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IMPULSIVE

Publisher: Amazon KDP
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Cover by Leo Bugel

First Edition 2024

INTRODUCTION

Impulsivity is a national health problem at the heart of aggression, violence, theft, all types of crime, and in diseases such as substance abuse, over-eating, shopping, gambling, sex, and even sexual identity. Impulsivity and behavioral dysfunction is seen from the single householder all the way to government decision and indecision. It is a national health crisis.

Following are four case studies that examine the tiny details of impulsivity as well as studies of the brain and environment, the microcosm of DNA and the macrocosm of humanity. Impulsivity has its very own spot in the DNA structure, 22q11, where mutation and maladjustment causes havoc on human interaction and action. This essay unravels impulsivity from the microscopic to the scope of a nation.

IMPULSIVE

The Office store, the size of a football field, was like an alluvial fan spread with piles of files, pens and pencils racked and sorted like deposition, equipment shelved like boulders in a forest, furniture the size of refrigerators, and one department with leather bags as thin and supple as sheets of paper birch. The eye goes to what it likes. A leather briefcase. Not needed, never seen before, but a thing to behold. The nervous system responds, the heart beats harder, dew appears on the skin, a kind of jangling in the nerves, and the obsession in the moment comes alive. Impelled, driven by a thrilling force beyond control to feel, lift, and walk out as if the bag was always on that shoulder. At home, justifications: The store charges too much; the store was dirty and had never been cleaned, the company won't miss it.

This double action is known as impulsivity. The impulse to steal, to have in the moment an object inappropriate to need, an object previously unbeknownst, and without forethought of rational examination coupled with behavioral disinhibition. Some people are predisposed to act without thinking. Young men half drunk commit crimes suddenly and without warning. Young women in heated lust get pregnant with no forethought. Careful thoughtful planning before action is neurologically nonexistent. Rapid accidental reactions to

external and internal stimuli go forth in a gush without regard to consequences both to self and others.

Impulsivity has three components any one of which or all three may be working in concert: Physics; psychological; and neurological. Impulse in physics is defined as the quantity the impact has on an object over a period of time. It is Newton's Second Law of Motion. Psychological impulsivity may involve several associated psychiatric disorders: Alcoholism, bipolar I disorder, antisocial personality disorder, borderline personality disorder, anxiety disorder, post-traumatic stress disorder. Neurological disorders include the biological and neuropsychological failure to inhibit—such as a boat ride in a storm—a cognitive component that is the failure to inhibit behavioral impulses and thoughts; learned social behavior such as socialization from within a family; and consequences which are the failure to examine situations, self, and others. Sometimes in the subject symptoms from two or more disorders may be comorbid and sometimes none; the subject may simply be impulsive some or most of the time.

The word impulse derives from late Middle English; it means tending to impel; and from the Latin: driven onwards, 18th century. The object, acting on an impulse, receives approaching waves that contain an impulsive neurotransmitter component.

PHYSICS

In physics acting on an impulse comes from classical mechanics (IMP) and is the change in momentum (M) of an object (O) and the change in velocity (v) that the object receives over time. It can be measured. IMP > O > M. Momentum is a vector quantity, an object that has both magnitude and direction, so impulse is also a vector quantity. (These formulas are illustrations only.) Newton's Second Law of Motion states that the rate of change of momentum of an object is equal to the resultant force (F) acting on an object (O). So the impulse is delivered by a steady force (F) acting on the object. M > F > O = E (Elapsed time).

Impulse is a concept in physics used to quantify the impact that force has on an object over time. There are four concepts of impulse: 1. Pure impulse; 2. Suggestion impulse; 3. Remainder impulse; 4. Planned impulse. If these concepts are applied to a life situation such as the impulse to steal, perhaps for the first time, then metaphorically, suggestion impulse and planned impulse would be redundant. Suggestion impulse is the impulse to steal by a whispered goad; planned impulse is unencumbered by conscious planning. Pure impulse is equal to action and motion congruently; remainder impulse occurs

when stealing continues after the initial action.

The impulse experienced by the object equals the change in momentum of the object. Hence, the impulse and the action are equal. In a collision, such as stealing an item, objects experience an impulse: Steal; the impulse causes and is equal to the change in momentum, walking along, impulse = change in momentum, go steal. The applied force is consciousness as sudden decision.

Impulse refers to a speedy force or impact; hence the sudden force acting on an object for a short interval of time. Bully = impact = quick hit = little kid = less than one second. The harder the punch the quicker or greater the force with increased velocity. Bully gets a sudden thought impulse to punch a little kid. Bully pulls back his arm and strikes, instantly. If the hit is hard and damaging, the velocity is fast and short in time.

Impulse, a sudden force or desire, could be electrical or could be the impulse to spend a precipitated inheritance of $50 thousand dollars acting on an abrupt feeling or thought following an impulse. Momentum, a measure of an object's resistance to stopping, such as the bully or the spender, is interchangeable with impulse. I = M. Impulse refers to the quantity (Q) of the net force applied to an object. M = Q. Impulse is the quantity of force and the time interval; it is

the increase of or decrease of an object's momentum. An object's change in momentum is equal to it's impulse. An intense impulse has greater harder velocity in relation to the object. Momentum is measurable; how much force did it take for the bully to break the little kid's nose? A baseball pitcher's throw is measurable over time. Change (C) in momentum of applied force and elapsed time (T): I = C = M = F = T. With energy and strength the force can keep growing and building.

Impulse is the outcome of force applied for the time duration from the bully's arm to the little kid's face. Force equals mass in acceleration. The rate of change of velocity called impulse is the product of force and duration; the change in momentum is called impulse. An impulse occurs because of a nerve, the difference in electrical charge across the plasma membrane of a neuron.

An object in momentum can be slammed to a stop if a force is applied against it for a duration of time. Bully's arm swings out; principal grabs and holds, little kid is not hit. An unbalanced force accelerates an object speeding it up or slowing it down. Extending time results in decreased force and minimizes the effect of the force in a collision. Increasing the collision time by a factor of 10 will result in a tenfold decrease in the force. Move the bully back 10 feet and the damage to the little kid's nose is minimized. A heavy truck traveling on the

highway has more force than a smaller car traveling at the same speed; greater mass is also harder to stop. Impulse equals force over time.

Impulse momentum theorem states that the impulse an object encounters is equal to the object's change in velocity. I = O = V. Thought equals impulse equals object equals velocity. The stronger the impulse, falling in love, the stronger the velocity. A girl falls in love with a boy. She can't get to that boy so she runs away and waits for a bus to take her to the mall where he is waiting. The bus doesn't come but a stranger in a car does come and offers her a ride. He drives her 30 minutes out of the way, stops the car, and brutally rapes her. She gets away but he runs after her and eventually captures her in a cemetery hiding behind a 1700s tombstone. He rips a stone out of the ground and crushes her scull and back with the stone. Her impulse to see the boy was as strong as her irrational judgment to get in the car with a stranger. She experienced an impulse equal to her change in velocity. It took less than 20 minutes for the event to occur. Force, time, and motion are in relationship.

