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THE NEUROSCIENCE OF TRAUMA SUPPORTS DIMINISHED CAPACITY AS A NUANCED APPROACH TO THE ICC CASE OF AN EX-CHILD SOLDIER

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The 2021 conviction of former child soldier Dominic Ongwen by the International Criminal Court (ICC) for war crimes committed as an adult commander in the Lord's Resistance Army in Uganda raises questions about the ICC's approach to mental illness. During his trial, the defendant unsuccessfully raised defenses of insanity and duress, based on his kidnapping into the militant group as a child. The court rejected not only those defenses, but also the claim that he had mental illness at all, in spite of his traumatic childhood. Integrating scientific research, we argue that both the ICC and the defense failed to address the neuroscience of trauma. But even if this evidence had been presented, the ICC's all-or-nothing approach to mental illness would still leave outwardly functional trauma survivors in legal limbo. On the one hand, such survivors may be too functional for the insanity defense. At the same time, their activated fight-or-flight responses may cause them to perceive and react to threats in ways that the duress defense would not excuse as reasonable. We propose that sentence mitigation based on diminished mental capacity provides a

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just and nuanced approach to the dilemma of a trauma victim turned perpetrator.

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INTRODUCTION

The 2021 International Criminal Court's (ICC) conviction of Ugandan ex-child soldier Dominic Ongwen for war crimes has evoked serious moral questions.¹ In particular, the egregious nature of his kidnapping as a child and forced service in the Lord's Resistance Army (LRA) raises the issue of trauma and how it might bear on legal culpability for Mr. Ongwen's adult actions when he continued fighting with the group.

Unfortunately, the trial at the ICC did not engage extensively with the neuroscience of trauma and how it should affect criminal liability. Legal systems, the conceptual ancestors of the ICC, have historical roots in antiquity, a time well before modern notions of neurobiology existed.² Perhaps reflective of this juxtaposition and a certain resistance to change, the *Ongwen* court rejected an insanity defense by the accused and held that he did not have a mental disorder.³

Two notable factors underlie the ICC's failure to pay adequate heed to Mr. Ongwen's past sufferings. The first is the failure of the defense and the ICC to discuss the neuroscience of early life trauma and its known biological aftereffects. Without this information, the court appeared reluctant to accept that Mr. Ongwen lived with the psychiatric effects from his enslavement as a child soldier. Second, the ICC took a rigid, binary approach to mental health. This all-or-nothing formulation strands former child soldiers in legal purgatory. These individuals are too functional to be legally insane but too traumatized to act fully rationally to claim the duress defense.

A proposed solution to these two problems—which accounts for childhood trauma—would be the doctrine of diminished mental capacity, which would recognize the shades of gray in this case. Breaking free of the insane-or-not framework enshrined in the Rome Statute, the treaty

¹ See Prosecutor v. Ongwen, Case No. ICC-02/04-01/15, Trial J. (Feb. 4, 2021), https://www.icc-cpi.int/CourtRecords/CR2021_01026.PDF [<https://perma.cc/E3NG-QGUN>].

² Compare Judy Siegel, *Hebrew U. Archeologists Find Patriarchs-era Cuneiform Tablet Similar to Hammurabi's Code*, JERUSALEM POST (Jul. 10, 2010) (stating that the Code of Hammurabi dates back to the 18 century BCE and “consists of 282 laws with scaled punishments”); with Philip Veith, Koichi Watanabe, Mohammadali M. Shoja, Christa Blaak, Marios Loukas & R. Shane Tubbs, *Humphrey Ridley (1653-1708): Forgotten Neuroanatomist and Neurophysiologist*, 28 CLINICAL ANATOMY 12 (2015) (noting “the initial advancement of science in the 16th and 17th centuries” and describing a scientist in this period as “one of the first anatomists to focus on the structure of the brain as an indicator of its function”).

³ *Ongwen*, Case No. ICC-02/04-01/15 ¶ 2580.

establishing the ICC,⁴ a sentencing decision recognizing diminished mental capacity would provide some relief in light of past trauma while still holding war criminals liable for their actions.

Part I provides background on the well-studied effects of early life trauma, with emphasis on how it might affect a survivor's behavior. Next, a brief background is provided on the ICC and the availability of mental health defenses in Part II. Part III reviews the *Ongwen* case and its outcome, with an emphasis on the mental health evidence presented. Finally, Part IV discusses sentence mitigation under the European model of diminished mental capacity. This approach provides a biologically rooted, nuanced approach to the difficult question of victim-perpetrators and a departure from the ICC's all-or-nothing approach to mental illness.

I. THE SCIENCE OF TRAUMA AND CHILDHOOD SOLDIERS

Part I explores the aftereffects of early life trauma with an emphasis on the neuropsychiatric factors underpinning changes in the survivor's behavior. This focus on the potential biology behind Mr. Ongwen's life course will provide a framework with which to analyze his behavior, facilitating a nuanced discussion of the law in Part IV, *infra*.

Before beginning, several caveats should be highlighted. The first is that neuroscience provides an ample body of work to draw from, and this Article does not purport to be comprehensive. Rather, the aim is to provide a curated selection of studies that highlight the effects of childhood trauma. Second, science is and should be a skeptical discipline. While the studies below point toward biological and functional impairment secondary to trauma, the science is far from settled. Practitioners in law and medicine would be wise to exercise caution when transposing scientific papers to the courtroom.⁵

A. TRAUMA DISORDERS

On a macroscopic level, trauma can lead to psychosocial impairments resulting in diagnoses such as post-traumatic stress disorder (PTSD).⁶ It

⁴ Rome Statute of the International Criminal Court art. 1, July 17, 1998, 2187 U.N.T.S. 90 [hereinafter Rome Statute].

⁵ See Octavio S. Choi, *What Neuroscience Can and Cannot Answer*, 45 J. AM. ACAD. PSYCHIATRY & L. 278 (2017) (urging caution regarding "brain overclaim syndrome" that overplays the significance of brain studies for legal implications).

⁶ AM. PSYCHIATRIC ASS'N, DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS, § F43.10 (5th ed. text revision 2022) [hereinafter DSM-5-TR].

should be acknowledged that trauma-related research, reviewed in the aggregate below, often does not fit neatly within diagnostic criteria.⁷ That said, a diagnosis like PTSD can be a clinical tool for conceptualizing trauma related disorders.

The Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR),⁸ describes the clinical manifestations of PTSD. These include recurrent intrusive memory of events, distressing dreams, negative alterations in cognitions and mood associated with traumatic events, marked alterations in arousal and reactivity such as irritability, angry outbursts, and reckless behavior with the duration of symptoms lasting longer than one month.⁹

Another diagnostic entity is complex PTSD (cPTSD), which combines PTSD criteria with additional symptoms such as interpersonal volatility and poor impulse control. Herman initially described cPTSD in the 1990s, as a result of prolonged or repeated early life adversity.¹⁰ Though not recognized as a diagnosis in the DSM-5, the International Classification of Disease (ICD-11) first listed cPTSD as a valid diagnosis in 2018.¹¹ Ford wrote that what is now known as cPTSD has been associated with early childhood trauma and war-atrocity participation.¹² Also noted as prevalent symptoms were “problems with rage, overwhelming distress, amnesia, a sense of being

⁷ Criteria for specific conditions such as PTSD or major depressive disorder are laid out in the DSM-5 TR and allow for diagnosis of mental health conditions based on symptoms. *See generally id.* These criteria provide a unified standard throughout the United States. Darrel A. Regier, Emily A. Kuhl & David J. Kupfer, *The DSM-5: Classification and Criteria Changes*, 12 *WORLD PSYCHIATRY* 92, 92 (2013) (noting that the DSM “provides the standard language by which clinicians, researchers, and public health officials in the United States communicate about mental disorders”).

⁸ DSM-5-TR, Ch. 7, *supra* note 6.

⁹ *Id.* § F43.10.

¹⁰ Judith Lewis Herman, *Complex PTSD: A Syndrome in Survivors of Prolonged and Repeated Trauma*, 5 *J. TRAUMATIC STRESS* 377, 377 (July 1992).

¹¹ WORLD HEALTH ORG., INTERNATIONAL CLASSIFICATION OF DISEASES 11TH REVISION (ICD-11), 6B41 (2022); *see also* Marylène Cloitre, *ICD-11 Complex Post-Traumatic Stress Disorder: Simplifying Diagnosis in Trauma Populations*, 216 *BRITISH J. OF PSYCHIATRY* 129 (2020) (“ICD-11 complex post-traumatic stress disorder (PTSD) is a new disorder”), *id.* (noting that the ICD-11 was “released in 2018”).

