Chapter 1
Trauma and its Vicissitudes in Forensic Contexts: An Introduction

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On the Pervasiveness of Trauma: Its Normal and Pathologial Trajectory

Trauma is an experience that, depending on how it is defined, can be considered pervasive and ubiquitous to all human experiences, although it is not unique to human beings. In its simplest form, it is a reaction of the organism/individual to unexpected changes in its otherwise reasonably predictable environment (Hartmann, 1958; Russell, 1998) that causes a temporary or permanent disruption of functions in those affected and forces some kind of action. An example from the botanical world is of a plant whose growth may become compromised if the soil composition is changed due to lack of water or the presence of serious contaminants in the environment that challenge the plant's ability to thrive/survive. We can also find a number of examples in pet animals (like dogs) whose response to inhospitable environment that is characterized by serious and prolonged mistreatment and abuse could be one of fear of human interactions; once in that state, these animals may show antagonistic reactions to any human approaching/invading their space, which could include growling or outright vicious attack (attempts at biting to repel the object of the threat); such a maneuver can be considered more defensive than offensive in nature. It could also include a partial or total surrender out of exhaustion as if in the midst of an anaclitic depression.

In the case of humans, there are various reactions to real or perceived conditions that we may experience as threatening and unsafe. These could include physiological and psychological reactions, such as heart palpitation, sweating, tightening of

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muscles, loss of appetite, anxiety, fear, dread, panic, and all the typical range of emotions associated with PTSD. The ultimate goal of these reactions is to force us to act and to find a more secure and predictable situation; in the process, we end up developing strategies (coping schemes) that are meant to ensure that the conditions which created the threat are kept under control at whatever cost; that may also include avoiding and developing phobic reactions to any situation where the possibility of being hurt is even remotely possible. We can observe these types of reactions in a case of a child who gets badly hurt while playing with his friends, resulting in serious bruises and a broken arm; as a result, he is now forced to wear a brace that renders him unable to play for a while and thus disrupting (hopefully, only temporarily) future enjoyable outings with his friends; lingering fear may include the possibility of reinjuring the same arm or breaking the other if he is not careful enough, thus forcing the child to change the ways of interacting with the environment and friends out of the need to protect him/herself from future harms. That could mean no bicycle, no sports, no taking airplanes, or traveling in general, etc. The fear then sometimes develops into a psychological scar, representing the physical wound that, in the child's mind, could become reopened if faced with similar or remotely similar situations.

This concept of a 'psychological scar' likely to be left by the 'wounds' resulting from traumatic experiences can be more clearly seen in another example of a young man who is assaulted by three masked young men with knives in the front foyer of his building (considered a safe haven), and who threatened to do great harm to him if he did not cooperate and comply. He felt the sharp edge of these knives by his neck and thigh, while hearing/feeling the heavy breathing of these men on him, who have managed to put him in a lock hold from behind, making him unable to move freely. It was clear that they meant business. They stripped him of all his belonging (e.g., watch, cash, etc.) and then threatened to take him to a more isolated place (his own apartment) to complete their deeds. Feeling quite alone and abandoned to his own destiny, somehow he was able to escape physically unharmed, but became overwhelmed with recurrent and lingering fear that it could happen again. Most immediately, he became suspicious (hyper vigilant) about everyone he did not recognize for fear that these men, whose faces he could not see because of the masks, were still watching him to complete the job they started. His suspiciousness went as far as wondering whether someone who knew him was also involved in the assault. Even years later, he would still become overtaken by tremendous tension and trepidation whenever approaching the front of his building where it all happened. The whole experience was now engrained in his body-memory (sensory organization), which would become activated even when inside his apartment, thinking of what could have happened if they had succeeded in their goal. He was now saddled with a recurrent fear of pending danger and hyper vigilance that were generalized to other similar conditions/situations.

These last two examples represent the kind of physical and psychological impact on functioning which may result when something unexpected and dangerous happens in an individual's life that forces a reconsideration of previously safe way of dealing with the world. These types of experiences are likely to prompt necessary

changes in one's previous behavioral repertoire. We are aware that, although our reactions to disruptions and traumatic and threatening events are normally guided by the same evolutionary and biologically influenced need for self-preservation, there are specific personal qualities that determine the ultimate resolution of traumatic events. We are referring to those personal qualities that are developed in the course of our early developmental trajectory and that have been found to determine the different ways we are likely to react to stressful/threatening conditions in general (Allen & Fonagy, 2017). According to some authors, these personal qualities are developed in the context of our early attachment reactions in relationship with our caretakers (Mikulincer & Shaver, 2017).

Several scholars have taken great pains to describe the processes involved in our becoming a fully developed and capable organism able to organize, categorize, and remember experiences of things/situations that occur; this ability is expected to ensure our psychological and physical survival. There are optimal conditions for the development of these important developmental milestones. Under these conditions, the individual can typically develop a strong and solid sense of self as a secure, loved, relevant, capable, and efficacious individual; able to modulate/regulate and use emotions that are appropriate to the circumstances; able to adapt to different situations; and whose ability to think remains flexible and goal directed. That is, a well-integrated individual is expected to emerge out of an interpersonal environment where he/she is guided to venture and engage with that environment and feels protected (Ainsworth & Bell, 1970; Ainsworth, Blehar, Waters, & Wall, 1978; Mahler, Pine, & Bergman, 1975; Sullivan, 1955). However, when the interpersonal environment is not optimal, when that environment is fraught with disruptions, something else happens that has been found to disrupt development and complicate the individual's quality of life and his/her ability to develop healthy relationships.

Several studies have highlighted how different types of complicated attachments are developed as a consequence of types of environments that cause severe disruptions in interpersonal relationships with others during the early developmental process and subsequently. According to these authors, a disruption can occur at various times during the individual's developmental trajectory with different degrees of implications. The earlier and more severe the disruption, the more likely to detour and/or seriously compromise any possibility for a viable sustainability in the future for some individuals (Ainsworth & Bell, 1970; Bowlby, 1988), while for others with well-developed resilience, this effect is less disruptive and debilitating, if present at all. The development of personality characteristics and behavioral disorders (e.g., borderline personality disorders, psychopathic tendencies, etc.) have been found to be influenced by the quality of these earlier experiences (Allen & Fonagy, 2017; Garbarino, 2015), and associated with the development of different attachment constellations in these individuals (e.g., secure, avoidant, resistant, disorganized, and disordered attachments) (Ainsworth et al., 1978; Bowlby, 1988; Mikulincer & Shaver, 2017). These constellations can be described as different cognitive and affective organizations profoundly ingrained in the person's psychic structure that later guide his/her general relationship with the world (e.g., whom to trust and to fear, what situation to avoid, how to select friends and romantic partners, etc.). A

secure attachment is found in individuals who develop in the context of an environment sensitive and responsive to their needs. Someone with a secure attachment is more likely to be able to face different challenges and stresses from the environment with equanimity and a general sense that things will ultimately be okay. That is, that they do not become emotionally and cognitively disorganized, and if they do, it is only briefly. This is someone who is able to develop confidence and trust in others, and able to tolerate and engage intimacy. Several authors have elucidated the conditions (e.g., the nature/quality of the response/intervention by the caretaker during critical developmental moments) that have been found to moderate the effect of psychological injuries (or traumatic conditions) on the individual that result in the development of healthy attachment reaction (Ainsworth & Bell, 1970; Ainsworth et al., 1978; Mahler et al., 1975; Sullivan, 1955).

Someone with an *insecure attachment*, on the other hand, tends to develop a relationship style where the bond with others can become easily contaminated by fear; this is normally expressed in difficulties dealing with mixed emotions and these individuals become particularly sensitive to any real or perceived rejections. Individuals with an insecure attachment have been found to be at risk for intimate partner violence and other interpersonal difficulties (Allen & Fonagy, 2017; Almeida, Ramalho, Fernandez, & Guarda, 2019). An *avoidant attachment* is found to develop in the context of an insensitive or overly neglectful environment; those with this type of attachment are prone to denial and isolation of affect under stress. These are individuals who tend not to feel comfortable with emotions and consequently they are apt to deny their feelings, particularly in cases of negative and disruptive emotions (such as anger, fear, etc.). They are liable to have trouble with intimacy and trust, and great difficulty tolerating intense emotions; the tendency is to break away and demand distance from their partners, blaming them for becoming too clinging and demanding. They do better in situations that allow for contained, predictable, shallower, and not too intimate or intense romantic connections.

A *resistant attachment* tends to develop in the context of an insensitive or overly intrusive environment (characterized by expressed anger or passivity or passive-aggression mode). These are individuals who are very sensitive to separation, normally experienced as profound personal rejection. The tendency is then to remain emotionally removed from others based on their experience of a caretaker who was unable to be available to meet basic needs whether physical or emotional. Individuals with borderline personality organizations have been described as showing these qualities of relating (Kernberg, 1975). A *disorganized attachment* tends to develop in the context of a fearful or frightening-abusive and unpredictable and fragmented environment. These individuals tend to understand others' intentions as purposely and intentionally attempting to do them harm and hence their need to remain ready to defend themselves. There is a tendency toward dissociation. Individuals with a paranoid organization have been described as showing these qualities of relating (Kernberg, 1975). Finally, a *disordered attachment* tends to develop in the context of an absent or profoundly neglectful environment where the individual is left alone to make sense out of the world around and unable to negotiate because they have been deprived of the role model normally played by the caregiver and are left without a point of reference.

Trauma and Its Pervasive Presence in Forensic Issues

Trauma has been found to permeate the lives of many notorious criminals in our society. In Table 1.1, we can see early histories of abuse and neglect, abandonment, history of substance abuse and criminality even in parents or caretakers (an early trauma history), all suggesting the necessary conditions for the development of some types of attachment disorders preceding their history of criminality (Garbarino, 2015). To that point, we have put together a list of case studies (Chap. 21 – Trauma and Its Criminal Trajectory) of individuals who have engaged in different types of criminal acts over the years (from fraud, to serial killings, to school shootings, sexual predators, etc.), where the reader is able to look at the personal trauma histories, the types of attachments likely to have developed in these individuals, and the crimes they committed. It is clear that the different attachment styles, once developed, have been found to affect the individuals' response to future traumatic experiences; these attachment styles have been found to be intimately implicated in the development of personality disorders and many criminal behaviors (Allen & Fonagy, 2017; Garbarino, 2015; Mikulincer & Shaver, 2017).

The challenge to the forensic professional is to be able to determine the extent to which an individual's earlier attachment experience is implicated in future responses to difficult conditions (Smith & Stover, 2016) that become the subject of the assessment. This is particularly the case in view of the fact that, although traumatic conditions permeate the lives of many in our society and are inescapable components of the lives of many individuals (Richardson, Freeh, & Acierno, 2010; Rojas-Flores, Clements, Koo, & London, 2017), not everyone who has experienced early trauma ends up involved in the justice system as defendants or victims. When we consider the number of victims of assaults and random shootings in subways, movie theaters, malls, entertainment centers, school grounds, places of worship, one's communities, at a restaurant, and even at one's own living quarters (https://www.ncjrs.gov/pdffiles1/bjs/104274.pdf), it is not unusual to hear that most of us have been affected. To that, we can add anti-immigrant sentiments, racism, and discrimination that many in our society are forced to endure and the frequent acts of terrorism within the country and many parts of the world. When we consider all these threats, it may feel to many that we are not safe and should remain vigilant at all times. However, the reactions to these situations are likely to be influenced by the quality of early and subsequent personal experiences.