Cars display a massive change in motion as they go from high speed to a full stop screeching into a driveway. If the amount of time is increased in the high speed careen into the driveway it reduces the amount of force more gradually than if

the car crashed. If the amount of time is decreased and the car speeds into the driveway and hits the house the collision is probably fatal. Airbags reduce the force. A climber roped to another climber falls into a crevasse; as he falls the climber behind holds the rope until he too is dragged to the edge and falls. The second climber will fall at a greater velocity than the first and hit the snow bridge first cushioning the fall of the first climber. Greater speed equals greater force. There too a body that has motion cannot be stopped. Bodies in motion stay in motion. Apply a force against the motion for a particular duration of time, as in the second climber holding the rope for the first, and the result in decreased motion for the first climber but increased motion for the second climber. The greater the motion the higher amount of force is required to bring the body to a stop; hence velocity changes momentum.

PSYCHOLOGICAL

Alcoholism

Alcoholism: Alcoholics tend to suffer from anxiety as a symptom of the disease. Alcohol suppresses nervous and social jitters and there is a sub-factor of abuse called alcoholism anxiety. Fifty percent of abusers suffer from anxiety whereas 11 percent of the U.S. population suffers from anxiety. Stressed alcoholics increase the negative

affect by abuse. They are shy, anxious, and pessimistic. Drinking is their effort to cope with unpleasant subjective experiences associated with such traits. They tend to be antisocial; aftermath of drinking results in lowered fear and guilt for engaging in social rule-breaking. This negative affect is an inherent trait of alcoholics.

Criteria for alcoholism: dependence; distracted by time spent seeking alcohol; recovering from debilitating hangovers; drinking longer than intended. Alcoholics tend to drink before the party, during the party, and after the party. The sub-group of alcoholism with anxiety has the same symptoms and traits as those without anxiety. Impulsivity is a hallmark of drunks who engage in risky behavior as they exhibit phobias, panic disorder, and generalized anxiety. The disorder itself causes risks due to impulsivity.

Scientists have found a distinct neurobiology associated with alcoholics who tend to inherit the gene from parents and the symptoms, behaviors, from conditioning. All anxiety and mood disorders contribute to negative emotionality and the risk for alcoholism. It is preexisting; there is a positive correlation between birth alcoholism and the attendant symptoms caused by the disease via activated drinking and dependence. An alcoholic who never takes a drink will have certain traits and behaviors regardless of use. The effect

cannot precede its cause; however, preceding conditions do not necessarily cause later outcomes, i.e. the alcoholic who never takes a drink. Anxiety and impulsivity precedes alcoholism in 75 percent of people who had both conditions, particularly social anxiety, which is more common than alcoholism but substantially increases alcoholism. There is a poor response to treatment: Six in 10 active alcoholics will relapse within two years. Alcoholics who drink to cope have a five fold prediction of developing full blown dependence within three years; whereas people who did not drink to cope with symptoms had a marginal risk for such development. The three-stage pathodevelopmental runway to alcoholism caused by neurobiological factors and stress is at the center of addiction pathology (Koob et al 2023).

Chronic substance abuse affects the prefrontal cortex, the basal ganglia and extended amygdala. There are cycles: The first binge intoxication releases dopamine, opioid peptides, and causes positive reinforcement. The impulse stage come with a goal: Increasing pleasure. The brain adapts and neuroadaptations reset the baseline. Eventually the baseline is reset to dependence wherein more and more alcohol is required to release the same pleasure factors. Over time the reward circuits are blunted like a rock face without a ridge and these brain chemicals are deregulated: Corticotropin, norepinephrine, in the central

amygdalae. A negative unwanted affect predominates during sobriety and withdrawal.

This is the shift from impulsive to compulsive, always by negative reinforcement, wherein compulsive use is aimed at decreasing the negative affect caused by the reset. Every time alcohol consumption is upped to receive more pleasure the baseline is reset. Finally preoccupation and anticipation—can't wait until five pm when the cocktail hour begins—undermines attempts at abstinence and alcoholism becomes chronic to maintain physiology, stress, and mood. Impulsive = compulsive = obsessive. The great reset.

Bipolar I Disorder

Bipolar I Disorder (BPD) exists in one percent of the population. It is characterized by hypo mania and moderate depression or mixed states. The patterns of occurrence and recurrence may be every three months or every three days or every three hours. Impulsivity defined herein as the predisposition to unplanned reactions to internal or external stimuli without regard to negative consequences (Moeller et al 2023). It is not in itself a psychiatric disorder but a symptom of another disease in the same way dementia is not in itself a disease but a symptom of another medical

diagnosis. Impulsivity tends to be more common in personality disorders and alcoholism. How many irritable premanic people have exploded on a spouse that led to divorce. How many people dive into a lake without knowing the depth of the water. It is a lack of behavioral inhibition which explains its relation to mania, manic episodes, and impulsivity.

Bipolar I disorder comes with morbidity in social and family situations, job impairment, accidents, suicides, and violence. Bipolar manic phases display the highest levels of aggression with impulsive behaviors. The Barratt Task Scale measures task delays and memory of patients on medication and shows elevated levels in non-planning, attention, and motor skills—state and trait related impulsivity. A state is controlled confined aggression with limits; a trait is pervasive in multiple situations. Lifetime suicide attempts, suicide, and aggressiveness are higher compared to healthy subjects. Of the subjects 17 percent attempt suicide versus 12 percent of subjects suffering from major depressive disorder. In sever cases of bipolar disorder the risk of successful suicide is higher than in other mental illnesses. Impulsivity is a trait feature of these cases and the impulsive scores are higher in attempted suicides than in healthy subjects. Baseline impulsivity as state and trait features are associated independent of attempts. A hallmark of bipolar mania disorder is this failure to

resist an impulse and the drive to perform harmful acts: Cutting, driving recklessly, stealing, promiscuity, gambling, and compulsive shopping; these traits are higher on all scales compared to other mental disorders and healthy people.

Impulsive thinking: Impaired concentration rapid thoughts, acting without forethought, inability to plan, disorganization, and lack of regard to consequences. A manic person might be on the phone for a job interview with some clanging speech and at the same time answer a knock at the door and sort through clothes just purchased, fling the wrapping and the clothing around the room, and mix a martini in the midst of the interview. Bipolar people act from tension and anxiety even in pleasant moods. At the end of the fireworks phase depressive symptoms force the person into bed with curtains drawn; both phases usually mirror length of time. Impulse momentum theorem states that the impulse an object encounters is equal to the object's change in velocity. Guilt and self-reproach, fatigue, are aftermath symptoms of the cycle.