¹² Julian D. Ford, *Disorders of Extreme Stress Following War-Zone Military Trauma: Associated Features of Posttraumatic Stress Disorder or Comorbid but Distinct Syndromes?*, 67 *J. CONSULTING & CLINICAL PSYCHOLOGY* 3, 3 (1999). Ford describes cPTSD under its older acronym, DESNOS, which is equivalent to cPTSD. *See* Herman, *supra* note 10, at 377 (equating disorders of extreme stress not otherwise specified, “DESNOS” with cPTSD).

damaged, guilt and shame, the belief that no-one understands, distrust, relational conflict or avoidance, hopelessness, and loss of meaning in life.”¹³

B. TRAUMA-INDUCED CHANGES TO PSYCHOLOGICAL FUNCTION

Building on these diagnoses, psychological testing can reveal behavioral changes in survivors of early life trauma. As discussed below, psychological changes include increased anger and aggression, hyperarousal, impulsivity, impaired decision making, and reduced moral capacity.

Research on former child soldiers has shown the propensity to anger and aggressivity. For example, PTSD symptoms in Congolese and Ugandan child soldiers were also associated with feelings of revenge and less reconciliation.¹⁴ Another study looked at war trauma in northern Uganda and found a positive association between the status of a child soldier and the preliminary diagnosis of both PTSD and cPTSD. The same study showed that those with cPTSD had markedly increased episodes of “uncontrollable anger.”¹⁵ This may correlate with the studies conducted by Hecker, Hermenau, Maedl, Elbert, and Schauer, which found an increase in appetitive aggression in combatants recruited as child soldiers.¹⁶

This aggression may stem from a reduction in inhibitory control, which refers in part to the ability to control emotions and impulses without externalizing behaviors. One study evaluated trauma-exposed youth and found that amongst those who were violence-exposed there was a significant reduction in inhibitory control and cognitive flexibility.¹⁷ Another study

¹³ Ford, *supra* note 12, at 7.

¹⁴ Christophe Pierre Bayer, Fionna Klasen & Hubertus Adam, *Association of Trauma and PTSD Symptoms with Openness to Reconciliation and Feelings of Revenge Among Former Ugandan and Congolese Child Soldiers*, 298 J. AM. MED. ASS’N 555, 555 (2007).

¹⁵ Siobhan Murphy, Ask Elklit, Sarah Dokkedahl & Mark Shevlin, *Testing the Validity of the Proposed ICD-11 PTSD and Complex PTSD Criteria Using a Sample from Northern Uganda*, 7 EUR. J. PSYCHOTRAUMATOLOGY 1, 7 (2016).

¹⁶ Tobias Hecker, Katharin Hermenau, Anna Maedl, Thomas Elbert & Maggie Schauer, *Appetitive Aggression in Former Combatants—Derived From the Ongoing Conflict in DR Congo*, 35 INT’L J. L. & PSYCHIATRY 244, 244 (2012); *see also id.* at 245 (“[A]ppetitive aggression can be defined as perceiving aggressive behavior towards others as positive and fascinating even without gaining any external benefit.”).

¹⁷ Rosanne Op den Kelder, Alithe L. Van den Akker, Hilde M. Guerts, Ramón J. L. Lindauer & Geertjan Overbeek, *Executive Functions in Trauma-Exposed Youth: A Meta-Analysis*, 9 EUR. J. PSYCHOTRAUMATOLOGY 1, 1 (2018).

identified a direct association between emotional abuse and hyperarousal.¹⁸ Hyperarousal is a state of particular sensitivity to various stimuli, which could be either threatening or non-threatening, with less discrimination between the two and a greater likelihood of misunderstanding threats.¹⁹ In other words, hyperarousal makes someone more likely to see threats where one may not exist.²⁰

Another study documented impaired decision-making among childhood adversity survivors. Birn, Roeber, and Pollak ran a gambling experiment which found that those with greater early life adversity made their bets more quickly and also chose bets with a lower likelihood of winning.²¹ The same study found an association between the level of childhood adversity and risky behavior later in life, such as driving without a seatbelt or not seeking medical attention.²² The same study also correlated the greater propensity for poor decision making with neuroimaging findings (discussed *infra*).

Outside of PTSD, another form of mental illness to consider in trauma-exposed individuals is antisocial personality disorder (ASPD).²³ ASPD is associated with an egregious disregard for the rights of others with a lack of remorse.²⁴ It is also linked to significant criminality and violence. A study of

¹⁸ Maria Rosaria Anna Muscatello, Amelia Rizzo, Laura Celebre, Carmela Mento, Gianluca Pandolfo, Clemente Cedro, Fortunato Battaglia, Rocco Antonio Zoccali & Antonio Bruno, *The Wounds of Childhood: Early Trauma Subtypes, Salience and Hyperarousal in a Sample of Adult Psychiatric Patients*, 66 INT'L J. SOC. PSYCHIATRY 1, 1 (2019).

¹⁹ *Id.* at 4 (“Hyperarousal would represent the expression of an activation/deregulation of the biological stress response, associated with heightened threat sensitivity and chronic, involuntary and exaggerated reaction to stimuli, even in conditions of non-imminent danger.”).

²⁰ *Id.*

²¹ Rasmus M. Birn, Barbara J. Roeber & Seth D. Pollak, *Early Childhood Stress, Exposure, Reward Pathways, and Adult Decision Making*, 114 PROC. NAT'L ACAD. SCI. 13549, 13550 (2017).

²² *Id.*

²³ See DSM-5 TR, *supra* note 6, § F60.2 (defining antisocial personality disorder as a “pervasive pattern of disregard for and violation of the rights of others” with criteria including failure to conform to norms and laws, deceitfulness, impulsivity, disregard for safety, irresponsibility, and lack of remorse when hurting others).

²⁴ *Id.*

865 people in a correctional system found that physical and sexual abuse were associated with a diagnosis of ASPD.²⁵

C. TRAUMA-INDUCED CHANGES TO BRAIN FUNCTION SEEN VIA FUNCTIONAL MAGNETIC RESONANCE IMAGING (fMRI)

As shown above, decision-making in the context of trauma symptoms appears to be severely impaired. This Article will now discuss the biological basis of these differences, starting with studies based on neuroimaging.

Birn, Roeber, and Pollak, who found that early life trauma correlated with poorer performance on a betting game and greater risk-taking behavior as an adult, were able to correlate these findings with visualized changes in brain function.²⁶ They used functional magnetic resonance imaging (fMRI), an imaging modality that measures blood flow to different parts of the brain as a proxy for brain activity.²⁷ Their study showed less activation in certain areas of the brain known as the putamen and insula, which is associated with risk-taking behavior as an adult.²⁸

Part of the psychiatric dysfunction may be linked to aberrant amygdala function. The amygdala are bilateral structures (found on both sides of the brain) that play a role in mediating fear and vigilance.²⁹ Conversely, a sub-region of the prefrontal cortex appears to play a role in regulating (i.e., dampening) fear through a process known as “extinction.”³⁰ Thus, there is a reciprocal relationship between the amygdala, which recognizes fearful circumstances, and the prefrontal cortex, which regulates that fear.

Multiple studies using fMRI have found that childhood trauma can disrupt this regulatory circuit. One study found that “uncoupling the amygdala” and a subregion of the prefrontal cortex “may result in impaired modulation of negatively valenced emotional responses, including a failure

²⁵ Matt DeLisi, Alan J. Drury & Michael J. Elbert, *The Etiology of Antisocial Personality Disorder: The Differential Roles of Adverse Childhood Experiences and Childhood Psychopathology*, 92 *COMPREHENSIVE PSYCHIATRY* 1, 1–2 (2019).

²⁶ Birn et al., *supra* note 21, at 13550–52.

²⁷ *Id.*

²⁸ *Id.* at 13551.

²⁹ Bradley R. Postle, *ESSENTIALS OF COGNITIVE NEUROSCIENCE* 488 (2015).