Statistics supporting the general sense of unsafety are found in a recent report by the Bureau of Justice Statistics (2019) that focuses on school settings. In this report, we find that there were 827,000 of total victimizations (e.g., theft and nonfatal violent victimization) at school and 503,800 total victimizations away from school among students aged 12–18; there were 153 killed or wounded in active shooting incidents at elementary and secondary schools, and 143 casualties in active school shooting incidents in postsecondary institutions. Also reported is the concern of gang activities in school, with 20% of students between the ages 12–18 reporting that they were bullied at school during the school year, and with 16% of students in grades 9–12 deciding to carry a weapon to defend themselves (e.g., a gun, knife, or

Table 1.1 Life trajectory of some of notorious/convicted criminals (created by the authors)

Name	Early history	Crime committed
Aileen Wuornos: The Florida Highway Killer	Abandoned by her mother as babies, Aileen and her brother, Keith, grew up with their grandparents Lauri and Britta Wuornos who adopted them. She believed they were her parents until the age of 11. Her biological father was Leo Pittman. He was a child molester who killed himself in prison. As a child, she claimed to have been beaten and whipped often by her grandfather. Reportedly, she was forced to lay face down and naked, telling her she was "evil," "wicked," "worthless," and that she should have never been born; that she wasn't worthy of the air she breathed. As a teenager, Aileen was known for her temper characterized by unpredictable anger outbursts and usually unprovoked. She was thrown out of parties for being vulgar, drunk, and starting fights. She performed sexual acts with boys for cigarettes and money. At age 14, she had a baby and gave him up for adoption. It was unclear who the father was. Once her grandmother died she was displaced from her grandparents' home, ending up in Florida at 16 where she began working as a prostitute. At 20, she married a 70-year-old man. The marriage lasted a month, as Aileen's husband filed for a divorce and a restraining order against her for beating him with his own cane.	Wuornos' crimes spanned from 1989 to 1990. She continued her work as a prostitute on the highways of Florida, killing seven men between ages 41–65. Aileen procured victims by hitchhiking and all were victims of opportunity. She killed her victims with multiple 0.22 caliber rounds. There were 2–9 gunshots per victim and at least three were left nude. She would leave the bodies in wooded areas near state or interstate highways. The victims' cars were left miles away from their bodies, sometimes in different counties. Money or personal belongings were stolen from almost her victims. She pleaded no contest to the murders of Dick Humphreys, Troy Burress, and David Spears and maintained that Richard Mallory had violently raped her as the reason for killing him and claimed that the others only tried to rape her. Wuornos was given three death sentences. Wuornos also pleaded guilty to the killing of Charles Carskaddon for which she received another death sentence. In 1993, she pleaded guilty to the death of Walter Jeno Antonio, and received yet another death sentence. In the case of Peter Siems, the body was never found, and she could not be tried for his murder. She was killed by lethal injection on October 9, 2002, in Florida State Prison. Arrigo and Griffin (2004), Broomfield (2014), Myers, Gooch, and Meloy (2005).

Name	Early history	Crime committed
Albert Fish	Born on May 19, 1870, in Washington, D.C., and abandoned by his parents (father ages 75 years old, and mother 32) lived in an orphanage until the age of 9 years old. Fish lived a brutal life in the orphanage. Reportedly, he was beaten regularly and exposed to sadistic acts of brutality; reportedly he was unmercifully whipped and observed other boys engaged in wrong activities. When he was only 12, he was introduced to urolagnia (drinking urine) and coprophagy (eating feces). These acts uncovered Fish's paraphilic tendencies through the humiliation of himself or his partner, and the intense sexual urges associated with the thought of urine. He later spent a great amount of his weekends lurking public baths, where he would watch other boys undressed. This uncovered his voyeuristic affinities (also known as peeping or onlooking). Fish's paraphilic impulses eventually led him to an obsession with mutilation of self and other.	Most serious criminal history started in 1919 when Fish's obsession with torture and cannibalism – eating raw meat for dinner, and occasionally feeding his children the raw meat as well – that led him to plan an actual murder. Fish molested mostly boys under the age of six. He would also expose himself to his victims. Fish often targeted vulnerable children, and paid boys to obtain other children for him. He eventually tortured, molested, mutilated, and murdered several young children. In looking for boys to torture, Albert Fish found 10-year-old Grace Budd after putting up an ad in the news in May of 1928 in the hopes of "hiring" a boy for his farm. Upon visiting the Budd family to interview their son, daughter Grace Budd fell victim to Fish at first sight. Fish seemed like the typical "loving grandfather" whom occasionally bore gifts. Grace was invited by Fish to a children's party, along with brother Edward, and the unsuspecting parents accepted. It wasn't until 6 years later that a grotesque letter sent by Fish to the Budd house described the rape, mutilation, and consumption of grace Budd, after drinking her blood. Fish was caught, arrested, and immediately began confessing to the killing, mutilation, and molestation of Grace and hundreds of other children. The jury found him sane, and guilty, and was executed by the electric chair on January 16, 1936 at Sing Prison in New York. Blanco (2017), Fink (2015), Montaldo (2018), Peters (2017), Serena (2018).

(continued)

Table 1.1 (continued)

Name	Early history	Crime committed
Charles Manson	Charles Manson was born November 12, 1934, in Cincinnati Ohio. Mother was 16 at the age of his birth and he never knew his father. His mother was described as an alcoholic and a criminal. She was arrested for armed robbery when he 9 years old forcing him to move in with his Aunt and Uncle in West Virginia. He was sold as a child by his mother for a pitch of beer, and was under the care of multiple people who all were bad experiences. He would often get into trouble at school. He engaged in petty crimes when he was younger. 1947 –at 12 years old, Manson is sent to Gibault School for stealing. Over the next 20 years he was in and out of reform schools & prison.	Manson exited his first juvenile facility at the age of 10 and attempted to live with his mother again; this was unsuccessful. His crime picked up after this event, and he was eventually sent to Indiana's' Boys School, a reformatory school where he escaped 3 days later. Manson was paroled at age 19 in 1954 but by 1961 he was serving a 10-year sentence for check forgery. 1956–1966 he was in and out of prison: Stole cars, probation revoked, pimping, stealing checks, committing crimes cross state lines. During this prison stay, he began to study various religious teachings including Scientology, as well as continue to study music. In this period, he began to desire to become a superstar and was heavily influenced by the Beatles and the effects they had on the world. Manson was released after 7 years on Parole and made his way to San Francisco. He became heavily involved in psychedelic drugs and the Counter Culture (Hippie) movement, which provided him with a platform to attract his followers. Carried out more than 30 killings with his followers First known murder: Gary Hinman on July 25, 1969. August 9, 1969, Manson told followers to kill actress Sharon Tate (who was pregnant at the time) & her husband director Roman Polanski, along friend visitors who were at the house. Sentenced to death. When the death penalty was ruled unconstitutional in 1972, he was resentenced to life. Died in prison on November 19, 2017 A&E (2018), Altman (2015), Bullis (1985), Charles Manson: Helter skelter and beyond (n.d.), Charles Manson (1995), Guinn (2014), Linder (2007).

Colin Ferguson	Born on January 14th, 1958 in Kingston, Jamaica His father, Von Herman Ferguson, was a wealthy and influential pharmacist who was described by Time magazine as “one of the most prominent businessman in Jamaica.” Lived luxuriously in a large home with nannies and housekeepers. Described as a well-rounded student that played sports such as cricket and soccer while also performing at the top of his class consistently. In 1978, Ferguson’s father died in a car crash and his mother died of cancer a few years later. This destroyed his family’s fortune and also deeply disturbed Ferguson Ferguson left for America in 1982 with a Visitor’s Visa. According to family and friends, he had a hard time dealing with racism as well as not getting any meaningful jobs. Married Audrey Warren in May 13, 1986; that marriage was soon in trouble as they fought a lot and sometimes police were involved Got divorced 2 years later, Colin stating they had “different social views,” while Audrey stating that he was “too aggressive and antagonistic.” He attended Nassau Community College where he was disciplined for being over aggressive towards a teacher. He then transferred to Adelphi University where he regularly spoke out against coexistence of blacks and whites and called for a revolution. He also accused those around him of being racist. He was suspended in June 1991 for yelling, “Kill everybody white!” and threatening violence against those that spoke against him.	In 1992, his ex-wife filed a complaint stating Ferguson pried open the trunk of her car. In February of 1992, Ferguson was arrested and charged for harassing a woman on the subway. The woman, who was white, tried to sit next to Ferguson when he started to scream at her and press his elbow and leg against her. Police came to the scene and pinned him down; he attempted to escape the police while shouting for help. Claimed police brutality which was investigated and then dismissed. Moved to California in April 1993 for a new career, but was unsuccessful after applying for several jobs. However, he purchased a pistol there which would become the crime weapon. Moved back to New York City a month later. According to his landlord and neighbors, he was becoming increasingly mentally unstable. He began talking about a revolution in the future where black people would rise up and strike their oppressors. On December 7, 1993, Ferguson purchased a ticket at Penn Station and boarded the third car of an eastbound LIRR 5:33 train. He sat at the back of the train car with his handgun and a bag filled with about 160 rounds of ammunition. As the trains was approaching the Merillon Avenue Station, Ferguson got up, drew his gun, and started to open fire at random. It was said that he would approach each person for a brief second before firing and moving forward. He was quoted as saying, “I’m going to get you” over and over again while walking down the aisle. He told the judge and the media that he wanted to call a number of witnesses including a handwriting expert and President Clinton. Had several bizarre defenses such as a computer chip was implanted in his brain by the government, a white man stole his gun while on the train, etc. Was convicted on February 17, 1995. He received a sentence of 315 years and 8 months to life. Blanco (n.d.) Eugene, Or.: Wipf and Stock. Ewing and McCann (2006), Grier and Cobbs (2000), Ramsland (2005)

a club). Additionally, 6% of 12–18-year-old students reported being called hate-related words. There was also evidence of a high percentage of teachers in elementary and secondary public school who reported being threatened with injury or being physically attacked, with 6% having been physically attacked by students from their school in 2015–16, an increase from previous years.

These findings reflect similar trends reported in such sources as National Center for Mental Health and Youth Violence Prevention (2012), JAMA Pediatrics (2013), and U.S. Department of Health and Human Services (2012). According to these sources, 60% of adults reported experiencing abuse and other difficult family circumstances during childhood; 26% of children in the U.S. witnessed or experienced a traumatic event before age four; nearly 14% of children repeatedly experienced maltreatment by a caregiver; 13% reported being physically bullied, 1 in 3 reporting that they have been emotionally bullied; 39% of children aged 12–17 reported witnessing violence; 17% reported being victims of physical assault; and 8% reported being the victim of sexual assault. It was also highlighted that 60% of 17-year-old youth or younger reported having been exposed to crime, violence, and abuse, either directly or indirectly; and that 30% of elementary and middle school children in inner city communities have witnessed stabbing, with 26% having witnessed a shooting. An important finding in these statistics is that of those young children exposed to five or more significant adverse experience in the first 3 years of childhood were estimated to face the following challenges:

- A 76% likelihood of having one or more delays in their language and emotional or brain development
- Fifteen times more likely to attempt suicide
- Three–four times more likely to become alcoholic
- More likely to:
  - Develop a sexually trasmitted disease
  - Inject drugs
  - Be absent from work
  - Experience depression
  - Have serious job problems (recognizetrauma.org, 2019).

Regarding possible trauma experience in terms of domestic and relational violence, there was a serious concern of victimizations reported by the National Coalition Against Domestic Violence (2017), which also summarized findings from several sources, discussed by Javier and Herron (2018). We find in these reports that 1 in 3 women and 1 in 4 men experience intimate partner physical violence, intimate partner sexual violence, and/or intimate partner stalking in their lifetime; that 1 in 4 women and 1 in 7 men experience severe physical intimate partner violence in their lifetime; and that 1 in 7 women and 1 in 18 men have been stalked by an intimate partner during their lifetime to the point which they felt very fearful or believed that they or someone close to them would likely be harmed or killed. The report also highlights that, on average, nearly 20 people per minute are being physically abused by an intimate partner in the United States; and that for a single year, this equates to more than ten million women and men. In the end, the core finding in this report is

that across all types of violence examined, lifetime estimates for women ranged from 11.4–29.2% for rape; 28.9–58% for sexual violence other than rape; and 25.3–49.1% for combined rape, physical violence, and/or stalking by an intimate partner. For men, lifetime estimates ranged from 10.8–33.7% for sexual violence other than rape; and 17.4–41.2% for combined rape, physical violence, and/or stalking by an intimate partner (Black et al., 2011; Walters, Chen, & Breiding, 2013).

The scientific community has been hard at work attempting to identify the various responses likely to emerge as a consequence of these and similar traumatic events. They found that these types of events result in changes in our internal and external environments at the cellular, physiological, and neurological levels (Fan et al., 2009; Kemeny, 2003; Solms & Turnbull, 2002); and that they also result in changes in behavioral and psychological patterns (Allen & Fonagy, 2017) that emerge as a function of temporary or prolonged traumatic conditions. Considering the range of responses discussed by these scholars, the greatest and most difficult challenges for the forensic professional who is asked to provide an assessment of psychological damage in relationship to conditions that become the subject of a legal action are: (a) How to identify the specific causal link(s) in relationship to a specific event or a series of events/incidents that are found to cause physical and/or psychological damage to an individual; (b) to be able to tease out from previous traumatic reactions the individuals may have experienced in reference to different sets of circumstances, only those that apply to the situation that is the object of the assessment; and (c) to be able to do so sufficiently clear to be of help to the court, that is ultimately responsible to make a reasonably accurate adjudication of damage or culpability.