Comorbidity for impulse control and bipolar disorder emerge in families, history, biology, and treatment. Symptoms originate in neurotransmission, response to mood stabilizers, and antidepressants. Sometimes impulsivity evolves into obsessive compulsive disorder. Impulse and mania are

strictly related (McElroy eat al). Bipolar subjects experience Positive Urgency, the tendency to act impulsively with strong emotion but psychosocial function is poor; vs. Response Inhibition, delayed gratification, extreme deficits in the manic phase but normal when switching to depression (Muhtadie et al 2023). Impulsive bipolar I personality disorder is best distinguished as such: “Choice of a small short-term gain at the expense of a large long-term loss” (Ainsley 2023).

Antisocial Personality Disorder

Antisocial Personality Disorder (ASPD) has singular impulsive traits and criminal behavior. Subjects suffering from ASPD are easily recognizable by their acts. On TV in countless cop shows the bad boy is irresponsible, maladaptive, deceitful, reckless, and uncaring. Certain girls are attracted to such characters. In life they are the children every parent worries about—young boys who start out stealing, smoking, trying drugs, and lighting fires. In adolescence they repeatedly break the law. ASPD’s behavior occurs on a spectrum from atrocities to occasional thieving. A boy in the news once climbed to the roof of a county clerk’s office and threw firecrackers at passerby. Another lit six buildings on fire in one night and thankfully he made sure that there were no people inside. Criminal

behavior is key to the disorder and the demographics are male who tend to come from poor unregulated households with minimum supervision. Another key component of ASPD is impulsivity: Nearly every act is spur of the moment; alone or in a group a bored boy suddenly gets a bright idea to throw boards at cars from a bridge. As they "play" they laugh, run away and hide when law enforcement appears on the scene. They are often caught and rarely escape jail time but they are repeat offenders and will get right back to criminal conduct once they are released. As children their life of crime begins with conduct disorder.

Following is a list of notable states and traits of ASPD:

-Exploit, manipulate, violate rights
-Lack concern, no regret, remorse distress of others
-Irresponsible disregard
-Inability to sustain long term relationships
-Unable to control anger
-Lack guilt, failure to learn from mistakes
-Blame others for their problems
-Repeatedly break the law
-History of conduct disorder in childhood
-Truancy, delinquency, aggressiveness
-Genetics, traumatic childhood
-Parents misused alcohol, drugs

-Unemployed, homeless (Swan et al 2023)

These signs are part of everyday personality and comportment. The impulsive aspect of ASPD is a complex construct, which means that inherent is a mental image or idea, a theoretical complex from a number of simpler elements: Character is a construct of personal values, rules, ethics, self-control, and willpower. These images are formed in childhood, either learned or genetic, and may be absent or present in a positive or negative sense. For example one child from a group of three in a family may have ASPD while the other two are normal. All constructs may be deconstructed in psychological counseling or with medication. These are domains of cognition and action that result from an inability to evaluate stimuli deeply before responding, called Rapid Response Impulse. ASPDs display a shorter delay for reward—break into that car now or miss the opportunity—with significant impulsive reactions. Drug use, especially cocaine, exasperates impulsiveness.

Brain regions affected in ASPD are the prefrontal cortex, superior temporal gurus, amygdala, hippocampus complex anterior cingulate cortex. These regions are visible in brain scans as they light up with reduced cortical thickness and are specifically related to the disorder via genetics. Deficits in regions of frontal gurus

are most prevalent (Raine et al 2000). There is an 11 percent reduction in gray matter volume along with reduced autonomic activity in heart and skin conductance response. Decreased white matter fiber bundles are present along with fiber fractional anisotropic reduction which respectively connects lambic region systems to the orbital frontal cortex, collective deficits in underlying networks. Decreased regional cerebral blood flow to the right prefrontal cortex and temporal cortex.

Emotional deregulation and impulsivity include aspects of non-empathy in the prefrontal cortex, explicitly the ventromedial prefrontal cortex. ASPD impulsivity is crucially seen in these areas of the brain. There is significant impairment in personality functionality which denotes that the individual must have pathological personality traits that show antagonism and disinhibition. The risk-taking seen in the disorder is a symptom of impulsivity present in nearly all of ASPD's actions (Biel 2023). Excessively reduced emotional intensity and the inability to perceive one's own and others emotions; this insufficient emotion is key to ASPD. There is a deficit in recognizing faces fearful or happy in other individuals; however, increasing levels of oxytocin are able to improve recognition and reduce aggression.

Hence, brain impairments include choice, impulse, and response. Choice is an

inability to refrain from choosing an immediate small reward for a delayed larger reward. Impulse is a motor response: Acting without thinking, voluntary control over a stimulus response is absent.

Borderline Personality Disorder

Borderline Personality Disorder (BPD) is a heartbreaking mental illness rooted in a failure to attach, usually because a mother or parental figure was absent or neglectful. To fully heal a BPD would have to be entirely re-parented although there are some current neuropsychological breakthroughs in counseling.

A BPD is insecure and unstable especially in relationships. A BPD begs for constant reassurance and will vacillate between periods of acting stable in character traits then completely fall apart and not know what she believes. There is childhood trauma such as sexual abuse, physical, and mental abuse, explicitly neglect. BPDs have a catastrophic fear of abandonment and will go to the moon to hold on to a partner or friend; when such suggests there is a problem her sensitivity to perceived criticism becomes perceived rejection. Black and white thinking is key—the disturbed idea that a person, place, or thing is either all good or all bad, wrong or right—she rejects any gray areas in between. Her lover or friend is

either put on a pedestal or intentionally devalued and she will gossip about the differences with anyone who will listen.

Subtype of BPD is impulsiveness. She demonstrates histrionic dramatic reactions to hurt and contradiction. Compulsive flirtations make her captivating, elusive, and mercurial, charismatic and charming; in these periods high energy may make her promiscuous. Thrill seeking may lead to shoplifting, reckless driving, and too many sexual encounters. All of this denotes a pathological skill for manipulation, dragging her partners with her on unstable adventures, until they have had enough and leave her.

Generalized BPD takes over in a kind of major depression and she becomes insecure with low self-esteem, excessive self-criticism, ill, and even suicidal. At the heart of BPD are feelings of emptiness and dissociative states. She may be highly intelligent and educated but when rejected nothing can make her feel worthwhile. Emotions are easily aroused and disproportionally intense. One lover said "You don't need an axe to crack a nut," referring to her soaring histrionics.

Physically she becomes anxious and nervous exhibiting tension, worry, and panic, fear of losing control, often over situations other people ignore. Deep shame follows these energetic events when, because

of her erratic behavior, separation anxiety sets in, and she may become hostile, retaliating by stealing money, hooking up, and throwing away her plans for the future.

Neurologically the BPD has disturbed estrogen levels and cortisol levels are elevated. Brain scans show decreased size in the amygdala and hippocampus. Genetics play a 65 percent role in BPD passing on attachment disorders through generations.

