age can stigmatize them, disrupt their psychological development, and increase the risk of recidivism. It undermines the rehabilitative potential of juvenile justice and may lead to a lifelong entanglement with the criminal justice system. Instead of promoting accountability, it fosters alienation, exclusion, and entrenched criminal identities. Ultimately, children must not be held responsible for actions they are biologically, psychologically, and socially unprepared to fully understand. The law must reflect this fundamental reality. A justice system that respects the developmental vulnerabilities of children, and prioritizes their rehabilitation over retribution, is not only more humane – it is also more effective in promoting social reintegration and reducing youth crime in the long term.