Trauma and Its Trajectory

One of the most important considerations to understanding trauma and its consequences is that once it occurs, it leaves an indelible mark in those affected, physically and psychologically (Russell, 1998). Something fundamentally happens to the individual cognitively and affectively as a result of exposure to a severe traumatic experience. That includes a fundamental shift in perceptions where the world is not experienced the same as before the trauma. This realization is reflected in the diagnostic descriptions included in the DSM nomenclature of trauma-related disorders, particularly regarding PTSD (APA, 2013). Evolutionary scholars have contributed a great deal to our understanding of that process and the mechanism solidly engrained in the human organism to ensure its physical and psychological survival (Belsky, 2019). Some of the components of this mechanism have been described in reference to domestic violence (Javier & Herron, 2018) and, in that context, the work of Tomkins (1962, 1978) and Solms and Turnbull (2002) provide an important and relevant framework. We will now expand a bit more on that subject, particularly on the link to the physiological and psychological changes that are normally part of the reaction to trauma.

Our point of departure is the fact that we are biologically equipped, and guided by an evolutionary necessity, to organize our experiences with and reactions to the world around us and retain them in memory to be able to compare among future experiences with similar valence. This organization takes place initially *sensorially* and then more *cognitively* when our neurological development becomes more sophisticated (i.e., when the myelination of neurons is complete, which makes them more efficient in retaining information and data from the environment). The extent to which we can pay attention to, and keep in mind, what is happening in our surroundings will ensure our ability to survive and thrive in that environment. This is particularly important in the context of environments that are inhospitable and threatening to the organism.

Our purpose in including this information in the introductory chapter is (1) to highlight both the normal, abnormal, and complex nature of the way we automatically react when confronted with situations in our environment that are experienced/perceived as threatening physically and/or psychologically; (2) to highlight that these reactions are initially adaptive for the most part but that they can become counterproductive or maladaptive when deployed inappropriately to situations/individuals not justified by the condition 'on the ground'; and (3) to help the forensic professional recognize that once developed, these reactions are organized into shortcuts or personal scripts that become difficult to tease out when attempting to assess a traumatic reaction (PTSD) to specific situations assumed to have caused harm to the individual that we are asked to assess. The chapters included in this volume are meant to provide the readers with an examination of some of the typical conditions that require the involvement of a forensic professional and where variations in trauma manifestations and their consequences may need to be considered and factored in the forensic assessment.

We start our discussion by looking at the series of physiological mechanisms that are normally (automatically) activated when we are faced with dangerous and threatening situations, specifically designed for the protection and preservation of the organism. This follows a discussion of the more psychological and, at times, less obvious reactions to stressful conditions that have been associated with traumatic situations (e.g., guilt, disgust, shame, anger, etc.) (Allen & Fonagy, 2017; Friedman, Resick, & Keane, 2007). The consideration of more psychological and internally based reactions is not clearly listed under PTSD in the DSM-5, although they were in previous editions of the DSM. Nevertheless, we find it critical to understand the more complex trauma reactions we observe in some of the forensic clients for whom a forensic assessment is requested.

The Physiological Face of Trauma

An environment found to be implicated in traumatic condition is experienced as stressful and out of the ordinary because it triggers the kind of physiological and evolutionarily based response associated with danger to the organism. We have a

sophisticated and complex nervous system that allows us not only to organize but also to categorize the various information we derive from our environment (and registered in and by our senses) and that we need to survive. When dealing with a threatening situation, we have a mechanism (the *autonomic nervous system*- or ANS) that alerts us to be prepared for action (Nevid, Rathus, & Greene, 2018). That is done through increased physiological activity, which involves two interrelated systems: The sympathetic (SNS) and the parasympathetic nervous systems (PNS). The operation of the first system (SNS) allows us to be prepared to deal with any threat/danger we may experience in our internal or external environment. In that context, there is gland activation (responsible for hormonal secretions) and a series of increased involuntary physiological activities (such as heart rate, breathing, salivation, digestion, muscle tone, dilation of pupils, etc.). These reactions have been found to be implicated in the development of indigestion in some situations and/or emotional responses, such as fear and anxiety (Nevid et al., 2018); in fact, there is evidence that the organism will shut down any function that will divert energy to the threat at hand, and activates only those operations that are necessary for preparing a response. Fear and anxiety serve as *amplifiers* to communicate the seriousness of the situation at hand and thus function as an important signal for the individual to draft a response that also alleviates those affects.

Under normal conditions, our body is expected to return to its pre-traumatic condition through the operation of our *parasympathetic nervous system*, whose function is to normalize physiological operations. As a result, the heart rate, breathing, muscle tone, salivation, digestion, etc., are returned to their normal levels, thus allowing the whole system to relax; it allows the body then to engage in replenishing its energy reserves (Nevid et al., 2018).

This whole process is efficiently synchronized by The *General Adaptation Syndrome (GAS*), which is responsible for organizing all these functions so that the SNS and PNS are adapting at the level required by the level and nature of the threats to the organism. This is accomplished through the operation of three basic and interrelated stages (alarm reaction, resistance, and exhaustion) which function in concert to ensure its ultimate goal, the preservation and protection of the organism. The *alarm reaction stage* is characterized by heightened sympathetic activity, during which our body is mobilized to prepare for the challenge triggered by the threat experience. This is followed by the *resistance stage*, or an adaptation stage, where the organism remains alert but not as high as when in the alarm stage; this stage allows the organism to renew spent energy and repair whatever damage may have occurred in the previous stage. Finally, in the *exhaustion stage* our whole system is then managed and maneuvered by the parasympathetic system, whose basic function is to bring down (a deceleration of) heart rate, respiration, etc., and eventually, an opportunity to return to homeostasis (Nevid et al., 2018).

When the individual is forced to live in situations that requires the organism to remain at a constant alert (highly tense and life threatening, like when living in a war zone, domestic violence, repressive governments, etc.), it can result in damage to those parts of the body which are now forced to operate without the necessary resources normally distributed through the blood supply which has been interrupted

by the emergency decree operating in the whole system. This condition has been referred to a *Disease of Adaption* that comes about when the source of stress persists, resulting from mild (allergic reaction) to more serious conditions (such as heart disease and even death, compromised perceptions about others' motivations, and other serious psychological conditions, etc.) (Nevid et al., 2018).

In a recent paper, Belsky (2019) reaffirmed this very view, already amply discussed in her earlier publications (Belsky, Steinberg, & Draper, 1991) of how the organism develops adaptation strategies to even most difficult early-life adversities, guided by evolutionary-based goals. That the individual will do whatever it takes to survive, even developing strategies that, in the mind of others not living in the midst of these individuals' situations, may seem counterproductive. In the end, the author suggests that although, an adaptation strategy is developed because of its "beneficial effect on the dispersion of genes in future generation…" and may have an evolutionary adaptation benefit, "… [it] may or may not be considered psychologically or culturally beneficial" (p. 241). One of the consequences of the evolutionary adaptation is that it may or may not accelerate child and adolescent development and promote reproductive fitness, depending upon how extreme the developmental conditions are. If the environmental conditions are so extreme to the point of threatening survival itself, the energy and resources of the organism are then used primarily for maintenance purposes, rather than growth and reproduction. Under adverse/high-risk conditions (e.g., growing up in a high-risk environment, financially unstable household, absent parents due to death, abandonment or imprisonment; a family environment characterized by sexual, physical, and or verbal abuse, etc.), development can become accelerated because "this should increase the chance of reproduction, the ultimate goal of all living things, before dying or having one's mate quality seriously compromised" (Belsky, 2019, p. 242); this is done in an effort to ensure a future for that person's gene pool, only when it is not too extreme. Such a tendency may explain the various behaviors we find in individuals living in high-risk environments, including children and adolescents engaging in "adult-like behaviors earlier…. (e.g., drinking, smoking, sex)" (p.241) than compared with others of similar age range not living in the same threatening conditions. An example of developments not being accelerated because the conditions are too extreme are findings of delayed puberty development in cases of "early-life deprivation (e.g., physical and emotional neglect, food insecurity), but not in threat exposure (e.g., child abuse, domestic violence)" (Sumner, Colich, Uddin, Armstrong, & McLaughlin, 2019, as cited by Belsky, 2019, p. 242). Young children suffering from severe deprivation (a form of intense trauma) were found to become totally withdrawn and apathetic to their environments when left unattended without or very limited and/or unpredictable human contacts (Spitz, 1946); again, this suggests that an internal biological mechanism is at play from the very beginning, where withdrawal of function is used as an attempt to preserve the limited available personal resources.

Findings from several studies looking at the effect of stress on the body have provided us with sufficient data to keep us vigilant about the effects of stressful conditions. For instance, prolonged stress has been found to weaken the body's immune system (Fan et al., 2009; Kemeny, 2003) and be implicated in the development of

cancer of various organs, heart conditions, digestive difficulties, hypertension, diabetes, sleep disorders, memory difficulties, anxiety and depression, Alzheimer's Disorder, and in some, neurocognitive disorders, etc. (Alzheimer's Risk Gene, 2011; Nevid et al., 2018). (We say 'implicated' because there are likely other genetic and physical factors involved in some of these conditions). It has been implicated indirectly in the development of Wernicke's Disease (and Korsacoff syndrome) normally triggered as a consequence of alcoholism and the resulting depletion of vitamin B1 from the brain (Charness, 2009; Nevid et al. 2018). That is the case when the alcoholism is initially triggered in an attempt to respond to a traumatic condition. Most recently, for instance, posttraumatic symptoms were found to contribute to alcohol misuse and hazardous drinking in a group of trauma-exposed Latinx, a behavior related to maladaptive emotion dysregulation (Paulus et al., 2019).

Similarly, there are other conditions when stressful and inhospitable conditions that have introduced anxiety and depression in the developing child/adolescent (e.g., mother's infection, substance abuse, and family conflicts during pregnancy and subsequently, etc.) have been found to be implicated in the development and/or maintenance of mental disorders (e.g., particularly anxiety and depression), learning disabilities, attention-deficit disorders, and even suicide (APA, 2000, 2013; Blanchard, Gurka, & Blackman, 2006; Dervic, Brent, & Oquendo, 2008; Einfeld et al., 2006; Essex et al., 2006; Fergusson & Woodward, 2002; Kilpatrick et al., 2003; McGillivray & McCabe, 2006; Nevid et al., 2018; NIMH, 2003; Pelkonen & Marttunen, 2003; Weissman et al., 2006).

Finally, trauma reactions have also been found to occur from TBI or assault (Teasdale & Engberg, 2003) from sport (football, soccer, hockey, baseball, etc.) (Schwarz, Penna, & Novack, 2009; Small et al., 2013), or because of domestic violence (Banks, 2018). There is some evidence that progressive dementia due to traumatic brain injury is more likely to result from multiple head traumas than from a single blow or head trauma (McCrea et al., 2003). Yet, several scholars have emphasized that even a single head trauma can have psychological effects, and if severe enough, can lead to physical disability or death. It was also found that the specific changes in personality vary with the site and extent of the injury following traumatic injury to the brain (Nevid et al., 2018).

A Cognitive/Affective Face of Trauma

Several scholars coming from different theoretical persuasions have provided explanations of the cognitive and affective mechanisms normally implicated in our responses to traumatic and inhospitable conditions (Allen & Fonagy, 2017; Beck, 2009, 2019; Bowlby, 1973, 1980, 1982; Ellis, Abrams, & Abrams, 2009: Freud, 1894, 1896; Kernberg, 1975; Luyten, Mayes, Fonagy, Target, & Blatt, 2017; Mahler et al., 1975; Morris, Javier, & Herron, 2015; Solms & Turnbull, 2002; Sullivan, 1955; etc.). These inhospitable conditions have been found to be implicated in the development of psychopathology in general, including personality and character

disorders. As indicated earlier, these conditions (e.g., trauma-related disorders, substance use disorders, personality disorders, etc.) are found in the DSM nomenclature and in clients involved in the justice system (APA, 2013; Garbarino, 2015). Since the common denominator of these different views is the involvement of strong emotions and the individual's difficulty to negotiate these emotions, we will use the work of Solms and Turnbull (2002), Tomkins (1962, 1978), Demos (1998) and Allen and Fonagy (2017) to guide our analysis. We find that their views tend to incorporate not only a close evolutionary-based connection between emotions and neuroanatomy in processing and responding to unusual/traumatic latent conditions in the individual's internal and external environment, but also offer other explanatory models that provide additional enrichment to our understanding of the phenomenon.