Anxiety Disorder

Impulsivity and Anxiety Disorder (AD) share a negative relationship. The anxious individual may be influenced by a preexisting impulsivity toward behavior disinhibition. There are definite links between AD and impulse control. The extroverted impulsive individual is a state in which decision making and consequences are taken into account; whereas the introverted impulsive AD will act without thinking. The psychotic impulsive does not consider risks. Attentional impulsive ADs are unable to focus due to cognitive instability. Planning and ability to think carefully are affected.

Genetic components affect neurotransmission of serotonin and dopamine. Motor activity causes the AD to act on the spur of the moment without

inhibition and perseverance. The anxious person cannot conform; responses within the environmental context cause response inhibition such that the person cannot act, as if frozen in the moment. The AD makes errors of commission affected by the impulsive process of attention and executive functions which lie in the prefrontal cortex—executive control and cognitive decisions, planning are absent. State and trait conditions of impulsivity are higher in ADs than in control subjects. In effectively working neural networks the impulse to act rashly is based on arousal of the lambic system inhibited by communication from the prefrontal cortex.

Core features of AD include self-harm, avoidance, safety seeking, and anxious apprehension. Impulsivity in AD is not always a maladaptive trait; it may be functionally beneficial to act without forethought, such as responding to a threat in a dark alley, running from a negative, hostile individual, or leaping from a burning building. More subtly the AD may simply benefit from impulsive responses to dissentient situations such as an argument with a lover. Dysfunctional impulsive ADs create troubling or harmful acts to self and others such as driving while intoxicated or holding a baby on a ledge to happily scan a view.

ADs engage in impulsive behavior when negative internal experiences

overwhelm the instinct to abjure. In most situations the AD will avoid harm, seek a safe space alone, and show anxious apprehension. A man will leave a meeting and retreat into the hallway to avoid displays of anxiety. The impulsive function kicks in to regulate negative affects and uncertainty. If an AD is invited to a party and attends he will often retreat to the bathroom or a bedroom to avoid uncertain outcomes—standing in a crowd of rowdy people, jumping into a pool, attraction—avoidance is a self-soothing protective sense often felt to eschew catastrophes that will never happen.

Post Traumatic Stress Disorder

Post Traumatic Stress (PTSD) is a disorder triggered by a terrifying event that an individual experienced or witnessed identified by flashbacks, nightmares, and severe anxiety with panic attacks. Soldiers returned from combat and women sexually assaulted will often have uncontrollable thoughts, intrusive memories, avoidance, harsh mood changes, physical and emotional reactions about the event that can last for months or years and interfere with daily tasks. Prominent are disrupting disturbing images that may or may not be directly related to the event. A sexual assault victim may experience PTSD after her children are born; the mind creates rescue scenarios in

which the children are thrown down a bank and the mother has to save them. These images are like cartoon pictures that whip through the mind and cause distress. A soldier who comes home to a wife may avoid her and patrol his property with an assault rifle while flashbacks of traumatic images stab his mind—whole families blown up with napalm—while he struggles to keep the images in the past but repeatedly applies them to the current scene. These recurrent and unwanted distressing memories of traumatic events are relived through flashbacks that evolve and creep into the present.

Severe emotional distress oftentimes climaxes into a breakdown through physical reactions such as ducking, startling, hiding from people and places. It is impossible to plan for the future as the PTSD victim has negative thoughts about the future, others, and the world. In therapy there are usually memory problems with important aspects of the event, especially for a woman who was raped; she may think of only certain aspects of the perpetrator or his car while her mind fills in the broken parts.

PTSD can lead to full blown major depression as the victim has difficulty maintaining close personal relationships with a spouse, children, or friends from whom they feel detached. Encouraging the victim to engage in favorite pastimes such as movies, games, car mechanics, cooking,

shopping may be met with disinterest. Positive emotions will turn negative as the victim feels numb and disassociated from the environment. In contrast the PTSD victim is easily startled by sounds that mimic explosions or the sudden appearance of an unknown man following. Everywhere the victim is hypervigilant locking down the house or fear of getting out of the car.

These symptoms culminate in insomnia, poor concentration, and detonations of irritability, angry outbursts, and aggressive behavior. The soldier may meet strangers at the door with a cocked revolver and the rape victim may permanently deny her husband sexual activity. Conversely the male soldier may loose interest in sex and the female rape victim may point a knife or a gun at a family member whose appearance takes on that of the rapist. The female sexual assault victim may have trouble maintaining a sexual relationship for the rest of her life. The mind fills in and creates pieces from the traumatic event and pastes them into the present. These behaviors result in overwhelming guilt and shame.

Impulsiveness and PTSD are positively related. The PTSD victim is a pathological thrill seeker and risk taker. An airplane crash survivor walked cockily on the ledge of a building and finally ingested a basket of strawberries, fully aware that he was allergic, thus succumbing to

anaphylactic shock. As he was dying he was saying “save me”; metaphorically the PTSD sufferer cannot save himself. Subtype of impulsive PTSD is externalized high negativity and low constraint of impulsiveness. Internalizing PTSD is most likely to result in depression and anxiety. Externalizing PTSD impulsivity will most likely result in car crashes or suicide attempts from a kind of reckless madness. Positively, engaging in reckless impulsive behaviors, becoming anxious or depressed or angry, may functionally assist in reducing PTSD’s catastrophic affect if the behaviors are not tragic or drastic.

Negative urgency and severity in thrill seeking mimics biological arousal experiences during the traumatic event. This is a physiological, psychological fact of key PTSD impulsive behaviors: The body and the mind recreate, mimic, act out, the emotional event repeatedly until some climatic event releases the sufferer from the repetitions.

Sensation seeking is a predicator of all PTSD clusters along with intrusive thoughts, capacity to process information following trauma. The PTSD victim will behave impulsively to redirect attention or to distract from intrusive thoughts. Such thoughts can be extremely dangerous when enacted, such as the victim of the plane crash who repeatedly subjected himself to the edge of death. Why did he survive when

most others were killed? Shame and guilt. He felt impulsively invincible. Severity of thought intrusion predicts a lack of perseverance. PTSD is statistically more severe in females; although there is more sensation seeking in males, more negative urgency in females. Such thrills have a curvilinear relation with age.

Psychological Case Study #1

Abstract

Dorsey 63 has Post Traumatic Stress Disorder with Impulsivity. She witnessed her husband's body immediately after he shot himself in the yard. She was the victim of an online romance scam. Following is a 12-article synthesis of studies that reveal core features of the online romance scam victim. This study is based on a synthesis of 12 studies of three to 510,503 thousand subjects.