³⁰ *Id.* at 493 (“During fear conditioning, activity in vmPFC [ventromedial prefrontal cortex] is suppressed relative to baseline; during extinction learning, activity in vmPFC increased”).

to extinguish fear responses in the absence of threat.”³¹ Another study of trauma-exposed youth found greater amygdala activity compared to non-trauma-exposed peers, difficulty regulating emotional conflict, and lower sensitivity to rewards in decision making.³²

The functional changes seen on imaging can be stratified by the complexity of trauma symptoms. A study comparing those with PTSD and cPTSD against a control group showed increased activation of the amygdala and the insula (a nearby brain structure) when presented with pictures of “threat faces” (as compared with faces bearing a neutral expression) in both the PTSD and cPTSD group.³³ Additionally, the cPTSD group showed even greater activation than the PTSD group, suggesting that complex PTSD may have a neurobiological distinctness from PTSD, with greater fear activation.³⁴

In addition to decision making and fear, the amygdala³⁵ and prefrontal cortex³⁶ are also associated with morality. Specifically, reduced connectivity of the amygdala and subregions of the prefrontal cortex parts of the brain has

³¹ Ryan J. Herringa, Rasmus M. Birn, Paula L. Ruttle, Cory A. Burghy, Diane E. Stodola, Richard J. Davidson & Marilyn J. Essex, *Childhood Maltreatment Is Associated with Altered Fear Circuitry and Increased Internalizing Symptoms by Late Adolescence*, 47 PROC. NAT’L ACAD. SCI. 19119, 19121 (2013); see also *Emotional Valence*, AM. PSYCH. ASS’N, DICTIONARY OF PSYCHOLOGY, <https://dictionary.apa.org/emotional-valence> [<https://perma.cc/67GN-3AR6>] (defining the concept of emotional valence).

³² Hilary A Marusak, Kayla R. Martin, Amit Etkin & Moriah E. Thomason, *Childhood Trauma Exposure Disrupts the Automatic Regulation of Emotional Processing*, 40 NEUROPSYCHOPHARMACOLOGY 1250, 1250 (2015).

³³ Richard A. Bryant, Kim L. Felmingham, Gin Malhi, Andrew Elpiniki & Mayuresh S. Korgaonkar, *The Distinctive Neural Circuitry of Complex Posttraumatic Stress Disorder During Threat Processing*, 51 PSYCHOLOGICAL MEDICINE 1121, 1121 (2021).

³⁴ *Id.*

³⁵ Jack van Honk, David Terburg, Estrella R. Montoya, Jordan Grafman, Dan J. Stein & Barak Morgan, *Breakdown of Utilitarian Moral Judgement After Basolateral Amygdala Damage*, 119 PROC. NAT’L ACAD. SCI. 31, 31 (2022) (“Our data suggest that value-based decisions to sacrifice another human for ‘the greater good’ critically depend on the [basolateral amygdala.]”).

³⁶ Jorge Moll, Roland Zahn, Ricardo de Oliveira-Souza, Frank Krueger & Jordan Grafman, *The Neural Basis of Human Moral Cognition*, 6 NATURE REVS. 799, 807 (2005) (“[L]esions of the ventral sectors of the [prefrontal cortex] would lead to severe social behavioural changes due to disruption of social-emotional contextual knowledge, with early lesions having more drastic effects as they impair the learning of moral values.”).

been associated with psychopathy.³⁷ Studies have found a connection between childhood trauma and poor connectivity between these two regions, the amygdala, and parts of the prefrontal cortex.³⁸ Thus, there may be an implication of dysfunctional moral decision-making in some childhood trauma survivors associated with the dysregulation between the amygdala and prefrontal regions of the brain.

In summary, the amygdala and prefrontal cortex work together to modulate fear and morality, and their ability to do so is disrupted in those with trauma history. This leaves trauma survivors living in greater fear, with diminished self-regulation (i.e., the key to morality) of these primal impulses.

D. TRAUMA-INDUCED CHANGES TO NEUROTRANSMITTERS

Along with changes to brain function, there are changes to the system of neurotransmitters that modulate the various psychological symptoms associated with trauma. Neurotransmitters are small molecules that allow communication within the brain, as well as between the brain and other parts of the body via the nervous system. De Bellis has summarized these changes.³⁹ One change is increased levels of corticotrophin releasing hormone (CRH), also called corticotrophin releasing factor (CRF), in those with histories of childhood trauma.⁴⁰ Stress triggers release of CRH/CRF,

³⁷ R. J. R. Blair, *The Amygdala and Ventromedial Prefrontal Cortex in Morality and Psychopathy*, 11 *TRENDS COGNITIVE SCI.* 387, 391 (2007) (noting that “disruption in the amygdala and [ventromedial prefrontal cortex] in psychopathy means that moral and other forms of reinforcement-based decision making are disrupted”); *see also id.* at 387 (“Psychopathy is a developmental disorder that involves emotional dysfunction, characterized by reduced guilt, empathy and attachment to significant others, and antisocial behavior including impulsivity and poor behavioral control.”).

³⁸ *See* Josh M. Cisler, *Childhood Trauma and Functional Connectivity Between Amygdala and Medial Prefrontal Cortex: A Dynamic Functional Connectivity and Large-Scale Network Perspective*, 11 *FRONTIERS SYS. NEUROSCIENCE* 1, 7 (2017), (connectivity “between the amygdala and [medial prefrontal cortex] . . . was negatively correlated with the continuous emotional abuse”); *see also* Rasmus M Birn, Rémi Patriat, Mary L. Phillips, Anne Germain & Ryan J. Herringa, *Childhood Maltreatment and Combat Post-Traumatic Stress Differentially Predict Fear-Related Fronto-Subcortical Connectivity*, 31 *DEPRESSION & ANXIETY* 880, 885 (2014) (childhood trauma questionnaire scores “negatively predicted connectivity from left and right amygdala to mPFC”).

³⁹ Michael D. De Bellis & Abigail Zisk, *The Biological Effects of Childhood Trauma*, 23 *CHILD ADOLESCENT PSYCHIATRY CLIN N. AM.* 185, 185 (2014).

⁴⁰ *Id.* at 190 (noting that spinal fluid “CRF levels are higher in adults with childhood trauma histories”).

which in turn triggers release of other neurotransmitters.⁴¹ Part of this cascade includes release of norepinephrine (also known as noradrenaline), mediated by a brain region called the locus coeruleus (which is involved in “fight-or-flight or freeze response”).⁴² Thus, increased CRH/CRF—linked to childhood trauma—may lead to increased activation of a person’s primal fight-or-flight instincts. A study done under the auspices of the U.S. Department of Veterans’ Affairs found that after exposure to trauma, the brain becomes more sensitive to changes in levels of norepinephrine, with PTSD symptom levels directly correlated with concentrations in spinal fluid.⁴³

Another relevant neurotransmitter is serotonin, and deficiencies in the brain’s serotonin system have been associated with depressive, anxious, and aggressive symptoms.⁴⁴ Lower levels of serotonin receptors (which modulate the effects of serotonin) have been associated with those who have experienced trauma at an earlier age, as well as greater PTSD symptoms.⁴⁵ Other studies have linked dysfunction of the serotonergic system to surviving child abuse.⁴⁶

⁴¹ *Id.* at 188 (“Activation of the LHPA axis triggers the hypothalamus to secrete corticotropin-releasing hormone (CRH). This neuropeptide, also called corticotropin-releasing factor (CRF), is a key mediator of the stress response.”).

⁴² *Id.* at 197.

⁴³ Rebecca C. Hendrickson, Murray A. Raskinda, Steven P. Millarda, Carl Sikkemac, Garth E. Terrya, Kathleen F. Pagulayana, Ge Lib & Elaine R. Peskind, *Evidence for Altered Brain Reactivity to Norepinephrine in Veterans with a History of Traumatic Stress*, 8 *NEUROBIOLOGY STRESS* 103, 103 (2018).

⁴⁴ De Bellis & Zisk, *supra* note 39, at 198–99 (“[D]eferred levels of serotonin activity have been associated with mental health problems, such as depression and anxiety . . . as well as with aggressive behaviors . . .”).

⁴⁵ James W. Murrough, Christoph Czermak, Shannan Henry, Nabeel Nabulsi, Jean-Dominique Gallezot, Ralitzia Gueorguieva, Beata Planeta-Wilson, John H. Krystal, John F. Neumaier, Yiyun Huang, Yu-Shin Ding, Richard E. Carson & Alexander Neumeister, *The Effect of Early Trauma Exposure on Serotonin Type 1B Receptor Expression Revealed by Reduced Selective Radioligand Binding*, 68 *ARCH. GEN. PSYCHIATRY* 892, 892 (2011).

⁴⁶ Pascal Ibrahim, Daniel Almeida, Corina Nagy & Gustavo Turecki, *Molecular Impacts of Childhood Abuse on the Human Brain*, 15 *NEUROBIOLOGY STRESS*, no. 100343, May 20, 2021, at 6–7.

Yet another neurotransmitter system affected by trauma is that driven by dopamine, which mediates reward, cognition, and emotion.⁴⁷ As Torrisi, Leggio, Drago, and Salomone summarize, the dysfunction of this symptom in trauma survivors also appears to be associated with decision-making,⁴⁸ aggression, and impulsivity.⁴⁹

Trauma is thus associated with derangements in the brain's system of neurochemical signaling. These changes could impact the body's fight-or-flight instincts, as well as trigger depressive, anxious, and even aggressive symptoms.