According to these authors, the processes described earlier guided by the operation of the central nervous system that makes possible for us to receive/organize information about our environment through our senses (Luria, 1973; Solms & Turnbull, 2002), also prepares us for much more sophisticated development. That is, the ability to organize information into good, bad, or neutral, based on our physiological reactions that are strongly linked to our basic affective physiological reactions to this information. Tomkins (1962, 1978) has identified eight physiological-based rudimentary affective reactions (affects) involved in that organization (e.g., enjoyment, interest, distress, anger, fear, startle, disgust, and shame); Solms and Turnbull (2002), on the other hand, were only able to identify (based on their neuropsychological studies) four basic affects that are implicated in the organization of our reactions to the world around (e.g., seeking, rage, fear, and panic). According to these authors, these basic emotions are organized as part of what they called *basic-emotion command systems*, which is normally deployed to respond to different internal and/or external demands (threats). Most importantly, these authors were able to identify specific neurologically based functions implicated in the operation of these different affective responses to environmental demands, particularly in cases of high importance for the individual's physical and emotional survival.

It is presumed that these neurological functions become particularly operational in traumatic conditions and are involved in the development of specific organized structures that encapsulate the organization of different experiences into specific categories or personal scripts, as a function of the emotions they elicit in us. These are experiences that elicit and are then organized around personal scripts characterized by fear, joy, shame, bewilderment, disgust, anger, or panic, etc. Demos (1998) defines scripts as "sets of ordering rules for the interpretation, evaluation, prediction, production, or control of scenes," or experiences in the world (p. 82). By that she meant that,

> Inherent in the script is the specific way of responding to the demands of the scene (e.g., run away, get ready to fight back, or to remain quiet) that the individual has already incorporated into [his] her repertoire and that tends to guide that individual's behavior when relating in [his]her surroundings…once traumatized by abuse, the individual may not only feel threatened by the components of the event related to the abuse…by remembering the content of the communication surrounding the event and/or other components of the abusive

> experience… the time of the event…the quality of the perpetrator's voice preceding the abuse…The victim may remember the items of clothing as well…the time and place of the occurrence…In a final analysis, the purpose of these scripts (or schemas) is to allow and guide the organism to respond to the environmental demands in a parsimonious, efficient, and historically contextual manner, the ways that are consistent with one's… history. (Javier & Herron, 2018, p. 14)

In other words, these personal scripts function as shortcuts that are deployed automatically as part of the *sympathetic nervous system* mechanism for the protection of the individual when an experience triggers feelings and emotions initially and historically associated with development of specific scripts. Warburton and Anderson (2018) provide an excellent description of the development and automatic deployment of these personal scripts, and which they suggest are normally operationalized through associative conditioning, instrumental conditioning, and social learning. An important point made by these authors is that the associative activation depends also upon unique personality characteristics (e.g., highly anxious, fearful prone, with borderline characteristics, etc.), as well as mental resources of the victim (e.g., whether the person feels he/she has what it takes to address the threat). These personal resources are what are referred to as 'self-efficacy,' 'ego strength,' or 'resilience' in various literature (Bellak & Goldsmith, 1984; Blanck & Blanck, 1974). According to Warburton and Anderson (2018), although strongly anchored in the individual's personal behavioral repertoire, these scripts can be altered through systematic and sustained intervention, so their deployment becomes more appropriate to the situation at hand and more a function of conscious and volitional decision on part of the individual than mere reflexive reaction.

The fact that personal scripts, once developed, are so endemically present in all human behaviors creates a challenge to the forensic professional who is asked to assess a specific consequence of an event presumed to have caused damage to an individual. It requires an examination of personal information related to a developmental period that precedes the forensic issue under consideration and that may be directly or indirectly implicated in the forensic issue. As we stated earlier, several scholars have looked at specific and critical conditions that have been found to be implicated in the development of one's personal scripts and emphasize the period of early development of attachment as being most critical. The works of Bowlby (1973, 1982) and Ainsworth et al. (1978), and later further expanded by Allen and Fonagy (2017), provide us with a wealth of empirical findings on the role earlier attachments could play in and impact on further functioning; included in that impact is the development of particular psychopathologies found to be present in individuals involved in the justice system (Garbarino, 2015).

An extreme disruption of a healthy attachment development is captured in the concept of *Attachment Disorder* or *Reactive Attachment Disorder* (Steele & Steele, 2017) described in the DSM. It refers to a constellation of disturbed behavior developed as a response to an extreme variation from the average expectable environment. It applies to individuals (normally children) whose behavior is characterized by extreme withdrawal from social interaction or where, if there is an interaction, it is characterized by a shallow and superficial investment in relations with multiple

others (Luyten et al., 2017). The development of this type of reactive attachment condition is considered a sign of core deficits in self and social development that tend to occur in children and other individuals who have suffered extreme neglect and maltreatment over a sustained period.

Bowlby (1944) was able to identify problems with attachment in criminal behavior in his study of 44 juvenile thieves at the London Child Guidance Clinic during 1936–1939. This is something that he considered a reenactment later in life of early patterns of attachment disruptions. He found that these youths' quality of their early attachment histories was consistently unstable and problematic. During that same period, Spitz (1946) observed the development of what he called *anaclitic depression* in orphaned children deprived of human interactions. This was followed by the seminar work of Mahler and her associates who delineated, through careful observational studies, the early contexts of the development of these scripts as a function of the quality of the early environment (Mahler et al., 1975). These seminal works provide us with empirical contexts to understand how the transformative effect of earlier relationships (good or bad) with one's human environment reverberates throughout the person's overall relationship/interaction with their surroundings. When the nature and quality of those early relationships were found to be positive, it led to a good outcome of a healthy, stable, and socially well-integrated and productive citizen. When the early environment was less than ideal, it was found to lead to behavioral difficulties and even criminal behaviors (Garbarino, 2015).

Blatt was able to identify anaclitic (or dependent) depression in adult clients as well (Blatt, 2004), a condition normally associated with inhospitable/neglectful family environment during early developmental history. Anaclitic depression is characterized by feelings of loneliness, helplessness, weakness, intense and chronic fears of being abandoned and left unprotected and uncared for. There are deep, unfulfilled longings to be loved, nurtured, and protected. Those with this condition are unable to internalize the experience of satisfaction (indicating a problem with mentalizing). The relationship with others is found to be valued based on what they can derive from these individuals in terms of immediate care and comfort provided (Blatt, 2017). Unlike the typical experience of depression, anaclitic depression is more profound in nature and quality and reflects a serious problem with self-concept and self-efficacy.

In explaining past trauma (particularly related to early experience of bullying and cyberbullying), several scholars have also suggested a 'Developmental Cascades Model' to explain its effect; such a model is very much in keeping with findings already discussed earlier in this chapter. This model posits that there are cumulative consequences of past problems and past traumatic events that reverberate throughout the individual's developmental trajectory and predict difficulties in adulthood and across systems and generations (Lereya, Copeland, Costello, & Wolke, 2015; Masten & Cicchetti, 2010). This model was used by Indellicati (2019) to look at the effect of childhood and adolescent peer victimization on academic, social, and emotional adjustment in college students as part of her doctoral dissertation.

Sources of Trauma in Forensic Contexts and Its Diagnostic Challenges

From a forensic perspective, any condition which impacts the normal developmental trajectory and/or functioning of the individual and whose impact is sufficiently serious as to cause a traumatic condition that derails temporarily/permanently the individual's future, can be of interest to the forensic professional. Again, the challenge here is how to determine and distinguish the immediate causal link to the damage being examined, as well as being able to identify those responsible (Koch, Douglas, Nicholls, & O'Neill, 2006); most importantly, to determine whether the principle of *mens rea* applies. For that to be the case, the person/entity identified as responsible (e.g., the landlord in case of lead poisoning of children inhabitants of that landlord's property; a driver in case of car accident; a mechanic/dealer in case of a malfunctioned vehicle involved in a deadly accident; a tobacco industry in case of lung cancer caused by first or second-hand smokers; a police officer/prison personnel in a case of death while apprehending or while in custody, etc.) has to be found to have "intentionally committed an act, violent or otherwise, with a guilty or wrongful purpose" (Huss, 2014, p. 98), and thus violated established norms. Although simply defined, it is a lot more complicated to prove intentionality. A case in point may be when legal responsibility for an act may become unenforceable if the one responsible is found to be mentally incapable or insane at the time of the identified incident.

The First Complication Is One of Definition

Koch et al. (2006) make the point that it is not enough to define a situation as 'stressful-related emotional condition' (resulting from real or imagine threats or injuries); they argue that to be legally bound when it becomes the subject of personal injury compensation claim or criminal injury compensation, it should include causation by a third party, substantial economic costs, lack of productivity, mental illness, increase in substance abuse, depression, etc. (Koch et al., 2006). According to these authors, we should add the issue of how to determine degree of compensation and level of culpability/causation in the context of other possible factors which may be involved, such as psychological vulnerability factors (or preexistence conditions).

Issue of Accuracy of Diagnosis

We also run into the problem of being able to accurately diagnose whether PTSD, as defined in DSM-5, can apply. This very issue was seriously challenged by Allen and Fonagy (2017) in their recent publication on trauma and also discussed in this

book by Caffrey (Chap. 5). They make the point that unlike the DSM-IV, the new diagnostic category for PTSD does not consider subjective experience of what could be considered extreme distress at the time of a traumatic event. According to these authors, by only focusing on an objective delineation of observable physical injury and behaviors, the DSM-5 is missing from serious considerations a whole range of psychological or emotionally laden situations that have been found to be profoundly damaging to many (e.g., such as situations that are humiliating and sadistic or when the individual is submitted to psychological neglect or act of terrorism and mental torture) (Bifulco, Moran, Baines, Bunn, & Stanford, 2002; Erickson & Egeland, 1996 as cited by Allen & Fonagy, 2017).

This is further complicated by the findings that exposure to objectively defined trauma events has (at times) not been found to be sufficient to produce PTSD (Rasmussen, Verkuilen, Jayawickreme, Wu, & McCluskey, 2019; Rosen & Lilienfeld, 2008); meaning that just because one is exposed to a trauma event, they will not necessarily develop a diagnosable PTSD. The fact that the symptom clusters of PTSD are sometimes evident even in the absence of objectively defined traumatic event (like in Criteria A) makes the diagnosis of PTSD in the context of DSM-5 more problematic. For instance, PTSD syndrome has been found in relationship to seemingly ordinary stressors, such as family problems, parental divorce, occupational difficulties, deaths of loved-ones, or serious loses, etc., where it was reported that the more severe the stressor, the more the likelihood of developing PTSD (Friedman et al., 2007; Gold, Marx, Soler-Baillo, & Sloan, 2005 as cited by Allen & Fonagy, 2017). In the end, these authors conclude that there is enough evidence to raise "appropriate questions about the precise etiological role of traumatic event…in PTSD" (p. 167). This means that a traumatic reaction may still be present in an individual even when a PTSD diagnosis, as defined by the DSM current nomenclature, may not totally apply. Rasmussen, Verkuilen, Jayawickreme, Wu, and McCluskey's recent article (2019) confirm this argument and concluded that it is clear from the literature that it is difficult to identify clear diagnostic items that are unique to posttraumatic stress disorder because many of the items utilized to assess PTSD also overlap with requirements for other diagnostic categories, such as anxiety and depression. They conclude that it is important to keep in mind that PTSD is not one thing, and that re-experience and avoidance are the only two factors that meet standards for construct validity. They even suggest a radical solution to the problem with DSM diagnosing of PTSD, which is to address the conceptual flaw by focusing on measuring what is uniquely PTSD separate and apart from any overlap with other diagnoses related to negative emotions. To that point, Malaktaris and Lynn (2019) recently looked at the relevance of flashbacks to the PTSD diagnosis by comparing three groups of individuals with PTSD or subthreshold PTSD symptoms (or PTSS) with or without flashbacks to a trauma-exposed control and control participants without trauma exposure. They found that individuals with PTSD reported "significantly greater sleep disturbances, experiential avoidance, and lower mindfulness than those without PTSS…"; also, that "individuals without PTSD underestimated the vividness, emotional intensity, distress, and functional impact associated with flashbacks…" (p. 249); no fragmentation of flashbacks was found

in individuals with PTSS. That is, individual with PTSS, with or without flashbacks, reported significantly more psychological symptoms compared to individuals without PTSS; there was an increase in sleep disturbances in individuals with PTSS.