1. Profile

Dorsey 63 lives alone for the first time in her life. Early on she lived with her mother in a two-family home unit until age 39 when she was married and the couple moved from Florida to upstate New York. There are no children. Both were on Social Security Disability due to crippling cases of Lyme Disease. She comes from a traditional Italian family with two brothers of whom she

was the oldest, and doting parents. Her father worked for the State as a parks and recreational specialist so she was always outside with the neighborhood kids, her father, and Dorsey's friends. The mother, Dorsey's best friend, died just a few years before this writing. Dorsey is a handsome woman with sage skin and long coiled dark hair, a square face with bold features, long muscular legs, broad shoulders, and five feet 10 inches tall. She wore khaki shorts and an oversized white hoodie.

Her home was neat and clean, sparse of decorations other than crosses and Roman Catholic plaques. She lives in a little brick ranch house situated singly on a short street with fenced in yard and two white Wheaton Terriers that ran around in the grass barking and jumping five feet in the air. The dogs add a feature of merriment to the quiet secluded house. She served coffee and muffins immediately and talked until they sat down, filling in the silent pauses natural to conversation.

2. Clinical Profile

Lyme disease. Chronic fatigue. Fibromyalgia. Treatments: Fentanyl, Gabapentin, Xanax. Age 63. Clinical Lyme Disease progressed to bones. Several operations to replace hips, knee, and broken femur twice in the same leg. Anorexia in remission. No presenting mental illness except for anxiety treated with

benzodiazepines. Probable PTSD with impulsivity. She receives Social Security Disability (SSD) for Lyme Disease.

3. Background

The presenting problem is threefold: 1. Dorsey's husband was diagnosed with Lyme Disease and subsequently neck cancer in an advanced stage. His opioid treatment was not working. One summer night he rose from bed in the middle of the night, turned on all inside and outside lights, went into the backyard with a gun, and shot himself in the head. The lights were illuminated to lead Dorsey to the scene. She found a note which she keeps private. Dorsey experienced shock and post traumatic stress which persisted to the present. She did not seek psychological counseling or psychiatry and uses her primary care physician for psychotropic meds.

2. Two years later, still suffering from PTSD, Dorsey was on Facebook, living in Florida with her mother, when a man sent a friend request. Unbeknownst to Dorsey this was an online romance scam. He said he lived in Sweden, was a widower, an architect, and had two children in his mother's care in England while he worked and travelled. Within two weeks they had exchanged phone numbers and were texting on Instant Messenger. They were in love. He promised her marriage.

3. During the two-year relationship he created several tragedies for which large sums of money were needed to resolve before he could move to England and marry her. Dorsey sent him $500 thousand in multiples of up to $30 thousand from several bank accounts. The banks and the FBI tried to stop the scam but Dorsey said she had met him, knew him, which she had not; still she did not believe the relationship was a scam.

4. Symptoms

Dorsey presented with impulsive states and traits noting that she was focused on this man to the exclusion of her surroundings; “Everything I do to the extreme is impulsive,” she said, and gave several examples of other compulsive incidents. Being a widower, identifying with his widowhood, devotion to religion, and the promise of marriage precluded any questions about the authenticity of the online relationship. She was not familiar with cybersecurity or with the accompanying mental illnesses with secondary impulsivity. She did not know that she was engaging in money trafficking, a federal crime, and refused to cooperate with the banks and FBI to the end.

She spoke of this man to her mother and brothers; one brother was so convinced it was a fraud that he refused to talk to her. Her other brother declined to support her when the scam was busted. Her mother

simply said, “Let’s go shopping for a wedding dress.” Eventually she went on a family cruise where she had time to think for herself and decided to end the relationship with the potential online scam, finally believing her brothers, and on a episode of Dr. Phil about scamming, she was utterly convinced. She subsequently went on to give her car to a friend eight years later for the promise of monthly payments; upon completion of payments the car would be titled to her friend. Presently Dorsey still makes the car payments, pays for the car insurance and registration in Florida. There was no legal agreement and the friend never paid, so the car is currently stolen.

5. Diagnosis

PTSD with impulsivity.

6. Treatment Approach

Naltrexone extended release. This medication is an opioid blocker used for addicts in withdrawal and to maintain the opioid blocking effect. Dorsey was an opioid abuser and she did and may still use Fentanyl for Lyme Disease neurologic pain. There were incidents of using too much after her husband died and subsequent trips to the emergency room. Gabapentin should be sufficient for pain. Naltrexone has a secondary use as treatment for obsessive compulsion and impulsivity. It reduces urges, core symptom impulse control. It is

well-tolerated with no hepatic side effects. More than 50 mg/day is needed. Given her anorexia, near overdoses on Fentanyl, continued impulsivity with its attendant symptoms, PTSD, and lack of psychological counseling, Naltrexone is recommended as a long term treatment plan.

Preliminary studies show that Naltrexone may reduce urges, the core symptom of impulse control. It is well tolerated and has no hepatic side effects. It reduces urge related symptoms and decreases pathological behaviors such as gambling. Treatment plans show that patients need more than 50 mg/day to be effective.

7. Process Goals

Treatment goals include psychological counseling to revisit her core dysfunctions—trauma, impulsivity, anorexia, anxiety, and Lyme Disease—Dorsey has never confronted symptoms of these deep tragedies. Also recommended is psychiatry to focus her treatment from generalized trials with her primary care giver to specific titrations. These are serious mental illnesses that have never been examined.

8. Discussion

Dorsey is more than likely a dependent personality type; she has always been surrounded by and lived with family

members. Currently she lives alone but sees a male neighbor everyday who dines with her and completes tasks around her house. She says she loves being alone and spends roughly half her time as such. While alone she does household chores and takes care of her two Wheaton Terriers. Regarding continued impulsivity she says, “I still wake up in the middle of the night over the raw subject of my car.” This car was given to a friend with the verbal agreement that she would make the payments and pay for the insurance. Her friend still drives the car, now eight years, and pays for nothing. Dorsey has taken no legal action to date. The car is legally stolen.

She does not blame anyone for her problems nor does she seek support outside of the family, now two brothers; her mother, her best friend, having died a year ago. Dorsey seeks no treatment to unravel her feelings about this loss and the loss of her father a few years prior. She says that she “copes with medications” and after the trauma of losing her husband, transferred her grief and irritability by moving to Florida from Upstate New York to live with her mother and take care of her five year old niece who was the brunt of Dorsey’s unresolved mental illness. She went to a psychiatrist twice but “Was fed up with the paperwork” so never went back—a symptom of her impulsiveness and PTSD—which she does not want to deeply explore. She

depends upon her Roman Catholic faith to carry her though problems.