E. TRAUMA-INDUCED CHANGES TO THE BRAIN'S ELECTRICAL FUNCTIONING

Further trauma-linked changes have been seen in the brain's electrical signals, which are key to the brain's function.⁵⁰ These electrical changes can be captured by an electroencephalogram (EEG). A group of researchers used an EEG during a test of impulsivity in childhood trauma survivors and found a decrease in activity of structures within the frontal lobe, which are important for impulse control.⁵¹

A review of EEG-based studies in PTSD found a link to right versus left brain asymmetry.⁵² The authors of the study go on to state that, as a result of

⁴⁷ Sebastiano Alfio Torrisi, Gian Marco Leggio, Filippo Drago & Salvatore Salomone, *Therapeutic Challenges of Post-traumatic Stress Disorder: Focus on the Dopaminergic System*, 10 FRONTIERS PHARMACOLOGY, no. 404, Apr. 17, 2019, at 2 (explaining dopamine "exerts profound influences over several physiological functions including reward, cognition and emotional processes").

⁴⁸ *Id.* at 5 (dopamine-driven dysfunction "may also be involved in the decision-making/reward connection, and . . . cognitive dysfunctions characterizing PTSD").

⁴⁹ *Id.* at 6 (dopamine "dysfunction might have a critical role in the development of aggressive and/or dysfunctional impulsive behavior exhibited by PTSD patients").

⁵⁰ See Giorgia Guglielmi, *A new way to capture the brain's electrical symphony*, NATURE (Sept. 19, 2018), <https://www.nature.com/articles/d41586-018-06694-6> [<https://perma.cc/QR6R-PF65>] (noting ongoing scientific efforts to decipher "how the brain's cells work together to transform a system of electrical pulses into thoughts, actions and emotions").

⁵¹ Sungkean Kim, Ji Sun Kim, Min Jin Jin, Chang-Hwan Im & Seung-Hwan Lee, *Dysfunctional Frontal Lobe Activity During Inhibitory Tasks in Individuals with Childhood Trauma: An Event-Related Potential Study*, 17 NEUROIMAGE: CLINICAL 935, 935 (2018).

⁵² Mamona Butt, Elizabeth Espinal, Robin L. Aupperle, Valentina Nikulina & Jennifer L. Stewart, *The Electrical Aftermath: Brain Signals of Posttraumatic Stress Disorder Filtered Through a Clinical Lens*, 10 FRONTIERS PSYCHIATRY, no. 368, May 2019, at 22.

this asymmetry, “it is possible that right parietal dysfunction contributes to or reflects this generalized hypervigilance and threat overattribution.”⁵³

In a similar vein, a study found an association between childhood trauma, lability of mood (i.e., tendency for mood swings), and electrical activity across the middle region of the brain in a subset of readings known as the beta frequency range.⁵⁴ The same study noted that “relations among childhood trauma, emotional problems, and beta activity could be explained by hyperarousal.”⁵⁵

All three of these studies reinforce the notion that childhood trauma survivors can live in a hyper-aroused state, with greater mood fluctuation and impaired decision-making capabilities.

F. SUMMARY OF THE NEUROSCIENCE OF TRAUMA

Read together, a collection of scientific evidence reveals behavioral and functional changes that appear linked to early life trauma. These measurable changes include greater indicia of impulsivity and aggression, differences in brain function (particularly in the amygdala, which regulates fear), alterations in neurotransmitter systems favoring fight-or-flight activation, and changes in the brain’s electric circuitry associated with self-regulation and threat recognition. This data can be summarized as psychiatric dysfunction leaving trauma survivors in a primal, amped-up state of defensiveness and calling into question their ability to control their responses to environmental stimuli.

G. LIVING WITH TRAUMA-LINKED PSYCHIATRIC ILLNESS

Lastly, while the constellation of symptoms associated with trauma is large, these symptoms need not be totally debilitating. In other words, trauma-linked psychiatric illness does not necessarily render a person completely non-functional.

For example, one study looked at social support among those with cPTSD. The authors found (amongst a sample of 94), that 41.5% were

⁵³ *Id.*

⁵⁴ Min Jin Jin, Ji Sun Kim, Sungkean Kim, Myoung Ho hyun & Seung-Hwan Lee, *An Integrated Model of Emotional Problems, Beta Power of Electroencephalography, and Low Frequency of Heart Rate Variability After Childhood Trauma in a Non-Clinical Sample: A Path Analysis Study*, 8 FRONTIERS PSYCHIATRY, no. 314, Jan. 2018, at 6–7.

⁵⁵ *Id.* at 7.

married or cohabiting and 27.7% were employed.⁵⁶ This suggests some level of social and work functionality amongst complex trauma survivors. Providing a more granular view of employment in this population, a group of researchers surveyed employment-related symptom burden among patients with PTSD and cPTSD at a mental health rehabilitation clinic. They found that 79.4% of those with PTSD and 63.6% of those with cPTSD had a work capacity of at least 6 hours per day.⁵⁷ This contrasts with their finding that 86.4% of those with cPTSD and 66.7% of those with PTSD have some level of work incapacitation.⁵⁸ Taken together, these findings (of impairment but some ability to work amongst trauma survivors) might suggest an intermediate level of impairment.

Likewise, another study surveyed Vietnam veterans with PTSD (rated severe or very severe) and found that while 69.5% did not work, 16.3% worked full-time, and with another 14.2% working part-time.⁵⁹ Additionally, a correlation between symptom severity and probability of working was found.⁶⁰ Given that those were severe cases of PTSD, one might argue *a fortiori* that among lower levels of PTSD, a greater level of functionality might be seen.

The emerging picture is thus not black or white, but rather nuanced. While trauma clearly has significant effects on a survivor's cognition and ability to function, these changes are not absolute. Merely asking if someone can work or otherwise live "normally" would therefore be inadequate to gauge their level of trauma-linked mental illness.

⁵⁶ Natalie Simon, Neil P. Roberts, Catrin E. Lewis, Marieke J. van Gelderen & Jonathan I. Bisson, *Associations Between Perceived Social Support, Posttraumatic Stress Disorder (PTSD) and Complex PTSD (CPTSD): Implications for Treatment*, 10 EUR. J. PSYCHOTRAUMATOLOGY, no. 1573129, Feb. 13, 2019, at 4.

⁵⁷ Lorena Brenner, Volker Köllner & Rahel Bachem, *Symptom Burden and Work-Related Impairment Among Patients with PTSD and Complex PTSD*, 10 EUR. J. PSYCHOTRAUMATOLOGY, no. 16994766, Nov. 27, 2019, at 7.

⁵⁸ *Id.* at 6.

⁵⁹ Mark W. Smith, Paula P. Schnurr & Robert A. Rosenheck, *Employment Outcomes and PTSD Symptom Severity*, 7 MENTAL HEALTH SERV. RSCH. 89, 95 (2005).

⁶⁰ *Id.* at 94 (“[T]here may be a link between higher [symptom] scores and a lower probability of work.”).

II. THE ICC AND MENTAL HEALTH DEFENSES

A. BACKGROUND OF THE ICC

The ICC was created by the Rome Statute in 2002,⁶¹ and serves as a court of last resort for the prosecution of the four core international crimes when national judicial systems cannot or will not investigate them.⁶² While the United States initially signed the treaty in 2000, American support was withdrawn in 2002.⁶³ Nonetheless, over 120 countries are members,⁶⁴ and the ICC's website (as of April 2022) lists on its docket 31 cases and 17 investigations,⁶⁵ including the situation in the Ukraine.⁶⁶

B. THE INSANITY DEFENSE AT THE ICC

Article 31(1)(a) of the Rome Statute provides for an insanity defense where the accused "suffers from a mental disease or defect that destroys that person's capacity to appreciate the unlawfulness or nature of his or her conduct, or capacity to control his or her conduct to conform to the requirements of law."⁶⁷ If successful, the insanity defense eliminates criminal liability.⁶⁸

The textual requirement that capacity be destroyed differs from, for example, the more nebulous lack of substantial capacity of the Model Penal Code's insanity provision.⁶⁹ One scholar has commented that the requirement

⁶¹ Rome Statute, *supra* note 4, art. 1.

⁶² *Q&A: The International Criminal Court and the United States*, HUMAN RTS. WATCH (Sep. 2, 2020, 12:00 AM), <https://www.hrw.org/news/2020/09/02/qa-international-criminal-court-and-united-states> [<https://perma.cc/MBY5-PG4P>] (describing the ICC as "a court of last resort").

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ *Cases*, INT'L CRIM. CT. (Apr. 5, 2022), <https://www.icc-cpi.int/Pages/cases.aspx> [<https://perma.cc/5B5Z-9LTW>].