A similar example is provided by Koch and associates (2006) who examined the role of dissociation found to be involved in the diagnosis of two interrelated diagnostic conditions since the DSM-IV, namely PTSD and Acute Stress Disorder (ASD). According to these authors, this condition may require two diagnoses (PTSD and ASD) to capture the reality of some individuals who are found to have suffered trauma and who may meet criteria for PTSD one-month post-trauma but not ASD. They concluded that such a decision de facto "arbitrarily dichotomizes a naturally occurring continuum" (p. 13). They also suggested, in this regard, that considering the often-strong comorbidity of PTSD with diagnoses of anxiety and mood disorders, personality disorders, substance abuse, etc., and the fact that our understanding of our beliefs about emotionality may lead to vastly different responses across cultures, to consider placing PTSD as part of a larger construct such as a "negative affectivity" construct (p. 10). In the end, however, it leaves us with a lingering question regarding the determination and adjudication of responsibility when "the relationship between traumatic event and PTSD is mediated by attributional style, cognitive processing, and emotionality, which differs across developmental stages…[and where] the prevalence, course, and expression might differ as well" (Koch et al., 2006, p. 12).

Allen and Fonagy (2017) suggest with regard to the DSM-5 that it would be more appropriate, and more in keeping with the data on the ground, to consider a broader diagnostic category to include a "multitude of symptoms, relationship and identity disturbance, as well as patterns of self-harming behavior than can stem from repeated and severe trauma, including childhood abuse and neglect" (p. 167). According to these authors, this was initially suggested by Herman in 1992 and 1993 under the concept *Complex PTSD* to be diagnosed as "disorders of extreme distress not otherwise specified" (p. 167), and further developed by Courtois and Ford (2009), Ford and Courtois (2009), and Courtois (2016) with the concept of *Complex Psychological Trauma* and *Complex Traumatic Stress Disorders.* Allen and Fonagy (2017) conclude that we are in a better, and more accurately and empirically based position, when defining and/or assessing the impact of trauma on an individual's function by considering that "…traumatic stress makes some substantial-albeit individually variable-contribution, in conjunction with a host of other etiological factors" (p.168). They further suggest that we should consider that to be the case for 'simple' and for 'complex' PTSD. Koch and associates (2006) also suggest that the event itself is not the most important predictor of PTSD but that individual characteristics and perception of the event are the most relevant factors in this regard. This is not to say that the nature, quality, and intensity of the trauma event should not be carefully examined, because they should.

The description of complex trauma and its effect that emerged from the work by Courtois and Ford (2009) and Ford and Courtois (2009) has three basic requirements: The first one (1), that it has to be related to an early experience of abandonment and or harm at a time the individual was most vulnerable (e.g., childhood or

adolescence); (2) that the condition was repetitive or prolonged; and finally (3), that it was caused by an individual considered important and crucial for the physical and/or psychological survival/wellbeing of the victim (e.g., primary caregivers or other responsible adults). Also important is the multifaceted impact that it causes in the individual's overall functioning. That is, "the changes in mind, emotions, body, and relationships" (p. 13) that are experienced in connection with complex psychological trauma, and that it results in "severe problems with dissociation, emotional dysregulation, somatic distress, or relational or spiritual alienation" (p. 13). Such a description eloquently highlights the complex nature of the phenomenon while at the same time provides a framework for the development of an intervention that is in keeping with that complexity.

Trauma in Its Multiple Contexts

Following Courtois and Ford's conceptualization and the seminal work by Bowlby, Ainsworth, Mahler and her associates, as well as more recent contributions by Koch and associates, Allen and Fonagy, and others, we can now appreciate and recognize the multiple contexts where trauma may be present and where there may be a request for an assessment of its effect for general psychological, educational, or forensic purposes. For the latter, we have included several chapters in this book (see section below on 'faces of trauma in this book') specifically dedicated to the exploration of some forensic areas that forensic psychologists are more likely to encounter. The areas covered are by no means exhaustive of situations in which forensic psychologists may be asked for their professional opinion. The central point that we are emphasizing, regardless of the area of forensic practice one is engaged in, is the importance to carefully consider the possible role a traumatic experience may play in the condition under assessment.

Also, recognizing that forensic involvement is made possible by what is required by case laws and statues, it is possible that areas not initially considered within the purview of forensic psychology at a point in time may become so in the future. An example of that is the one discussed by Suk (2010) regarding the legal and still controversial standing of 'abortion trauma' where a woman who decides on an abortion and later feels 'regret', resulting in "severe depression and loss of esteem" (p. 1200), could be admissible in court. Although extremely controversial because of its implications for both sides of the abortion discourse, nevertheless, a forensic psychologist may become involved in such cases. Forensic psychology played a part in the defense of Lorena Bobbitt's successful acquittal in 1994 (for cutting off her abusive husband's penis) where she was presented as someone suffering from a battered woman syndrome "…whose act was attributable to psychological trauma from an unwanted abortion" and being a victim of sustained domestic violence (Suk, 2010, p. 1200).

With those caveats in mind, we can now explore several areas that could be of forensic interest, some of which to be more fully covered in the various chapters

listed in this book. This list may include such areas as to what happens when a developing fetus and/or child is negatively impacted as a function of inhospitable prenatal environment. Such an eventuality has been found when a mother's pregnancy is characterized by alcohol and drug abuse and the child comes into this world suffering from fetal alcoholism (Burns, Breen, & Dunlop, 2014; Waterman, Pruett, & Caughey, 2013), resulting in compromised development. Another example is when the home environment exposes a child to lead poisoning (plumbism) resulting in neurodevelopmental difficulties and seriously complicating the early developmental trajectory of the child (Bellinger & Needleman, 2003; Canfield et al., 2003; Needleman, McFarland, Ness, Fienberg, & Tobin, 2002). That condition has been found to cause neurodevelopment and executive function difficulties even in children with a lead concentration level below 10 μg/dL *and as low as* 5 μg/dL *(the level suggested in 2012)* (https://www.cdc.gov/nceh/lead/data/definitions.htm). Some of the effects include disruption in normal language development, behavioral, and affect dysregulation, "deficits in attention and concentration, visual-special skills, fine-motor coordination, balance, and social-emotional modulations" (American Academy of Pediatrics, 2005, p. 15; Pocock, Smith & Baghurst, 1994; Sciarillo, Alexander, & Farrell, 1992); it was also found to contribute to a propensity to antisocial behavior and juvenile delinquency (Bellinger & Needleman, 2003; Dietrich et al., 2000; Dietrich, Ris, Succop, Berger, & Bornschein, 2001; Needleman et al., 2002). At the physiological level, it has been found to cause recurrent headaches, abdominal pain, loss of appetite, and constipation, as well as clumsiness, and agitation; it may even proceed to vomiting, stupor, and convulsion (American Academy of Pediatrics, 1998; 2005; CDC, 2002). Although we have noticed improvement in this area, the issue of plumbism and mercury exposure continues to be a factor in the lives of many children still living in old dwellings (Blackman, 2006; Patel et al., 2019). In some of the cases evaluated by one of the authors of this chapter over the last 20 or so years, the lead intoxication was found to be as high as 70 μg/dL in some children suffering from severe learning disability and behavioral disorders, particularly attention-deficit hyperactivity and conduct disorders.

Although chelation therapy with *ethylenediaminetetraacetic acid* (EDTA) has been found to be effective in reducing the lead level in blood (CDC, 2002), with some positive reversal at least physically, the damage to a child who has lived with the condition for many years to the point of infiltration (bone calcification) tends to be more lasting once the earlier developmental educational/social/emotional trajectory has been seriously derailed for a prolonged period. This situation is further compounded by the challenges the parents and the rest of the family face when having to negotiate a not always adequate school environment to secure special educational intervention for the resulting developmental and learning disabilities, and behavioral disorders in affected children (Hou et al., 2013; Landrigan, Schecter, Lipton, Fahs, & Schwartz, 2002).

Another example of inhospitable environment is a family environment characterized by domestic violence (Javier & Herron, 2018) and child abuse and neglect (Centers for Disease Control and Prevention, 2014; Moylan et al., 2010) as discussed earlier. And as if these conditions are not challenging enough, financial and

political instabilities can also contribute to creating an environment of disruptions, characterized by a sense of unpredictability and fear. This is particularly the case when these conditions contribute to making more likely the individual will hear, witness, or be the victim of assault (by gun/knife/etc.) or sexual acts, act of community terrorism, identity thefts, cases of domestic violence, school shootings, and acts of blatant and subtle discrimination (macro and micro aggression) on the basis of race or religion, gender, cultural backgrounds, etc. (Bureau of Justice Statistics, 2017; Daniels, Bradley, & Hays, 2007; Harrell, 2019; Morgan & Truman, 2018; Oudekerk, Musu, Zhang, Wang, & Zhang, 2019; Sue et al., 2007).

Again, these disruptions can be temporary or more permanent, causing tremendous psychological impact in the individual's overall functioning, depending on where he/she is in the developmental trajectory. That fact brings us to another source of trauma that we can categorize under 'bullying' and 'cyberbullying,' a phenomenon whose devastating effects have created havoc in the educational, social, and emotional lives of those affected (Javier, Dillon, DaBreo, & Mucci, 2013). Several prominent scholars have concentrated their research effort to tease out the major consequences experienced by those who are victims and/or are forced to witness (bystanders) bullying behavior in school or outside school (Espelage & Swearer, 2008; Hinduja & Patchin, 2012). There are legal cases emerging against school personnel, perpetrators, and parents/family of perpetrators that include assessment of culpability and of damage for failing to create a secure learning school environment.

Bullying has been found to also be experienced by the elder population. This is the case when the elder may experience violence/neglect at the hands of family members or by employees of nursing homes, and thus reducing them to a life of fear and submission after an active and full life of financial and physical independence (Dahlkemper, 2016). We can get a sense of the pervasiveness of traumatic conditions in the elder population from findings discussed in Dong's report (2017).

Similarly, there are more and more reports emerging from many sources, and now part of the public discourse, related to sexual and physical abuse at the hands of members of religious institutions, medical professions, teachers, etc. The 2015 film "Spotlight", about child abuse cases by priests in the Boston Dioceses, contributed to the public display of consternation and outcry that now permeate many sectors of our society and that propelled justice systems in many countries throughout the world to bring indictments against priests, bishops, religious and church personnel, sport coaches and administrators, etc., many resulting in jail terms (Death, 2013, 2018; McCluskey, 2000; O'Reilly & Chalmers, 2014; Trothen, 2012). Findings from different sources profound traumas have been hidden, have resulted in eroding/destroying those victims from within even decades after the abuse occurred. It is the protracted and stubborn denials of the abuse, the sense of profound betrayal, and the sense of shame and confusion that have resulted from the ways members of those institutions responsible for the protection, religious, and moral teaching of what it is meant to be a member, have historically responded to the allegations. The victims of the Olympic gymnastics sexual predator, doctor Larry Nassar, considered one of "the most prolific known sex criminal in American sport history" (Pesta, 2019, p. 48), relate similar pain of abuse, denigration, and

betrayal by their coach John Geddert and others in the institution who were supposed to look after their well-being and safety. For some of these victims, the diagnosis of 'complex trauma' may apply, considering how their lives devolved, including the excessive use of drug and alcohol, sexual promiscuity and sexual confusion, the development of psychiatric disorders, and even suicide.

And the list goes on and on. We find traumatic situations in wide variety of systems: the workplace, in the military, law enforcement, justice, medical and health delivery, transportation, border patrols, etc. In all these situations, the question for the forensic professional is whether *mens rea* can be applied and whether the discipline can provide the necessary tool of assessment for these conditions to fulfill the various standards of evidence operating in different jurisdictions. We are referring to the *Frye Standard* (that refers to the importance for the professional to rely on tools generally accepted by the discipline…that is, it must be sufficiently established and have gained general acceptance in the particular field it belongs), or the *Daubert Standard* (that refers to the importance to rely on scientific evidence on which the forensic professional opinion should be based. It should be scientifically reliable, relevant, and valid; also, that the application of such standards requires from the professional specialized knowledge) (Huss, 2014).