The tragic suicide of her husband, the care of his debilitating neck cancer, and the subsequent online romantic scam and loss of $500 thousand dollars, Lyme Disease, and anorexia she endured need to be explored. Dorsey fits the typology of the online scam victim. The phenomena of romantic fraud is based on a compression of look-alikes and textual contexts that reflect the person's life story and values. Digital communications technology can overcome physical, social, and psychological barriers in building romance. Naïveté and impulsivity, high moral values, gullibility, intimidation, risk taking, respect for authority, and uncritical exploration, all culminate to make Dorsey a victim of deniability and fraud. For nearly two years she was flying high on romantic idealization. She read romance novels. Social media users idealize theirs and others profiles often in a manipulative dynamic. Among users 63 percent have been the victim of a scam one or more times versus three percent of the general population. Profiles include a female, middle age, neurotic, impulsive, with a tendency to addiction. This is the at risk personality profile and Dorsey has the states and traits in more than one tragedy. Such online communication has some benefits: The victim can pause texts, FaceTime, and phone calls. The perpetrator does not see episodes of grief or histrionics, and may choose to

modify their profiles at any time. Fourteen hundred dating sites and apps have evolved during the last ten years to serve the profile.

Daily encounters are seen as warm and trusting and increase the idealized affection. Even sex is digitalized. The victim denies or rationalizes doubts. Intimate implicit photos—all factionalized—deepen the bond and force blackmail and extortion. This is the victim luring modality: Speaking about the relationship is key, tragic biographic narratives, shared morals, and deadlines for money transfers drown the victim in feelings of love and responsibility with the dangling carrot: Marriage.

The discovery phase for Dorsey was untreated except for a cruise with her family in which she finally had alone time to think for herself and listen to her family's imploring warnings. Negative urgency and tragic events eternally postpone longed-for in-person meetings. During the discovery phase the victim seeks the support of others, claims to have changed, experiences trauma, grieves, makes attributions, seeks ways of coping, damns future relationships, and endures emotional shock. Dorsey ignored these symptoms and the dire need for clinical treatment. Fifty percent of scammers originate in African countries, 16 percent Asian and English speaking countries.

Psychological Case Study #2

Abstract

Timothy James (TJ) presents with heroin addiction, alcoholism, antisocial personality disorder with impulsivity, and cirrhosis. He lives in San Francisco in a welfare hotel on Social Security Disability.

1. Profile

Timothy James (TJ) 34 is a slight, blond, blue-eyed young man about five feet eight. His facial features are classically beautiful with very white skin. He wears dirty Converse, stained white Tee shirt, and worn thin jeans. He is disheveled, spots of hair missing, and broken or missing teeth with slash scars on his face. He lives alone in a Welfare hotel in San Francisco.

2. Clinical Profile

Heroin addiction, alcoholism, cirrhosis, antisocial personality disorder with impulsivity. He participates in the methadone maintenance program and uses alcohol to get high. No psychological or psychiatric treatment. No 12-Step program. Age 34. No diagnosed mental illness, no medical treatment for cirrhosis. He receives Social Security Disability (SSD) for alcoholism.

3. Background

TJ presents from an upper middle class family of five living in the third wealthiest county in the nation in Northern New Jersey. He was the middle child with an older brother and a younger sister. He and his sister were close but he constantly fought with the older brother who dismissed him. His father was Vice President of Prudential headquarters; his mother worked part time as a church secretary. Father had PTSD from WWII in which he was a bomber pilot. Mother had bipolar I disease and anxiety with panic attacks which caused severe tachycardia; her pattern of depression and mania swung bi-monthly. TJ experienced an affluent childhood; everything he needed and wanted was everything he received, except for love and affection. Father was a maintenance alcoholic and mother was a prescription drug user. With his homemaker mother he never knew what to expect from irritability, hostility, and in-bed depression to thrills, trips, and manic shopping expeditions after which the kids drove home drinking beer with their mother. Father was mostly absent on business trips seducing his secretary.

His best friend was a gay man with whom he lived for the first 10 years after moving from Northern New Jersey to San Francisco. He endured constant hostility from his mother who called him “The Boy Who Wets His Bed.” TJ wet his bed through his teenage years and his mother hung his

sheets out of his bedroom window to dry like a flag. She was verbally and physically abusive making TJ eat soap and locking him in closets. There was no rational loving follow up to instill proper behavior. Most communication was yelling or nonexistent. He was forced into his room for half the day in lonely grieving empty time. She insulted TJ in public. His father beat him with sticks, and although TJ was his favorite child, there was a lack of consistent reliable affection and correction.

4. Symptoms

TJ is sexually manipulative and abusive. He coerced his sister into having sex with him when she was 12. He raped two of her best friends. He pushed his sister down a ten foot house foundation; she landed on her back and suffers from debilitating back pain to current day. TJ manipulated her into holding his arm as he shot heroin after which he choked her almost to death. He climbed to the roof of City Hall and threw firecrackers at people passing. He ran away twice and was found in Florida. He went to New York City to buy drugs and deal them in Northern New Jersey. TJ is abrasive and mean; most of his peers do not like him. He has never worked. In San Francisco on the methadone maintenance program he drinks beer to compensate for the lost high. From youth into young adulthood TJ spent his time and money chasing a high. His problems escalated when he beat up his

mother and told her "I wish you were dead." She committed suicide the same day. He never saw his father again although he talked with him on the phone.

Symptoms are consistent with anti-social personality disorder with embedded impulsivity which started in childhood as conduct disorder. Exploitation and manipulation and violating the rights of others. This is seen in his sexual violations after which he demonstrated a lack concern, no regret, remorse, for the distress of others, known as irresponsible disregard. Incapable of sustaining long term relationships; he cannot control anger and he does not learn from his mistakes. Oftentimes he blames others for his problems, specifically family members. Repeated law breaking. In childhood he was truant, delinquent, and aggressive. Genetics and a traumatic childhood show that mental disorders and alcoholism run in the family.

As stated earlier impulsivity is a hallmark of drunks who engage in risky behavior as they exhibit phobias, panic disorder, and generalized anxiety. The disorder itself causes risks due to impulsivity. TJ fell down stairs, hit the edge of a stereo console, and was knocked out; hence the slash scars on his face. His father did not help him but his girlfriend's father drove to the house and took him to the emergency room. He was in knife fights. His feminine attractiveness was game to

aggressive homosexual men who abused him. These situations were the result of impulsive behavior with alcohol, heroin, and making himself vulnerable.

His cirrhosis has evolved unchecked and untreated although there were signs: He felt tired and weak; itching of the skin; losing weight; discomfort over the liver in the upper right side of the abdomen; muscle loss and weakness.

5. Diagnosis

Alcoholism. Antisocial Personality Disorder with Impulsivity. Cirrhosis.

6. Treatment Approach

TJ's cirrhosis is in the final stage. Administer pain medication post methadone cessation. Hospice when time. Psychological counseling to unravel pain from childhood. Continue on methadone until monitored withdrawal. Xanax to cope with withdrawal from alcohol. Medications, Suboxone to withdrawal, Cymbalta, Nortriptyline administered in weekly doses by case manager and counselor.

7. Process Goals

Treatment goals include psychological counseling to revisit his core dysfunctions—trauma, impulsivity, and addiction. Since TJ is terminal the goal is to

make him comfortable via a process of close clinical care with one case worker and one psychological counselor. Stay on meds with weekly visits to the clinic.