⁶⁶ *Situations Under Investigations* INT'L CRIM. CT. (May 8, 2022), <https://www.icc-cpi.int/pages/situation.aspx> [<https://perma.cc/RRE3-2A62>].

⁶⁷ Rome Statute, *supra* note 4, art. 31(1)(a).

⁶⁸ *Id.* art. 31(1) (listing defenses by which "a person shall not be criminally responsible").

⁶⁹ MODEL PENAL CODE § 4.01(1) (AM. L. INST., Proposed Official Draft 1962) ("A person is not responsible for criminal conduct if at the time of such conduct as a result of mental disease or defect he lacks substantial capacity either to appreciate the criminality [wrongfulness] of his conduct or to conform his conduct to the requirements of law.") (brackets in original).

of “destruction” of capacity places severe limits on the defense: “The parsimonious approach of Article 31(1)(a) of the ICC Statute is as close as can be got to a total rejection of an insanity defense.”⁷⁰

C. THE DURESS DEFENSE AT THE ICC

The duress defense at the ICC is set forth in Article 31(1)(d) of the Rome Statute. Like the insanity defense, it abrogates criminal liability.⁷¹ The elements of the duress defense at the ICC are (1) the accused’s conduct was caused by duress caused by a threat of “imminent death or continuing or imminent serious bodily harm” against the accused or another person; (2) the accused acts reasonably to avoid this threat; and (3) the accused does not intend to cause harm greater than the one avoided.⁷²

The requirement of proportionality has drawn scholarly criticism as being onerous and raising difficult questions of comparing harms.⁷³ For comparison, the Model Penal Code’s definition of duress requires an accused person to show their actions were “coerced . . . by the use of, or a threat to use, unlawful force against his person or the person of another, that a person of reasonable firmness in his situation would have been unable to resist.”⁷⁴

D. DIMINISHED CAPACITY AND SENTENCING MITIGATION

If an accused is convicted, the ICC’s Rules of Procedure and Evidence provide that the court should consider circumstances such as “substantially diminished mental capacity or duress” during the sentencing phase.⁷⁵ Per ICC precedent, these mitigating factors need only be proven by “balance of probabilities,” while aggravating factors must be proven beyond a reasonable doubt.⁷⁶

⁷⁰ John Tobin, *The Psychiatric Defence and International Criminal Law*, 23 MED., CONFLICT & SURVIVAL 111, 121 (2007).

⁷¹ Rome Statute, *supra* note 4, art. 31(1).

⁷² *Id.* art. 31(1)(d).

⁷³ Benjamin J. Risacher, Note, *No Excuse: The Failure of the ICC’s Article 31 “Duress” Definition*, 89 NOTRE DAME L. REV. 1403, 1404 (2014).

⁷⁴ *Id.* at 1410 (citing MODEL PENAL CODE § 2.09(1) (AM. L. INST., Official Draft 1985)).

⁷⁵ INT’L CRIM. CT. R.P. & EVID. 145(2)(a)(i).

⁷⁶ Prosecutor v. Katanga, Case No. ICC-01/04-01/07, Sentence, ¶ 34 (May 23, 2014), https://www.icc-cpi.int/CourtRecords/CR2015_19319.PDF [<https://perma.cc/64V9-C7JG>].

III. ONGWEN CASE BACKGROUND AND SYNOPSIS

A. THE LORD'S RESISTANCE ARMY

The Lord's Resistance Army (LRA) is a rebel group dating back to the 1980s in Northern Uganda.⁷⁷ It is estimated that the LRA has kidnapped and indoctrinated over 20,000 children since its inception.⁷⁸ Indoctrination included psychological manipulation such as isolation and promotion of the Acholi language over abductees' mother tongues.⁷⁹ At times, the LRA's indoctrination included frank violence, as seen in a quote from a young survivor of LRA abduction: "If one child tries to escape, they catch him, put him in the middle of a group of children and make the children kill the child with a piece of wood and say if you try to escape we will kill you like that."⁸⁰ These child soldiers are then forced to serve the LRA, including in combat. Adolescent female abductees are forced into sex slavery.⁸¹ A Human Rights Watch 2003 report noted that, as part of its operations, the LRA "kills and mutilates civilians, abducts children and adults, loots homes and public buildings, and burns villages and fields."⁸² The LRA is currently led by Joseph Kony. The United States is, as of 2021, offering a \$5 million reward for information leading to Mr. Kony's capture.⁸³

⁷⁷ Jocelyn TD Kelly, Lindsay Branham & Michele R. Decker, *Abducted Children and Youth in Lord's Resistance Army in Northeastern Democratic Republic of the Congo (DRC): Mechanisms of Indoctrination and Control*, 10 CONFLICT & HEALTH, no.11, May 18, 2016, at 1.

⁷⁸ *Id.* at 2.

⁷⁹ *Id.*

⁸⁰ *Id.* at 4 tbl.1

⁸¹ *Stolen Children: Abduction and Recruitment in Northern Uganda*, HUMAN RTS. WATCH (Mar. 28, 2003), <https://www.hrw.org/report/2003/03/28/stolen-children/abduction-and-recruitment-northern-uganda> [<https://perma.cc/HHX5-7DBY>].

⁸² *Id.* ("At age fourteen or fifteen, many are forced into sexual slavery as 'wives' of LRA commanders and subjected to rape, unwanted pregnancies, and the risk of sexually transmitted diseases, including HIV/AIDS.")

⁸³ *US Embassy in Sudan offers millions for Joseph Kony leads*, AL TAGHYEER (Dec. 3, 2021), <https://www.altaghyeer.info/en/2021/12/03/us-embassy-in-sudan-offers-millions-for-joseph-kony-leads> [<https://perma.cc/QV6P-93FP>].

B. ONGWEN OVERVIEW

Uganda's government referred the LRA to the ICC in 2003, leading the Office of the Prosecutor to open an investigation in 2004.⁸⁴ This led to the issuance of arrest warrants for LRA leaders, including Joseph Kony and Dominic Ongwen.⁸⁵ Following his arrest, Mr. Ongwen was transferred to the Hague, Netherlands in 2015.⁸⁶

Mr. Ongwen's trial began in December 2016 and included over 100 witnesses called by the prosecution, defense, and the victims' representatives.⁸⁷ In February 2021, the ICC convicted Mr. Ongwen of sixty-one charges committed between July 2002 and December 2005.⁸⁸ These offenses included LRA attacks on civilians, sexual offenses (e.g., rape, forced marriage, forced pregnancy), and child conscription.⁸⁹ He was sentenced to twenty-five years' imprisonment in May 2021 and will receive credit for four years spent in custody during the trial period.⁹⁰

C. THE ICC'S REJECTION OF MR. ONGWEN'S MENTAL HEALTH CLAIMS

Mr. Ongwen raised two defenses with mental health considerations. The first was insanity under Article 31(a) of the Rome Statute. The defense called two Ugandan psychiatrists to testify,⁹¹ while the prosecution called three mental health experts.⁹²

The defense argued that the accused's psychiatric issues stemming from his "forced abduction"⁹³ limited his ability to control his actions. This trauma

⁸⁴ , *Case Information Sheet: Situation in Uganda*, The Prosecutor v. Dominic Ongwen, INT'L CRIM. CT. (Jul. 2021), <https://www.icc-cpi.int/CaseInformationSheets/ongwenEng.pdf> [<https://perma.cc/A47V-KGCG>].

⁸⁵ *Id.*

⁸⁶ *Id.*

⁸⁷ *Id.*

⁸⁸ *Id.*

⁸⁹ *Id.*

⁹⁰ *Id.*

⁹¹ Prosecutor v. Ongwen, Case No. ICC-02/04-01/15, Trial Judgment, ¶ 2450 (Feb. 4, 2021), <https://www.icc-cpi.int/court-record/icc-02/04-01/15-1762-red> [<https://perma.cc/76QB-7H5A>] [hereinafter Trial J.].

⁹² *Id.* ¶ 2456 & n.6685 (delineating prosecution and defense mental health experts).