Faces of Trauma in This Book

Recognizing the central role that trauma and its consequences have played in history of psychology (Beck, 2009, 2019; Ellis et al., 2009; Freud, 1894, 1896; Greenberg & Mitchell, 1983; Sullivan, 1955), and being cognizant of the growing role of psychology as a discipline and scientific enterprise in the forensic arena, it has become abundantly clear that it was now time to organize a forensic book where trauma was centrally addressed. Our goal is to include thoughtful and informative discussions on the various ways trauma is implicated in many areas of forensic practice; also to prepare a volume that can be used as part of a forensic course at upper undergraduate or graduate levels; and finally, as a resource for forensic professionals and those in the legal systems interested in getting a better understanding of the role of trauma in criminal behavior, in sentencing adjudication, risk assessment and management, and in the nature of treatment in forensic contexts. This book requires at least a basic exposure to forensic psychology, and it is not meant as a textbook for a basic forensic course.

With that in mind, we divide the book into four sections with the first section (Part I: Six chapters) dedicated to addressing Conceptual Framework, covering examination of trauma from a forensic developmental lens (Chap. 2 by Nesi, Garbarino, & Praeter); the role of trauma in the evaluation of various competencies (Chap. 3 by Owen, Perry, & Scher); the challenges addressing issues related to individuals who are mentally ill, with a serious history of multiple traumas, and incarcerated (Chap. 4 by Leindenfrost & Antonius); issues related to the complexity of what is involved in considering trauma as an important factor in sentencing miti-

gation (Chap. 5 by Caffrey); the role of trauma in propelling individuals to become activists and thus turning a bad experience into a force for positive changes on what they refer to as 'homicide activism' (Chap. 6 by Tookoshian & Leeolou); and finally, challenges related to issues of individuals who are unable to communicate due to limited, if any, knowledge of English; individuals with low educational background and who are cognitively compromised; and individuals who are coming from different cultural contexts, and whose understanding of the work and special terms used by the court is limited at best (Chap. 7 by Javier & Lamela).

The second section (Part II: Seven chapters) is dedicated to the exploration of a number of core, relevant, and current topics likely to emerge in forensic practice related to civil matters (issues related to children/adolescents where the forensic question involves protective custody issues, child custody) (Chaps. 8 by Esquilin & Johnson, and 9 by Zelechoski, Rachel, & Heusel); immigration and termination of parental rights (Chaps. 10 by Persyn & Owen, and 11 by Amrami & Javier, respectively); issues of pre-employment and fitness for duty, personal injury and employment discrimination, including law enforcer personnel (Chaps. 12 Casarella & Beebe, 13 by Foote and Chap. 14 by Maddux, Agnew, & Frumkin). The section to follow (Part III: Six chapters) is dedicated to the exploration of trauma in cases of criminal matters. In this context, the reader finds the examination of trauma in the context of intimate partner violence (Chap. 15 by Paradis, Bowen, & McCullough), among the Veterans who find themselves involved in the justice system (Chap. 19 by Lamade & Lee), and in sex offenders (Chaps. 16 by Lamade, and 17 by DeMarco & Geller). Also included in this section is a chapter by Shaw, Rogers, and Gefner (Chap. 18) who seeks to address an issue that is in the mind of many when dealing with criminal or unlawful behaviors. We are referring to the fact that not everyone whose life experience is characterized by an unfortunate course of events and trauma ends up involved with the legal system or engaged in criminal behavior and legal situations. The factors normally associated with that eventuality are what are referred to as resilience factors that serve as buffer against the likely effect of noxious and traumatic events (Ungar, 2013). It is an important chapter that is meant to tease out those components of the personal life that can be helpful in keeping the person away from having to engage with the legal system as defendant or become paralized by the negative effect of personally experienced traumatic events. The book concludes with another section (Part IV: three chapters) dedicated to a general discussion of the emerging issues raised throughout the book and a discussion of specific prescriptions for the forensic professionals (Chap. 20 by Javier, Owen, & Maddux). In that context, it also includes a chapter on 'Trauma and its Trajectory in Criminal Behaviors' (Chap. 21 by Javier, Owen, & Jemour); and another and final chapter by Hon. Hirsch (Chap. 22) that provides a case study of how a justice system that considers the multiplicity of factors (including traumatic experiences) that are normally involved in the commission of a crime, can be meaningfully considered in the deliberation and adjudication of the crime by the court while still affirming the defendants' personal accountability.

Each chapter in the book has been structured to encourage ongoing active participation from those interested in further and careful exploration of trauma issues addressed in the book. In this context, the readers will find that each chapter in the

book poses a series of questions/and activities that they can use to further their understanding and making them more personally relevant. Additionally, we also dedicate a chapter (Chap. 21) to listing a series of different types of crimes in a form of 'Case Studies' which features not only the specific (notorious) crimes committed over the course of history but also some personal history (biographies) of those involved in these crimes. It is set up as a separate chapter to facilitate the use of that section as a teaching tool for class assignments. Finally, on the back section of the book (Appendices), the readers will find a series of resources about each topic covered in the book, all in the spirit of encouraging them to further explore the issues addressed in the different chapters.

In the end, the readers will find that the material presented is written by individuals not only knowledgeable of various aspects of forensic practice but who also show a clear determination and passion to make sure that trauma information is given its important and rightful place in all aspects of the forensic endeavor. This is evident throughout the book.

Concluding Thoughts

In this book, we discuss the complex nature of trauma and its consequences in the general context, while also including more specific forensic foci. Ultimately, while widening the scope of inquiry regarding the nature of trauma in general, our goal is to provide the forensic professional with the necessary tools to examine and make a reasonable determination of what aspects of the traumatic condition presented by their clients can be directly linked to the specific event that is the subject of the forensic assessment; and to be able to do so, while following the standards of practice guiding the profession. The ultimate goal is to provide as clear and concise assessment of trauma in relationship to the forensic issues at hand so that adjudication of accountability can be clearly established, if present. The emphasis is on providing specific recommendations for the professional when addressing the challenges in considering the role of trauma in forensic contexts. There is a recurrent theme throughout the book, an invitation to those interested in trauma to recognize its pervasive and damaging nature, as well as to recognize the difficulty in assessing its true nature and impact on individuals, and what it would take to develop intervention approaches that are more likely to succeed. There are no easy answers, but there are directions provided by empirically derived information that we can now follow in our attempt to address the complexity of considering trauma in forensic contexts.

In preparing this volume, it became patently clear that there are more forensic contexts where trauma is implicated that we are covering or could possibly cover in a single volume. Our hope is that, perhaps, some of our readers may be inclined and encouraged to continue the exploration of trauma in other forensic contexts, with a focus on providing specific trauma-sensitive assessment/intervention recommendations. This is our hope and our invitation.

Questions/Activities for Further Exploration

1. Identify one difficult/stressful situation in your life where you felt particularly affected for a long time and another less stressful situation that affected you only for a brief period.
2. Identify in both conditions what was it that made it particularly stressful or not, how did you know, what you felt physically and emotionally, what part of your life was affected, in what way, and for how long.
3. Identify what helped, if anything, to make you feel better.
4. Discuss the personal history of trauma in someone involved in criminal behavior, whether already known to the justice system or not, and what pushed that person into a criminal act while others with similar experience did not engage in criminal behavior.
5. What do you consider criminal behavior and why?
6. What role should trauma experience play, if any, in determining culpability for a crime, in sentencing, etc., and your view of how intervention could be helpful and when it may be counterproductive?
7. Select a convicted inmate to get to know more about his/her life trajectory, the context of the crimes, role of trauma, if any, etc.

References

A&E. (2018, May 14). Charles Manson. Retrieved November 13, 2018, from https://www.biography.com/people/charles-manson-9397912

Ainsworth, M. D., & Bell, S. (1970). Attachment, exploration, and separation: Illustrated by the behavior of one-year-olds in a strange situation. *Child Development, 41*, 49–67.

Ainsworth, M. D., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of strange situation*. Hillsdale, NJ: Erlbaum.

Allen, J. G., & Fonagy, P. (2017). Trauma. In P. Luyten, L. C. Mayes, P. Fonagy, M. Target, & S. Blatt (Eds.), *Handbook of psychodynamic approaches to psychopathology* (pp. 165–198). New York, NY/London: The Guilford Press.

Almeida, I., Ramalho, A., Fernandez, M. B., & Guarda, R. (2019). Adult attachment as a risk factor for intimate partner violence. *Annals of Medicine, 51*(1), 1–5.

Altman, R. (2015). Sympathy for the devil: Charles Manson's exploitation of California's 1960s counter-culture. Undergraduate honors theses. 907. https://scholar.colorado.edu/honr_theses/90

Alzheimer's Risk Gene disrupts brain's wiring 50 years before the disease hits (2011, May 16). Science Daily. Retrieved from http://www.sciencedaily.com;

American Academy of Pediatrics. (1998). Committee on Environmental Health. Screening for elevated blood lead levels. *Pediatrics, 101*, 1072–1078.

American Academy of Pediatrics. (2005). Lead exposure in children: Prevention, detection, and management-Committee on Environment Health. *Pediatrics, 116*(4), 1036–1046; http://doi.org/10.1542/peds.2005-1947.

American Psychiatric Association (2000). Diagnostic and Statistical Manual of Mental Disorders (4th edition), Washington DC: APA.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, D.C.: Author.

Arrigo, B. A., & Griffin, A. (2004). Serial murder and the case of Aileen Wuornos: Attachment theory, psychopathy, and predatory aggression. *Behavioral Sciences & the Law, 22*(3), 375–393. https://doi.org/10.1002/bsl.583

Banks, M. E. (2018). Victimized and disabled: Neuropsychological issues at the intersection of gender and ethnicity. In R.A. Javier & W.G.Herron (Eds.), Understanding domestic violence: Theories, challenges, and remedies (Pp.265–285). New York/London: Rowman & Litttlefield;

Beck, A. T. (2009). Cognitive aspects of personality disorders and their relation to syndromal disorders. A psychoevolutionary approach. In C. R. Cloninger (Ed.), *Personality and psychopathology* (pp. 411–429). Washington, D.C.: American Psychological Association.

Beck, A. T. (2019). A 60-year evolution of cognitive theory and therapy. *Perspective on Psychological Science, 14*(1), 16–20.

Bellak, L., & Goldsmith, L. (1984). *The broad scope of ego function assessment*. New York, NY: Wiley.

Bellinger, D. C., & Needleman, H. L. (2003). Intellectual impairment and blood levels [letter]. *New England Journal of Medicine, 349*, 500–502.

Belsky, J., Steinberg, L., & Draper, P. (1991). Childhood experience, interpersonal development,and reproductive strategy: an evolutionary theory of socialization. Child Dev, 62(4), 647–70.

Belsky, J. (2019). Early-life adversity accelerates child and adolescent development. *Current Directions in Psychological Science, 28*(3), 241–243.

Bifulco, A., Moran, P. M., Baines, R., Bunn, A., & Stanford, K. (2002). Exploring psychological abuse in childhood: II. Association with other abuse and adult clinical depression. *Bulletin of the Menninger Clinic, 66*(3), 241–258. https://doi.org/10.1521/bumc.66.3.241.23366

Black, M. C., Basile, K. C., Breiding, M. J., Smith, S. G., Walters, M. L., Merrick, M. T., … Spivak, H. R. (2011). *The National Intimate Partner and Sexual Violence Survey (NISVS): 2010 summary report*. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. Retrieved from http://cdc.gov/violenceprevention/pdf/nisvs_report2010-a.pdf.

Blackman, T. (2006). *Placing health: Neighbourhood renewal, health improvement and complexity*. Bristol, UK: Policy Press.

Blanchard, L., Gurka, M., & Blackman, J. (2006). Emotional, developmental, and behavioral health of American children and their families: A report from the 2003 National Survey of Children's Health. *Pediatrics, 11*(7), e1202–e1212.

Blanco, J. I. (2017, June 4). Albert Hamilton fish. Retrieved from http://murderpedia.org/male.F/f/fish-albert.htm.