8. Discussion

Timothy James 34 was murdered on Jones street one afternoon when he went out to buy a six pack of beer. A man stabbed him in the back across from the police station. His hotel manager saw the incident and recognized the man; however the man was not indicted because one witness was insufficient evidence. Fifteen years later his older brother jumped 60 feet off a catwalk above the Boston Line tracks. He too was plagued by trauma and alcoholism. His sister has had repeated suicide attempts, suffers from major depression, and is alcoholic. Twenty-five years hence TJ's father died from Parkinson's Disease. His sister is the only living member of TJ's family of origin.

TJ's alcoholism progressed through the years. He said, "I tried 12 Step programs but all they did was talk about alcohol." Medical intervention may have checked his desire for alcohol. He never withdrew from substances, heroin, from age 15.

Attachment disorder is obvious. TJ never married or had children. His brother had one marriage, divorce, and was childless; his sister had three boys and five marriages. No one in the family of origin ever

met her children. The family was severely dysfunctional; members never talked to one another or demonstrated affection. Affluence, private schools, trips, lessons were used as the means to justify, at least to the outside world, a stable robust family situation. The mother committed suicide at age 49; it would have been helpful if the father was available for his son, but he was not. TJ needed intervention early and regularly. His life proceeded without care, thus his untimely death.

TJ started using heroin at age 15. He suffered from conduct disorder from childhood. The parents were neglectful, often abusive, and did not supervise. He became a dangerous individual, raping his sister and two of her friends; he was a heroin addict and dealer, right under the nose of his affluent parents. With genetics and conditioning, this is a case that might have had a positive outcome with supervision, care, psychological counseling, and psychiatry.

Psychological Case Study #3

Abstract

Gladelynn (Glade) 60 presents with Major Depression Recurrent, Borderline Personality Disorder, Alcoholism, Anxiety. She has had a dozen therapists from age 13. She has a history of cutting.

1. Profile

Gladelynn (Glade) 60 year old female is slight and blond, blue eyes, about five feet 7 inches. She is impeccable, fashionable, and stylish, looking like a studied artist or model. She is thin, about 100 pounds with classically sculptured features. She smiles then reverts to a stricken stare. Glade presents with a history of shoplifting. Highly educated with a Master's in Nonfiction and a Doctorate in Journalism, she worked as a college professor only once obtaining a full professorship; in twenty years she was an adjunct at seven different universities. She was married five times. History of major depression and borderline personality disorder, alcoholism, with a half dozen hospitalizations in five years. She also suffers from anxiety with panic attacks. Her entire family of origin has died. She was raped by her brother.

2. Clinical Profile

Major depression recurrent. Borderline personality disorder. Post traumatic stress. Anxiety with impulsivity, panic attacks. Alcoholism. Glade has had about seven therapists in 20 years starting at age 13. She is the survivor of two family suicides, one murder, and a father who remarried and disowned her. She is the youngest child of three siblings, two deceased. She suffers from debilitating back pain, arthritis, and fibromyalgia.

3. Background

Glade came from an affluent upper middle class family in Northern New Jersey. Her father was Vice President of Prudential as in the former case. She went to private schools, elementary through high school. She was expelled from two schools for drinking and taking her mother's prescription drugs. Her father was OCD, PTSD, and her mother was BP I with anxiety and panic. All members of the family were alcoholic. The parents were dysfunctional and abusive—the father had obsessive compulsive disorder and post traumatic stress—from WWII as a bomber pilot over Germany. He beat her with sticks and the mother insulted her and locked her in closets; her depression and mania swung bimonthly. Glade was given everything she wanted including world travel. Her mother died of suicide at age 49 when Glade was 16; afterwards her father married his secretary and disowned her. Panicked and on her own she married at age 17 while in college in Upstate New York. Her father stopped paying her tuition and Glade worked while attending college, moving and going to seven different colleges until she obtained a Bachelor of Science in Philosophy. Ten years later she earned a Master's in Fine Arts in Nonfiction, and a PhD in Journalism. She has three successful boys in their near-thirties.

Glade was an athlete: She ran Boston and New York marathons and was a

marathon swimmer. She hiked all the high peaks in the Catskills and the Adirondacks in four years. Such vigorous achievements mirrored her father's dismissive opinion of her intellect and his achievements in business and a subsequent law degree. Her father told her she would never be more than a secretary and thought she was developmentally disabled. Before he died of Parkinson's he told her that he was the first member of the family to score a doctorate. It was not true but reflected his irrational need to compete with his children. He erased Glade from his will and the obituary as if she never existed.

4. Symptoms

Glade presents with shoplifting and compulsive spending. She was fired from two retail jobs where she was caught shoplifting. Her career as a college professor ended in 2017 when Social Security Disability (SSD) threatened to stop payments because she was making too much money. Glade had a series of retail jobs to make the allotted SSD income on the side. Major depression recurrent has caused hospitalizations at least once a year. This is complicated by alcohol, anxiety with panic and impulsivity, and borderline personality disorder. She has had five marriages and due to childhood sexual abuse is incapable of sustaining intimacy with her partners and husbands. She cannot hold onto friends for more than a few years. Glade's compulsive shopping spending sprees bankrupts her families.

PTSD with BPD complicates all her relationships. She has low self-esteem and often feels worthless.

5. Diagnosis

Major Depression Recurrent. Anxiety with Panic Disorder and Impulsivity. Post Traumatic Stress. Borderline Personality Disorder. Alcoholism.

6. Treatment Approach

Cymbalta; Abilify; Xanax; Buprenorphine. It took 10 years working with one Psychiatrist to titration of the right medications. These have stabilized Glade along with a new psychological counselor.

7. Process Goals

Glade presented in 2022 with shoplifting, spree spending, and binges of rage in public. Abilify was added at that time to quell the rage episodes and spending obsessions. She has spent two years with the same therapist and two psychiatrists. Glade is desperate to end shoplifting, spending, and rages. There has been progress. Continue with same doctors, therapy bi-weekly, psychiatry every six months. Perhaps look for a job outside of retail. Abstinence from retail is recommended for work and shopping other than grocery stores. Medication specifically for impulsivity is desired. Address shoplifting and spending in therapy.

8. Discussion

Glade survived her family of origin due to her tenacity. She was driven to accomplish goals along timelines. If her father was the impetus, that was an unconscious thought; unlike her father, she did not compete with others, but with her own goal-setting. The marathons, the hiking, the degrees, even the purchase of Jeep Wranglers were goals, some from childhood. She maintained a 3.8 average undergraduate and a 4.0 average MFA and PhD. She trained and studied. She accumulated 42 years of sobriety. It was her goal to move to Nyack New York alone—that was accomplished—so Glade decides, focuses, and achieves. Currently she reached her last goal: to publish. She has four books.