⁹³ Prosecutor v. *Ongwen*, Case No. ICC-02/04-01/15, Public Redacted Version of 'Corrected Version of "Defence Closing Brief", filed on 24 February 2020,' ¶ 537 (Mar. 13,

started with Mr. Ongwen’s abduction, somewhere between the ages of eight to ten.⁹⁴ One incident, relayed via testimony of a defense psychiatrist, involved a young Mr. Ongwen being forced to skin a young escaped LRA abductee alive, disembowel them, and hang up their entrails.⁹⁵ Another incident involved an early experience after abduction where Mr. Ongwen witnessed the killing of four boys who attempted to escape.⁹⁶

Defense psychiatrists diagnosed the accused with dissociative identity disorder, dissociative amnesia, post-traumatic stress disorder (PTSD), depressive disorder, and symptoms of obsessive-compulsive disorder.⁹⁷ Insofar as these might support the insanity defense, counsel focused primarily on dissociation and depersonalization.⁹⁸ Under this theory, there were allegedly two personalities, which made it impossible for Mr. Ongwen to control his actions.⁹⁹

However, the ICC rejected the defense’s insanity argument due to dissociation and multiple personalities, finding that he did not have a mental disorder. In particular, the judges noted that a severe level of psychiatric illness would likely also be accompanied by functional impairment.¹⁰⁰

2020), https://www.icc-cpi.int/CourtRecords/CR2020_00998.PDF [<https://perma.cc/MV36-XG9D>] [hereinafter Defense Closing Br.] (“The Defense Experts concluded that Mr. Ongwen’s mental illnesses stemmed from his forced abduction by the LRA around 1987, continued through his years in the LRA and still plague him today.”).

⁹⁴ Prosecutor v. *Ongwen*, Case No. ICC-02/04-01/15, Trial Tr., 97 (Nov. 18, 2019), https://www.icc-cpi.int/sites/default/files/Transcripts/CR2019_07146.PDF [<https://perma.cc/ER35-UL29>] (direct examination of defense witness Dr. Akena).

⁹⁵ *Id.* at 104 (“He was actually forced to skin one of those guys alive, the person was tied up and they skinned this person, removed his gut and put it up on, on trees.”).

⁹⁶ *Id.* at 97.

⁹⁷ Trial J., *supra* note 91, ¶ 2525.

⁹⁸ Prosecutor v. *Ongwen*, Case No. ICC-02/04-01/15, Closing Statements, 72–73 (Mar. 12, 2020), https://www.icc-cpi.int/sites/default/files/Transcripts/CR2020_01343.PDF [<https://perma.cc/D8LG-TKWC>] [hereinafter Defense Closing Statement] (arguing that Ongwen’s “involvement in the crimes of the LRA [were] under the influence of dissociative episodes”).

⁹⁹ Defense Closing Br., *supra* note 93, ¶ 537 (“[H]is involvement in crimes of the LRA [were] under the influence of dissociative episodes, including dissociative amnesia and two distinct personalities, (Dominic A and Dominic B) which made it impossible for him to control his actions.”).

¹⁰⁰ Trial J., *supra* note 91, ¶ 2521 (“[M]any of the actions undertaken by Dominic Ongwen . . . involved careful planning of complex operations, which is incompatible with a mental disorder.”); *see also id.* ¶ 2520 (“[T]he large number of witnesses who described

Additionally, the ICC declined to rely on the defense experts' conclusions, finding numerous methodological issues with them.¹⁰¹

Second, the defense raised a defense of duress—which implicates mental health insofar as mental illness affects perceptions of risk and harm—based on fear of leaving the LRA. They argued that Mr. Ongwen “was under a continuing threat of imminent death and serious bodily harm from [LRA Leader Joseph] Kony and his controlling, military apparatus.”¹⁰² As with the insanity defense, the ICC rejected the duress defense. The court found that the accused was not subject to imminent threat, had disobeyed Mr. Kony in the past, and had a “realistic possibility” of leaving the LRA.¹⁰³

Lastly, the court rejected a defense integrating insanity and duress. Mr. Ongwen argued that the “cumulative effect from the combination of lack of capacity to appreciate the unlawfulness of the conduct or to conform the conduct to the law and the extensive threats and coercion” might constitute its own defense.¹⁰⁴ However, the court did not accept this theory and instead found the two defenses contradictory, as insanity requires inability to control behavior, whereas duress presumes an ability to control one's acts.¹⁰⁵

At the sentencing stage, the ICC similarly rejected the defense's claim that Mr. Ongwen should receive mitigation based on diminished mental capacity. Specifically, the court said, “The Chamber reiterates that the evidence establishes clearly that at all relevant times for the charges, Dominic Ongwen did not suffer from a mental disease or defect. The evidence indicates that he was in full possession of his mental faculties and exercised his role as commander effectively.”¹⁰⁶ Thus at sentencing, the ICC adopted the approach to mental illness that it did in the guilt phase: mental illness and functionality were incompatible.

Dominic Ongwen's actions and interactions . . . did not provide any testimony which could corroborate a historical diagnosis of mental disease or defect.”).

¹⁰¹ *Id.* ¶ 2527 (“A number of issues . . . affect the reliability of the evidence provided . . . to the extent that the Chamber cannot rely on it.”).

¹⁰² Defense Closing Br., *supra* note 93, ¶ 680.

¹⁰³ Trial J., *supra* note 91, ¶ 2668.

¹⁰⁴ Defense Closing Br., *supra* note 93, ¶ 729.

¹⁰⁵ Trial J., *supra* note 91, ¶ 2671.

¹⁰⁶ Prosecutor v. Ongwen, Case No. ICC-02/04-01/15, Sentence, ¶ 100 (May 6, 2021), <https://www.icc-cpi.int/court-record/icc-02/04-01/15-1819-red> [https://perma.cc/59FE-42RJ].

D. THE (LIMITED) DISCUSSION OF CHILDHOOD TRAUMA AND NEUROSCIENCE

While mental health experts did discuss trauma, the discourse of experts on both sides remained generalized and avoided exploration of the specific evidence neuroscience has to offer on trauma survivors.¹⁰⁷

Indeed, though it may have behooved them, the defense did not offer much in the way of biological evidence relating to trauma. The direct testimony of Dr. Akena was initially promising in this respect, as he noted, “So somebody gets exposed to an event that either threatens their life or their existence and this has been shown to lead to biochemical—biological changes in the brain, and then that then leads to physical manifestation of the disease in some people.”¹⁰⁸ Alas, this potentially illuminating information was not elaborated upon. Subsequent testimony did not illuminate *what* the changes mentioned are and *how* they might affect the behavior of a former child soldier.¹⁰⁹

Similarly, the second defense psychiatrist, Dr. Ovuga, made only general reference to the question of biology and trauma. On cross-examination regarding Mr. Ongwen’s alleged dissociative amnesia: “There is bio -- neurobiological basis for it. So, they don’t just forget, but the structural biochemical and physiological changes that trauma imposed on their brains are the ones responsible for their forgetfulness”¹¹⁰ As in the case of the other defense expert, Dr. Ovuga did not expound on this testimony.

Perhaps ironically, the most testimony on the neuroscience of trauma came from a *prosecution* witness, Ugandan psychiatrist Dr. Catherine Abbo.

¹⁰⁷ *E.g.*, Prosecutor v. Ongwen, No. ICC-02/04-01/15, Trial Tr., 19 (Mar. 19, 2018) (direct examination of prosecution witness Dr. Mezey discussing PTSD), https://www.icc-cpi.int/sites/default/files/Transcripts/CR2018_04200.PDF [<https://perma.cc/ZX9D-5MVH>].

¹⁰⁸ Prosecutor v. Ongwen, No. ICC-02/04-01/15, Trial Tr., 70 (Nov. 18, 2019) (direct examination of defense witness Dr. Akena), https://www.icc-cpi.int/sites/default/files/Transcripts/CR2019_07146.PDF [<https://perma.cc/45FL-N7PG>].

¹⁰⁹ *See id.*; *see also* Prosecutor v. Ongwen, No. ICC-02/04-01/15, Trial Tr. 9 (Nov. 19, 2019) (day two of direct examination of defense witness Dr. Akena, who testified that the trauma of abduction could cause “long-lasting damage to somebody’s brain” without further details), https://www.icc-cpi.int/sites/default/files/Transcripts/CR2019_07316.PDF [<https://perma.cc/75WU-QMTU>].

¹¹⁰ Prosecutor v. Ongwen, Case No. ICC-02/04-01/15, Trial Tr., 38 (Nov. 22, 2019) (cross examination of Dr. Akena), https://www.icc-cpi.int/sites/default/files/Transcripts/CR2019_07320.PDF [<https://perma.cc/R9V4-PALN>].

She engaged in some discussion of the neurobiology of trauma, including hyperactivation of the amygdala (the “fear part” of the brain) and shrinkage of the hippocampus (which helps encode memories).¹¹¹ Dr. Abbo also noted that noradrenaline (also known as norepinephrine) levels might be elevated in trauma survivors, though she did not specify how this might affect day-to-day living.¹¹² And when she was asked to say more about the neuroscience of psychiatric illness, Dr. Abbo gave a general answer without elaborating on her earlier testimony,¹¹³ and the discussion later shifted to dissociative disorder.¹¹⁴

Dr. Abbo also discussed the hormone dopamine, which she referred to as a “happy hormone” due to its role causing people to feel “energised” and “rewarded.”¹¹⁵ This discussion led to Dr. Abbo’s statement that it “looks like . . . the happy hormones or neurotransmitters were higher and they balanced out the destructive hormones” associated with trauma. She also offered neuroscience to state that the frontal lobe of Mr. Ongwen’s brain was exercising control over the fear-associated amygdala.¹¹⁶ In this respect, then, the sparse discussion of trauma neurobiology favored the prosecution.