Blanco, J. I. (n.d.). Retrieved from http://murderpedia.org/male.F/f/ferguson-colin.htm

Blanck, G., & Blanck, R. (1974). *Ego psychology: Theory and practice*. New York, NY: Columbia University Press.

Blatt, S. J. (2004). *Experiences of depression: Theoretical, clinical, and research perspectives*. Washington, D. C.: American Psychological Association.

Blatt, S. J. (2017). Depression. In P. Luyten, L. C. Mayes, P. Fonagy, M. Target, & S. Blatt (Eds.), *Handbook of psychodynamic approaches to psychopathology* (pp. 131–151). New York, NY/London: The Guilford Press.

Bowlby, J. (1944). Forty-four juvenile thieves: Their characters and home life. *International Journal of Psychoanalysis, 25*(19–52), 107–127.

Bowlby, J. (1973). *Attachment and loss: Vol. 2. Separation: Anxiety and anger*. New York, NY: Basic Books.

Bowlby, J. (1980). *Attachment and loss: Vol. 3. Loss: Sadness and depression*. New York, NY: Basic Books.

Bowlby, J. (1982). *Attachment and loss: Vol. 1. Attachment* (2nd ed.). New York, NY: Basic Books.

Bowlby, J. (1988). *A secure base: Clinical applications of attachment theory*. London, UK: Routledge.

Broomfield, N. (Director). (2014, September 18). *Aileen Wuornos: The selling of a serial killer* [Video file]. Retrieved from https://www.youtube.com/watch?v=oPD2hd6y_C8

Bullis, J. E. (1985). A social-psychological case history: The Manson incident. Dissertations and Theses. Paper 3564.

Bureau of Justice Statistics (2017). www.bing.com/search?q=2017+crime+rate+united+states&FORM=RSFD3.

Bureau of Justic Statistics (2019). http://bjs.gov/index.cfm?=pbdetail&iid=6646.

Burns, L., Breen, C., & Dunlop, A. J. (2014). Prevention of fetal alcohol spectrum disorders must include maternal treatment. *Medical Journal of Australia, 200*(7), 392.

Canfield, R. L., Henderson, C. R., Jr., Cory-Slechta, D. A., Cox, C., Jusko, T. A., & Lanphear, B. (2003). Intellectual impairment in children with blood lead concentrations below 10μg per deciliter. *New England Journal of Medicine, 348*, 1517–1526.

Centers for Disease Control and Prevention. (2002). *Managing elevated blood levels among young children: Recommendations from Advisory Committee on Childhood Lead Poisoning Prevention*. Atlanta, GA: Center for Disease Control and Prevention. www.cdc.gov/nceh/lead/CaseManagement/CaseManage_main.htm. Retrieved June 12, 2019.

Centers for Disease Control and Prevention. (2014). *Intimate partner violence: Consequences*. Retrieved from http://www.cdc.gov/violenceprevention/intimatepartnerviolence/consequences.html

Charles Manson: Helter skelter and beyond. (n.d.). Place of publication not identified: Filiquarian Pub. LLC.

Charness, M. E. (2009). Functional connectivity in Wernike Encephalopathy. Journal Watch Neurology. Retrieved from http://neurology.watch.jwatch.org/cgi/content/full/2009/623/4?q=etoc_jwneuro;

Courtois, C. A. (2016). Complex development trauma in adults: Innovation in integrated treatment. Paper presented at the 2016 ABPP Annual Convocation-APA Annual Convention, Denver, CO, 4–7 Aug 2016.

Courtois, C. A., & Ford, J. (Eds.). (2009). *Treating complex traumatic stress disorders: An evidence-based guide*. New York, NY: The Guildford Press.

Dahlkemper, T. R. (2016). *Caring for older adults holistically* (6th ed.). Philadelphia, PA: Terri Wood Allen.

Daniels, J. A., Bradley, M. C., & Hays, M. (2007). The impact of school violence on school personnel: Implications for psychologists. *Professional Psychology: Research and Practice, 38*(6), 652–659. https://doi.org/10.1037/0735-7028.38.6.652

Death, J. (2013). Identity, forgiveness, and power in the management of child abuse by personnel in Christian institutions. *International Journal of Crime and Justice, 2*(1), 82–97.

Death, J. (2018). *Governing child abuse, voices, and victimization. The use of public inquiry into child abuse in Christian institutions*. New York, NY: Routledge.

Demos, E. V. (1998). Differentiating the repetition compulsion from trauma through the lens of Tomkins's script theory: A response to Russell. In J. G. Teicholz & D. Kriegman (Eds.), *Trauma, repetition & affect regulation: The work of Paul Russell* (pp. 67–104). New York, NY: The Other Press.

Dervic, K., Brent, D., & Oquendo, M. (2008). Completed suicide in childhood. *The Psychiatric Clinics of North America, 31*(2), 271–291.

Dietrich, K. N., Berger, O., & Bhattacharya, A. (2000). Symptomatic lead poisoning in infancy: A prospective case analysis. *The Journal of Pediatrics, 137*, 668–571.

Dietrich, K. N., Ris, M. D., Succop, P. A., Berger, O. G., & Bornschein, R. L. (2001). Early exposure to lead and juvenile delinquency. *Neurotoxical Teratol, 23*, 511–518.

Dong, X. (2017). *Elder abuse: Research, practice, and policy*. London/New York, NY: Springer.

Einfeld, S. L., Piccinin, A. M., Mackinnon, A., Hofer, S. M., Taffe, J., Gray, K. M., … Tonge, B. J. (2006). Psychopathology in young people with intellectual disability. *JAMA, 296*(16), 1981–1989.

Ellis, A., Abrams, M., & Abrams, L. (2009). *Personality theories: Critical perspectives*. Los Angeles, CA/London: Sage.

Erickson, M. F., & Egeland, B. (1996). Child neglect. In J. Briere, L. Berliner, J. A. Bulkley, C. Jenny, & T. Reid (Eds.), *The APSAC handbook on child maltreatment* (pp. 4–20). Thousand Oaks, CA: Sage Publications.

Espelage, D., & Swearer, S. (Eds.). (2008). *Bullying in American schools: Social-ecological perspectives on prevention and intervention*. London/Mahwah, NJ: Lawrence Erlbaum Associates.

Essex, M. J., Kraemer, H. C., Armstrong, J. M., Boyce, W. T., Goldsmith, H. H., Klein, M. H., … Kupfer, D. J. (2006). Exploring risk factors for the emergence of children's mental health problems. *JAMA Psychiatry, 63*(11), 1246–1256.

Ewing, C. P., & McCann, J. T. (2006). *Minds on trial: Great cases in law and psychology*. Oxford, UK: Oxford University Press.

Fan, J., Gu, X., Guise, K. G., Liu, X., Fossella, J., Wang, H., & Posner, M. I. (2009). Testing the behavioral interaction and integration of attentional networks. *Brain and Cognition, 70*(2), 209–220. https://doi.org/10.1016/j.bandc.2009.02.002

Fergusson, D., & Woodward, L. (2002). Mental health, educational and social role outcomes of adolescents with depression. *Archives of General Psychiatry, 59*(3), 225–231.

Fink, K. (2015, Jan 21). The 8 scariest psychopaths in history. Retrieved from https://medium.com/@JeriFink/the-8-scariest-psychopaths-in-history-b5f13b9d9aa2.

Finkelhor, D., Turner, H. A., Shattuck, A., & Hamby, S. L. (2013). Violence, crime, and abuse exposure in a national sample of children and youth: An update. *JAMA Pediatrics, 167*(3), 614–621.

Ford, J. D., & Courtois, C. A. (2009). Defining and understanding complex trauma and complex traumatic stress disorders. In C. A. Courtois & J. D. Ford (Eds.), *Treating complex traumatic stress disorders: An evidence-based guide* (pp. 13–30). New York, NY: Guilford Press.

Freud, S. (1894). Neuropsychosis of defense. Standard Edition. London: Hogarth Press.

Freud, S. (1896). Further remarks on the neuropsychosis of defense. Standard edition. London: Hogarth Press.

Friedman, M. J., Resick, P. A., & Keane, T. M. (Eds.). (2007). *Handbook of PTSD: Science and practice*. New York, NY: Guilford Press.

Garbarino, J. (2015). *Listening to killers: Lessons learned from my twenty years as a psychological expert in murder cases*. Los Angeles, CA: University California Press.

Gold, S. D., Marx, B. P., Soler-Baillo, J. M., & Sloan, D. M. (2005). Is life stress more traumatic than traumatic stress? *Journal of Anxiety Disorders, 19*, 687–698.

Greenberg, J. R., & Mitchell, S. A. (1983). *Object relations in psychoanalytic theory*. Cambridge, MA: Harvard University Press.

Grier, W. H., & Cobbs, P. M. (2000). Black rage.

Guinn, J. (2014). *Manson the life and times of Charles Manson*. New York, NY: Simon & Schuster.

Harrell, E. (2019, January 8). Victims of identity theft, 2016. *Bureau of Justice Statistics*. http://www.bjs.gov/index.cfm?ty=pbdetail&iid=6467. Retrieved 12 June 2019.

Hartmann, H. (1939/1958). *Ego psychology and the problem of adaptation*. New York, NY: International University Press.

Herman, J. L. (1992). Complex PTSD: A syndrome in survivors of prolonged and repeated trauma. *Journal of Traumatic Stress, 5*, 377–391.

Herman, J. L. (1993). Sequalae of prolonged and repeated trauma: Evidence for a complex post-traumatic syndrome (DESNOS). In J. R. T. Davidson & E. B. Foa (Eds.), *Posttraumatic stress disorder: DSM IV and beyond* (pp. 213–228). Washington, D.C.: American Psychological Association.

Hinduja, S., & Patchin, J. W. (2012). *School climate 2.0. Preventing cyberbullying and sexting one classroom at a time*. London, UK: Sage Publications.

Hou, S., Yuan, L., Jin, P., Ding, B., Qin, N., Li, L., … Deng, Y. (2013). A clinical study of the effects of lead poisoning on the intelligence and neurobehavioral abilities of children. *Theoretical Biology & Medical Modelling, 10*, 13. https://doi.org/10.1186/1742-4682-10-13

Huss, M. T. (2014). *Forensic psychology. Research, clinical practice, and applications* (2nd ed.). Hoboken, NJ: Wiley.

Indellicati, A. (2019). Effects of childhood and adolescent peer victimization on academic, social, and emotional adjustment in college students. Doctoral dissertation, St. John's University.

Javier, R. A., Dillon, J., DaBreo, C., & Mucci, D. (2013). Bullying and its consequences: In search of solutions – Part II. *Journal of Social Distress and Homeless, 22*(2), 59–72. https://doi.org/10.1179/1053078913Z.0000000008

Javier, R. A. & Herron, W.G. (2018). Understanding Domestic Violence: Theories, challenges, and remedies. New York/London: Rowman & Littlefield.

Kemeny, M. E. (2003). The psychobiology of stress. *Current Directions in Psychological Science, 12*(4), 124–129. https://doi.org/10.1111/1467-8721.01246

Kernberg, O. (1975). *Borderline conditions and pathological narcissism*. New York, NY: Jason Aronson.

Kilpatrick, D. G., Ruggiero, K. J., Acierno, R., Saunders, B. E., Resnick, H. S., & Best, C. L. (2003). Violence and risk of PTSD, major depression, substance abuse/dependence, and comorbidity: Results from the national survey of adolescents. *Journal of Consulting and Clinical Psychology, 71*(4), 692–700.

Koch, W. J., Douglas, K. S., Nicholls, T. L., & O'Neill, M. L. (2006). *Psychological injuries: Forensic assessment, treatment, and law*. New York, NY/London: Oxford University Press.

Landrigan, P. J., Schecter, C. B., Lipton, J. M., Fahs, M. C., & Schwartz, J. (2002). Environmental pollutants and disease in American children: Estimates of morbidity, mortality, and costs for lead poisoning, asthma, cancer, and developmental disabilities. *Environ Health Perspective, 110*, 721–728.

Lereya, S. T., Copeland, W. E., Costello, E. J., & Wolke, D. (2015). Adult mental health consequences of peer bullying and maltreatment in childhood: Two cohorts in two countries. *Lancet Psychiatry, 2*, 524–531. https://doi.org/10.1016/S2215-0366(15)00165-0

Linder, D. (2007). The Charles Manson (Tate-Labianca Murder) trial. Available at SSRN: https://ssrn.com/abstract=1029399 or https://doi.org/10.2139/ssrn.1029399

Luria, A. (1973). *The working brain: An introduction*. New York, NY: Basic Books.

Luyten, P., Mayes, L. C., Fonagy, P., Target, M., & Blatt, S. (Eds.). (2017). *Handbook of psychodynamic approaches to psychopathology*. New York, NY/London: The Guilford Press.

Mahler, M., Pine, F., & Bergman, A. (1975). *The psychological birth of the human infant: Symbiosis and individuation*. New York, NY: Basic Books.

Malaktaris, A. L., & Lynn, S. J. (2019). The phenomenology and correlates of flashbacks in individuals with posttraumatic stress symptoms. *Clinical Psychological Science, 7*(2), 249–264. https://doi.org/10.1177/2167702618805081

Manson, C. [Interview by D. Sawyer]. (1995). *ABC News*.

Masten, A. S., & Cicchetti, D. (2010). Developmental cascades. *Development and Psychopathology, 22*, 491–495. https://doi.org/10.1017/S0954579410000222

McCluskey, U. (2000). Abuse in religious institutions: An exploration of the psychosocial dynamics in the Irish context. In U. McCluskey & C. A. Hooper (Eds.), *Psychodynamic perspectives on abuse: The cost of fear*. London/Philadelphia, PA: Jessica Kingsley Publishers.

McCrea, M., Guskiewicz, K. M., Marshall, S. W., Barr, W., Randolph, C., Cantu, R. C., … Kelly, J. P. (2003). Acute effects and recovery time following concussion in collegiate football players: The NCAA concussion study. *JAMA, 290*(19), 2556–2563.

McGillivray, J. A., & McCabe, M. P. (2006). Early detection of depression and associated risk factors in adults with mild/moderate intellectual disability. *Research in Developmental Disabilities, 28*(1), 59–70.

Mikulincer, M., & Shaver, P. R. (2017). Attachment-related contributions to the study of psychopathology. In P. Luyten, L. C. Mayes, P. Fonagy, M. Target, & S. Blatt (Eds.), *Handbook of psychodynamic approaches to psychopathology* (pp. 27–46). New York, NY/London: The Guilford Press.

Montaldo, C. (2018, August 23). Biography of serial killer Albert Fish. Retrieved from https://www.thoughtco.com/serial-killer-albert-fish-973157.

Morgan, R. E., & Truman, J. (2018, December 21). Criminal victimization, 2017. *Bureau of Justice Statistics*. http://www.bjs.gov/index.cfm?ty=pbdetail&iid=6466. Retrieved 12 June 2019.

Morris, D. O., Javier, R. A., & Herron, W. G. (2015). *Specialty competencies in professional psychology. Specialty competencies in psychoanalysis in psychology*. New York, NY: Oxford University Press.

Moylan, C., Herrenkohl, T., Sousa, C., Tajima, E., Herrenkohl, R., & Russo, M. (2010). The effects of child abuse and exposure to domestic violence on adolescent internalizing and externalizing behavior problems. *Journal of Family Violence, 25*(1), 53–63. https://doi.org/10.1007/s10896-009-9269-9

Myers, W. C., Gooch, E., & Meloy, J. R. (2005). The role of psychopathy and sexuality in a female serial killer. *Journal of Forensic Sciences, 50*(3), 1–6. https://doi.org/10.1520/jfs2004324

National Center for Mental Health Promotion and Youth Violence Prevention. (2012). http://www.promoteprevent.org/sites/www.promoteprevent.org/files/resources/childhood%20trauma_brief_in_final.pdf. Retrieved 8/12/19

National Coalition Against Domestic Violence. (2017). http://ncadv.org/learn-more/statistics. Retrieved 8/9/2017

National Institute of Mental Health (NIMH) (2003). Suicide facts. Retrieved from http://www.nimh.nih.gov/research/suifact.cfm;

Needleman, H. L., McFarland, C., Ness, R. B., Fienberg, S. E., & Tobin, M. J. (2002). Bone lead levels in adjudicated delinquents: A case control study. *Neurotoxicology and Teratology, 24*, 711–717.

Nevid, J. S., Rathus, S.A., & Greene, B. (2018). *Abnormal Psychology in a Changing World*. N.Y.: Pearson.

O'Reilly, J., & Chalmers, M. P. (2014). *The clergy sex abuse crisis and the legal responses*. New York, NY: Oxford University Press.

Oudekerk, B.A., Musu, L., Zhang, A., Wang, K., & Zhang, J. (2019). *Bureau of Justice Statistics*. http://www.bjs.gov/index.cfm?ty=pbdetail&iid=6526. Retrieved 12 June 2019.

Patel, N. B., Xu, Y., McCandless, L. C., Chen, A., Yolton, K., Braun, J., … Lanphear, B. P. (2019). Very low-level prenatal mercury exposure and behaviors in children: The Home Study. *Environmental Health, 18*(4). https://ehjournal.biomedcentral.com/articles/10.1186/s12940-018-0443-5. Retrieved August 20, 2019.

Paulus, D. J., Tran, N., Gallagher, M. W., Viana, A. G., Bakhshaie, J., Garza, M., … Zvolensky, M. J. (2019). Examining the indirect effect of posttraumatic stress symptoms via emotion dysregulation on alcohol misuse among trauma-exposed Latinx in primary care. *Cultural Diversity and Ethnic Minority Psychology, 25*, 55–64. https://doi.org/10.1037/cdp0000226

Pelkonen, M., & Marttunen, M. (2003). Child and adolescent suicide epidemiology, risk factors, and approaches to prevention. *Pediatric Drugs, 5*(4), 243–265.

Pesta, A. (2019, July 29). Time, *194*(4), 48–52. www.time.com

Peters, L. (2017, July 13). Eight suspected psychopaths from history whose stories are still chilling in 2017. Retrieved from https://www.bustle.com/p/8-suspected-psychopaths-from-history-whose-stories-are-still-chilling-in-2017-70014.

Pocock, S. J., Smith, M., & Baghurst, P. (1994). Environmental lead and children's intelligence: A systematic review of the epidemiological evidence. *BMJ, 309*, 1189–1197.

Ramsland, K. M. (2005). *Inside the minds of mass murderers: Why they kill*. Westport (Conn.): Praeger.

Rasmussen, A., Verkuilen, J., Jayawickreme, N., Wu, Z., & McCluskey, S. T. (2019). When did posttraumatic stress disorder get so many factors? Confirmatory factor models since DSM-5. *Clinical Psychological Science, 7*(2), 234–248.

Recognizetrauma. (2019). http://recognizetrauma.org/index.php. Retrieved 1/26/2019.

Richardson, L., Freeh, B. C., & Acierno. (2010). Prevalence estimates of combat-related PTSD: A critical review. *Australian and New Zealand Journal of Psychiatry, 44*(1), 4–19.

Rojas-Flores, L., Clements, M. L., Hwang Koo, J., & London, J. (2017). Trauma and psychological distress in Latino citizen children following parental detention and deportation. *Psychological Trauma: Theory, Research, Practice, and Policy, 9*(3), 352–361. https://doi.org/10.1037/tra0000177

Rosen, G. M., & Lilienfeld, S. O. (2008). Posttraumatic stress disorder: An empirical evaluation of core assumptions. *Clinical Psychology Review, 28*, 837–868.

Russell, P. L. (1998). The role of paradox in repetition compulsion. In J. G. Teicholz & D. Kriegman (Eds.), *Trauma, repetition compulsion, and affect regulation: The work of Paul Russell* (pp. 1–22). New York, NY: The Other Press.

Schwarz, L., Penna, S., & Novack, T. (2009). Factors contributing to performance on the Rey Complex Figure Test in individuals with traumatic brain injury. *The Clinical Neuropsychologist, 23*(2), 255–267. https://doi.org/10.1080/13854040802220034

Sciarillo, W. G., Alexander, G., & Farrell, K. P. (1992). Lead exposure and child behavior. *American Journal of Public Health, 82*, 1356–1360.

Serena, K. (2018, Jan 30). The gruesome crimes of Albert Fish, the Brooklyn Vampire. Retrieved from https://allthatsinteresting.com/albert-fish.

Small, G. W., Kepe, V., Siddarth, P., Ercoli, L. M., Merrill, D. A., Donoghue, N., … Barrio, J. R. (2013). PET scanning of brain tau in retired National Football League players: Preliminary findings. *American Journal of Geriatric Psychiatry, 21*(2), 138–144.

Smith, L. S., & Stover, C. S. (2016). The moderating role of attachment on the relationship between history of trauma and intimate violence victimization. *Violence Against Women, 22*(6), 745–764.

Solms, M., & Turnbull, O. (2002). *The brain and the inner world: An introduction to the neuroscience of subjective experience*. New York, NY: Karnac Books.

Spitz, R. A. (1946). Anaclitic depression: An inquiry into the genesis of psychiatric conditions in early childhood. *Psychoanalytic Study of the Child, 2*, 313–342.

Steele, M., & Steele, H. (2017). Attachment disorders. In P. Luyten, L. C. Mayes, P. Fonagy, M. Target, & S. Blatt (Eds.), *Handbook of psychodynamic approaches to psychopathology* (pp. 426–444). New York, NY/London: The Guilford Press.

Sue, D. W., Capodilupo, C. M., Torino, G. C., Bucceri, J. M., Holder, A. M. B., Nadal, K. L., & Esquilin, M. (2007). Racial microaggression in everyday life: Implications for clinical practice. *American Psychologist, 62*(4), 271–286.

Suk, J. (2010). The trajectory of trauma: Bodies and minds of abortion discourse. *Columbia Law Review, 110*(5), 1193–1252. Downloaded from 149.68.240.133 on Fri, 23, March 2018 16:57:57 UTC http://about.jstor.org/terms.

Sullivan, H. S. (1955). *Interpersonal theories of psychiatry*. New York, NY: Tavistock Publications.

Sumner, J. A., Colich, N. L., Uddin, M., Armstrong, D., & McLaughlin, K. A. (2019). Early experiences, of threat, but not deprivation, are associated with accelerated biological aging in children and adolescents. *Biological Psychiatry, 85*, 268–278. https://doi.org/10.1016/j.biopsych.2018.09.008

Teasdale, T. W., & Engberg, A. W. (2003). Cognitive dysfunction in young men following head injury in childhood and adolescence: A population study. *Journal of Neurological and Neurosurgical Psychiatry, 4*(7), 933–936.

Tomkins, S. (1962). *Affect, imagery, consciousness (vol. 1): The positive affects*. New York, NY: Springer.

Tomkins, S. (1978). Script theory: Differential magnification of affects. In H. E. Howe Jr. & R. A. Dunstbier (Eds.), *Nebraska symposium on motivation* (pp. 201–236). Lincoln, NB: University of Nebraska Press.

Trothen, T. J. (2012). Shattering the illusion. In *Child sexual abuse in Canadian religious institutions*. Waterloo, ON: Wilfrid Laurier University Press.

U.S. Department of Health & Human Services. (2012). Child maltreatment, 2011. https://www.acf.hhs.gov/sites/default/files/cb/cm11.pdf. Retrieved 8/12/19

Ungar, M. (2013). Resilience, trauma, context, and culture. *Trauma, Violence, & Abuse, 14*(3), 255–266.

Walters, M., L. Chen, & Breiding, M. J. (2013). *The National Intimate Partner and Sexual Violence Survey.* Retrieved from http://www.cdc.gov/violenceprevention/pdf/nisvs_sofings.pdf

Warburton, W. & Anderson, C. A. (2018). On the clinical applications of the General Aggression Model to understanding domestic violence. In R. A. Javier & W.G. Herron (Eds.). Understanding domestic violence: Thories, challlenges, and remedies. (Pp. 71–106). New York/London:Rowman & Littlefield.

Waterman, E. H., Pruett, D., & Caughey, A. B. (2013). Reducing fetal alcohol exposure in the United States. *Obstet Gynecol Survey, 68*(5), 367–378. https://doi.org/10.1097/OGX.0b013e31828736d5

Weissman, M. M., Wickramarante, P., Nomura, Y., Warner, V., Pilowsky, D., & Verdeli, H. (2006). Offspring of depressed parents: 20 years later. *American Journal of Psychiatry, 163*(6), 1001–1008.