E. APPEALS PROCEEDINGS

At time of writing, Mr. Ongwen’s appeal is pending. Forensic psychiatrist Dr. Mario Braakman filed an *amicus* brief that did raise questions of trauma and impaired functioning.¹¹⁷ On February 14, 2022, he presented testimony to the ICC Appeals Chamber where he focused on his

¹¹¹ Prosecutor v. Ongwen, Case No. ICC-02/04-01/15, Trial Tr., 26 (Mar. 26, 2018) (direct examination of Dr. Catherine Abbo), https://www.icc-cpi.int/sites/default/files/Transcripts/CR2019_05485.PDF [<https://perma.cc/9BCZ-NRVC>].

¹¹² *Id.* Cf. Part II.D *supra* note 42 (noting that norepinephrine is associated with fight-or-flight responses).

¹¹³ Trial Tr., *supra* note 111, at 27.

¹¹⁴ *Id.* at 28.

¹¹⁵ Prosecutor v. Ongwen, Case No. ICC-02/04-01/15, Trial Tr., 50 (Mar. 27, 2018) (cross-examination of Dr. Catherine Abbo), https://www.icc-cpi.int/sites/default/files/Transcripts/CR2019_05492.PDF [<https://perma.cc/AU2A-6R4N>].

¹¹⁶ *Id.* at 51.

¹¹⁷ Prosecutor v. Ongwen, No. ICC-02/04-01/15, Submission of observations pursuant to rule 103 of the Rules of Procedure and Evidence, as amici curiae on transcultural forensic psychiatric issues, 7 (Dec. 23, 2021), https://www.icc-cpi.int/CourtRecords/CR2021_11926.PDF [<https://perma.cc/4QQX-Y42A>].

recommendation for further psychiatric examination and the need for rehabilitation.¹¹⁸

IV. ANALYSIS AND DISCUSSION

Ongwen represents a missed opportunity to address a former child soldier's early life trauma, on both the part of the defense and the ICC itself. This puts survivors of childhood trauma in a legal limbo. Their psychiatric symptoms may not be severe enough to warrant an insanity defense, while their heightened sensitivity to threats preclude them from making the objectively rational choices required by the duress doctrine. The doctrine of diminished mental capacity would provide a solution that breaks free of the artificial and unrealistic all-or-nothing model of mental illness embraced by the ICC. Such a compromise would both recognize the trauma of being kidnapped and exposed to brutality at an early age, while also accounting for the wrongs committed by the accused as an adult.

A. A MISSED OPPORTUNITY TO DISCUSS TRAUMA AND NEUROSCIENCE

Juxtaposing the ample data on childhood trauma¹¹⁹ with the testimony offered by the defense¹²⁰ in *Ongwen* highlights the missed opportunity in this case to understand Mr. Ongwen's behavior based on neuroscience. As noted above, there exists a robust body of relevant evidence that trauma, particularly trauma experienced in early life, is linked with greater impulsivity, hyperarousal into a fight-or-flight state, reduced ability to exercise self-control, as well as a greater propensity to infringe on the rights of others (antisocial conduct). All of these would impair Mr. Ongwen's ability to control his behavior and his conduct (as required by the insanity defense), as well as his appreciation of threats (part of the duress defense).

These psychological observations are supported by neuroscience. This includes functional changes seen on brain imaging, changes to the hormonal neurotransmission system within the brain and body, and observable changes to the brain's electrical activity. Indeed, the comment by a prosecution witness about Mr. Ongwen's "happy hormone" dopamine counteracting

¹¹⁸ Prosecutor v. Ongwen, No. ICC-02/04-01/15, Trial Tr., 86 (Feb. 14, 2022), https://www.icc-cpi.int/Transcripts/CR2022_01004.PDF [<https://perma.cc/C39N-NWLM>].

¹¹⁹ Part I, *supra*.

¹²⁰ Part III.D *supra*.

neurotransmitter abnormalities caused by his trauma¹²¹ could also have been rebutted by evidence that dopamine dysfunction is associated with trauma.¹²²

In light of the relevant science, then, it seems perplexing that the defense did not explore the rich corpus of neuroscientific evidence regarding trauma. This is especially true given that the court itself suggested openness to such evidence, during the prosecution's case no less. Presiding Judge Schmitt offered the following observation during the testimony of the prosecution's witness:

[T]he better you understand the biological roots that might have an influence on mental illnesses, the more objective your profession would be . . . you must have an interest to make [your assessment] as objective as possible, and that would help you perhaps, that would be my understanding, if you understood better the medical and the biological implications . . .¹²³

It is hard to imagine a clearer indication from the Presiding Judge that the court would welcome expert testimony on the biology of mental illness. This, at least to one judge, would come across as "objective" and could have bolstered that case.

Instead, the defense focused on dissociation, likely in pursuit of acquittal under the Art. 31(a) insanity defense. While dissociation, as advocated by the defense, can support the insanity defense,¹²⁴ the evidence in Mr. Ongwen's case did not show this.¹²⁵ For whatever reason, the more compelling evidence of the neuroscience of trauma was not presented to the court, in favor of a more far-fetched theory based on multiple personalities.¹²⁶

¹²¹ See Trial Tr., *supra* note 111, at 50–51.

¹²² See Torrisi et al., *supra* note 47, at 6 (indicating that dopaminergic "dysfunction is implicated in the pathophysiology of PTSD").

¹²³ Trial Tr., *supra* note 111, at 27–28 (testimony of Dr. Catherine Abbo)

¹²⁴ Omri Berger, Dale E. McNiel & Renée L. Binder, *PTSD as a Criminal Defense: A Review of Case Law*, 40 (4) J. AM. ACAD. PSYCHIATRY & L., 509, 512 (Dec. 2012) (noting cases where "PTSD phenomenon of dissociation has been successfully presented as a basis for insanity").

¹²⁵ Trial J., *supra* note 91, ¶ 2540–44 (discussing contradictions between evidence and defense's contention that defendant experienced dissociation).

¹²⁶ Trial Tr., *supra* note 110, at 31 (quoting the prosecutor calling defense experts' dissociation theory "nonsense").

B. THE ICC'S ALL-OR-NOTHING APPROACH TO MENTAL ILLNESS IS UNJUST AND PLACES TRAUMA SURVIVORS IN LIMBO

But even if Mr. Ongwen's team had invoked childhood trauma to show a certain level of psychiatric dysfunction, the ICC has used an all-or-nothing reasoning regarding both (a) the existence of mental illness in the *Ongwen* decision, and (b) the Rome Statute's approach to insanity and duress. Thus, even had the defense presented a neuroscience-based defense, doctrinal issues would likely have foreclosed it from benefiting from this evidence.

This dichotomous, black-or-white conception of mental illness contradicts the evidence and authors' clinical experience that adverse psychiatric effects of trauma such as hyperarousal and impaired decision making can co-exist with a certain, perhaps intermediate, level of functionality. Like many trauma survivors, Mr. Ongwen was able to form relationships and engage in vocational activities.¹²⁷

By basing its lay judgment of mental illness on functionality, such as Mr. Ongwen's military aptitude, the ICC has effectively exiled Mr. Ongwen to a legal purgatory. In this legal limbo, he is too functional to benefit from the ICC's statutory defenses of insanity and duress, yet still lives with the likely effects of trauma which impair his function and implicate fairness concerns.

With regard to the insanity defense, Mr. Ongwen's ability to engage in effective self-control may have been impaired given trauma-induced neuropsychiatric changes.¹²⁸ However, the high statutory bar set by Article 31(1)(a) requires destruction of those capacities, not mere impairment. Thus, with some (but not total) impairment, he would have a difficult time winning acquittal based on insanity due to intermediate impairment.

With respect to the duress defense, a former-child soldier working under the dangerous warlord Joseph Kony in the LRA, Mr. Ongwen likely had real fears about his ability to disobey orders. These fears may have been exacerbated and magnified by his childhood trauma, which can cause

¹²⁷ See Part II.F, *supra* (studies discussing varying levels of functionality among trauma survivors).

¹²⁸ See Kim et al., *supra* note 51, at 940 ("Our study provides additional evidence that childhood trauma represents an environmental risk factor for the development of impulsivity even in the nonclinical general population").

hyperactivation of the amygdala (which deal with fear),¹²⁹ and cause heightened sensitivity to threats.¹³⁰ Thus, Mr. Ongwen's *subjective* fear may have been heightened due to trauma history.

However, this subjective fear was not accounted for by the ICC's application of the duress provision of Article 31(1)(d) when it held that Mr. Ongwen was "free of threat of imminent death or imminent or continuing serious bodily harm."¹³¹ Because of the traumatic history of being kidnapped and forced to engage in brutality, Mr. Ongwen may not have possessed the clear-minded perception of threat that the Rome Statute's duress provision takes for granted. Thus, a trauma survivor's conception of what constitutes harm and its imminency may differ from that assumed by the statute, particularly in light of studies showing increased activation of the brain's threat recognition system.¹³²

The lack of nuance in the ICC's conception of mental illness and application of the statute places functional-yet-scarred trauma survivors in a gray zone. They have suffered and live with psychiatric aftereffects such as difficulty with decision-making, reduced self-control, and an over-activated threat-recognition system. Yet the ICC seems reluctant to even acknowledge the existence of such mental illness. But even if it did, survivors like Mr. Ongwen would remain locked in legal limbo by the Rome Statute's textual rigidity. On one hand, these survivors are not sick enough to warrant an insanity defense. But on the other hand, their heightened fears, augmented by trauma response, do not comport with the strict requirements of the duress defense. The way forward merits a more nuanced approach.

C. PROPOSED SOLUTION: APPLY DIMINISHED CAPACITY TO MITIGATE SENTENCING

The doctrinal purgatory created by the ICC's all-or-nothing approach to mental illness does not do justice to the medical and moral complexity posed by a former child soldier turned war criminal. A more just solution would

¹²⁹ See Herringa et al., *supra* note 31, at 19121 (maltreatment associated with dysregulation of amygdala leading to "impaired modulation of negatively valenced emotional responses, including a failure to extinguish fear responses in the absence of threat").

¹³⁰ See Butt et al., *supra* note 52, at 22 (associating right brain electrical imbalance with the fact that "individuals with PTSD have difficulty differentiating between safe and threatening cues, overestimate the probability of threatening events, and generalize threat responses").

¹³¹ Trial J., *supra* note 91, ¶ 2670.

¹³² See Butt et al., *supra* note 52.

account for adult culpability for atrocities committed by an individual whose capacity to appreciate threats and morality were impaired by years of trauma, from kidnapping to the brutality of violence. The European application of the doctrine of diminished mental capacity finds such a middle ground, moving away from the binary nature of mental illness adopted by the court.

As outlined by Sparr, the European model of diminished mental capacity can be applied as “a form of lesser legal insanity.”¹³³ Under this theory, the accused does not challenge their factual guilt, but rather argues that they should bear a lesser punishment in light of lower culpability.¹³⁴ In European countries where the doctrine is recognized, such Italy and England, diminished capacity can lead to a reduction in sentence.¹³⁵ This model has also been followed in South Africa.¹³⁶ Similarly, the International Criminal Tribunal for the former Yugoslavia (ICTY) has found that diminished mental capacity may be “raised by the defendant as a matter in mitigation of sentence.”¹³⁷ Following in the footsteps of the ICTY, the ICC’s Rule of Procedure and Evidence 145(2)(a)(i) provides for the court to take “substantially diminished mental capacity” into consideration when calculating a sentence.

The well-documented changes to neuropsychological function in survivors of childhood trauma provides ample evidence to account for substantially diminished mental capacity. From neuroanatomical changes to excess stress hormones, one can argue that Mr. Ongwen’s biological ability to reason normatively was damaged. Following this tack would allow the court to account for the shades of gray in victim-perpetrator cases like *Ongwen*.

Indeed, the doctrine of diminished responsibility would allow the ICC to move away from “or” thinking (whether his mental capacity was destroyed

¹³³ Landy F. Sparr, *Mental Incapacity Defenses at the War Crimes Tribunal*, 33 J. AM. ACAD. PSYCHIATRY & L. 59, 66 (2005). *Cf. id.* at 65 (noting that under the American, in contrast with the European, model of diminished mental capacity, “evidence of mental abnormality is admitted to negate the required state of mind or mental element of the offense charge” and is called “the *mens rea* variant”).

¹³⁴ *Id.* at 66 (“[T]he defendant claims that he is less culpable and either seeks conviction of a lesser crime or seeks to have his punishment reduced.”).

¹³⁵ *Id.*

¹³⁶ *Id.*

¹³⁷ Prosecutor v. Delalic, IT-96-21-A, Judgement, ¶ 590 (Int’l Crim. Trib. for the Former Yugoslavia, Feb. 20, 2001), <https://www.icty.org/x/cases/mucic/acjug/en/cel-aj010220.pdf> [<https://perma.cc/MH47-ZHPE>].

or not) to “and” thinking, which would simultaneously recognize both culpability and extenuating circumstances. While Mr. Ongwen’s crimes are horrific, his current sentence of 25 years would put him in his 60s upon release. Thus, a former child soldier, who has already lost years of his life, would forfeit a significant portion of his adult life as well.

D. CONSIDERATION OF A REDUCED SENTENCE DUE TO TRAUMA-LINKED DIMINISHED CAPACITY

A modest reduction in Mr. Ongwen’s sentence expands on previous scholarly proposals to doctrinally account for his traumatic childhood. Pangalangan has raised the possibility of the “rotten social background” defense, shoehorned into the ICC’s insanity provisions.¹³⁸ However, this proposal would lead to a full acquittal, which may be difficult to digest given the scale of Mr. Ongwen’s actions. A diminished mental capacity reduction in sentence would balance Mr. Ongwen’s adult criminal liability with the traumas he endured as a child kidnapped and conscripted into a militant group.

Perhaps more importantly, a neuroscience-based diminished mental capacity defense adds a new layer to the discussion. For example, Windell Nortje has raised the question of “whether Ongwen has ever been in a position to legitimately distinguish between right and wrong” due to his traumatic experiences.¹³⁹ Nortje (like the defense team in *Ongwen*) does not, however, offer a plausible mechanism as to *how* Mr. Ongwen’s trauma caused diminished mental capacity.

Adding psychology and neurobiology to the conversation does offer such an explanation as to how and why Mr. Ongwen’s mental capacity was likely diminished due to trauma incurred as a kidnapped child soldier. Such evidence, with the objective imprimatur of science, gives the ICC justification to act on the laudable inclination of Pangalangan and Nortje and grant some measure of relief to a victim turned perpetrator.

¹³⁸ See Raphael Lorenzo Aguilin Pangalangan, *Dominic Ongwen and the Rotten Social Background Defense: The Criminal Culpability of Child Soldiers Turned War Criminals*, 33 AM. UNIV. INT’L L. REV. 3, 605, 626 (2018) (“It is submitted that an actor’s rotten social background may constitute a mental disturbance that destroys his capacity to appreciate the unlawfulness of his own conduct”).

¹³⁹ Windell Nortje, *Victim or Villain: Exploring the Possible Bases of a Defence in the Ongwen Case at the International Criminal Court*, 17 INT’L CRIM. L. REV. 186 (2017).

CONCLUSION

We offer a scientifically based and doctrinally conservative approach to the thorny question of how to account for the childhood trauma when a victim becomes the victimizer. Applying diminished capacity at sentencing accounts for the commission of atrocities while recognizing that prior trauma has likely altered Mr. Ongwen's brain. These changes include decreased decision-making capacity paired with increased impulsivity, aggression, and heightened sensitivity to threat. Notably, our proposal fits within the clear text of the ICC's rules, follows the precursor ICTY's course regarding diminished capacity as grounds for sentence mitigation, and does not require legal gymnastics.¹⁴⁰ Finally, we note that science is always evolving and that some in the field of neuroscience caution against over-extrapolation from studies to the legal context.¹⁴¹ Nonetheless, justice requires a balancing of factors here with the best evidence available at present. That evidence shows that childhood trauma changes the way survivors perceive and respond to their environment, which should be accounted for by our legal systems.

¹⁴⁰ Cf. *Prosecutor v. Ongwen*, ICC-02/04-01/15A, Amicus Br. by Justice Francis M. Ssekandi, 8 (Dec. 20, 2021) (arguing that the Rome Statute, per Articles 31(3) and 21, incorporates the partial defense of diminished mental capacity under the Commonwealth common law), https://www.icc-cpi.int/sites/default/files/CourtRecords/CR2021_11724.PDF [<https://perma.cc/ZJ6X-TVUK>].

¹⁴¹ See Choi, *supra* note 5.