Glade has not shoplifted in three months and has had only two public rage attacks in the past year. Clearly therapy is successful. Recently Glade began a step-by-step approach to ending obsessive shopping. She attends a 12-Step program near daily. There is no lack of drive and planning for Glade; her spending and shoplifting is clearly impulsive as is the rage. Impulsivity has the potential to ruin her life after all the work to recover. Shopping is deeply embedded in the manic shopping sprees with her mother when they piled elegant shopping bags into the convertible and stopped for Foster Laugers along the way, one for mother, one for sister and one for brother who may have been six and nine. Shopping and shoplifting

are related in Glade's psychological approach to reality: Thrill seeking.

Psychological Case Study #4

Abstract

Avery 34 is a young male who presents with Traumatic Brain Injury (TBI), Anxiety, Echolalia, and sometimes hears voices. He has been treated with antidepressants, and by a series of prison doctors. He has been hospitalized for alcohol poisoning. He has a history of fire setting and has recently set a car on fire for which he was arrested and indicted. He spent two years in prison.

1. Profile

Avery is a thin blond over six feet tall with large blue eyes. He is clean and neat. His hair is crew cut and he wears athletic pants and shirt. He speaks so quietly he can barely be heard. He does not speak except to answer questions. He is used to answering questions as his parents sought special education for him at age three which was the first time he spoke a word. He grew up with divorced parents but father and mother participated in his care along with his older brother who translated Avery's garbled speech for his parents. Avery went to public school where he was bullied. His parents did their best, were loving and helpful, but both worked more than full time.

2. Clinical Profile

Traumatic brain injury. Anxiety with impulsivity. Some delusions. Alcoholism. Avery received Special Education, speech and physical therapy pre-kindergarten to 11th grade. He dropped out of high school and obtained a GED.

3. Background

Avery lives alone in Upstate New York in an historic building. The apartments look as if they came out of New York City showrooms. Avery obtained his apartment through County and State grants.

He has two brothers, one of whom is younger and has a different father; that father died a few years prior. This younger brother is an engineer living in Oregon. His older brother is a fine arts painter of some note and runs a car rental business in San Francisco.

Avery grew up in a rural college city with his father and older brother. His father was a self-employed carpenter. His parents divorced when he was one. The mother is a college professor and has had to live in different parts of the State for jobs. She was present until he was 16 and left at the same time his brother left for college and his beloved paternal grandmother died so Avery was alone in the house with his father for the first time.

History of alcoholism. History of fire setting and arrests. Avery was first arrested for shoplifting cold medicine in a grocery store. He was arraigned put on one year probation. Next he was arrested for setting a city building on fire. He and some unsavory friends set a fire in a dumpster which was below a building vent so the fire shot up through three floors. No one was injured. Avery spent a year in County Jail. Next he was arrested for setting seven vacant buildings on fire at night at the same time. He was arrested and indicted and spent three years in prison with six years probation. The local firefighters called him Sparky. The next fire was a car parked in a vacant lot near the owner's home. The owner was refurbishing the car. The Police found Avery's spit and a cigarette butt on the edge of the fire. He went to County Jail for one year. Subsequently he rode his motorcycle 100 MPH drunk down a city route at midnight and was arrested and sent to prison for two years for violating probation.

4. Symptoms

Alcoholism. Severe anxiety. Speech impediments. Some fine and gross motor impairments. Echolalia. Avery tends to repeat what he hears in a whisper. He speaks under his breath and mixes up some consonants. He is shy, has one good studious friend and friends who are drug addicts and criminals who goad Avery into criminal participation. He reports hearing voices.

Avery's impulsivity and anxiety has severe criminal consequences—all of which began when his mother left for a job, his brother went to college, and his grandmother died—when Avery was 16. His I.Q. Is below average in some areas and above average in others. He is a master at design and an athlete having rode his bicycle in one day to every state surrounding New York State.

5. Diagnosis

TBI; Anxiety with Impulsivity; Stress induced delusional voices. Alcoholism.

6. Treatment Approach

Psychological counseling one time a week for six weeks then every other week. Psychiatry. Xanax for anxiety and impulsivity; Naltrexone 50mm for alcoholism and impulsivity; Abilify for voices and speech/voice impairments.

7. Process Goals

Stabilized in his apartment with daily tasks that are repeated and scheduled every day. Therapy for fire setting. 12-Step program one time a day. Stay on meds. Continue with bike-riding through the fall; in winter walking with good winter boots and new orthotics. Follow up care for his heel injury sustained in a car accident. No need for a driver's license.

8. Discussion

Avery has a remarkable sense of humor that is odd and creative and that makes everyone in a room laugh. He is a master at organization, cleanliness, and mathematical design. He creates structures out of sticks free standing and six feet tall. He can draw to realistic precision but with odd Impressionist creativity.

Avery's TBI was sustained during his birth: Frank Breech with buttocks presenting. The mother was not dilated enough to push him out; he could not be extracted because it was a home birth with a midwife ignorant to his breech position. The umbilical cord was trapped in the birth canal and Avery lost oxygen. He was immediately given oxygen upon birth completion. The paramedics arrived but the mother declined to go to the hospital. Avery had a low Apgar score which improved over time.

With dedicated 12-Step work it is believed that this young man will blossom both in speech and social exposure. Alcohol abstinence is crucial. Therapy to deal with the upset of his family of origin environment. Avery has had the same quiet dependable sweet girlfriend for six years; she has been a rock in his recovery. His medication should be monitored and mandatory. Fire setting may have been an outburst of his adolescent years. He has not started a fire since age 22. All fire bearing instruments should be

sequestered. Avery has a bright future in his beautiful apartment with his girlfriend, his talents, and new friends.

CASES GOING FORWARD

A rock is not impulsive but if a bully picks up a rock without premeditation and throws it at an innocent, cracks open his face, then it is impulsively in motion. Negative force of intent, emotion, retaliation, determines the momentum, the velocity over time. How far away was the innocent? As a matter of fact Avery was hit in the head by a rock thrown by a bully. Damage was to Avery's eye, a deeply blackened and slashed eye. The bully was across a street length and Avery was sitting on school steps. Had the bully crossed the street momentum would have been shorter in time with more forceful velocity and Avery might have lost his eye. Farther away, another cross street length, and the rock may have tapped his eye with no damage. Impulsivity in this case is personal. M = F = O = E. Motion = Force = Object = Elapsed Time.

Impulse quantifies the impact that force has on an object over time. There are four concepts of impulse: 1. Pure impulse; 2. Suggestion impulse; 3. Remainder impulse; 4. Planned impulse. The bully and Avery were pure impulse: Action and motion are congruent. Impulse and action are equal.

Avery's fire setting was pure, remainder, and planned. Behind the force of velocity and fire may have been TBI and anxiety, the impetus. Or perhaps it was suggestion impulse whispered in his head by one of the voices. An object in momentum can be slammed to a stop if a force is applied against it for a duration of time. In Avery's case therapy and medications might slam his impulsive momentum to a stop.

Consciousness as sudden decision. Dorsey was moved by trauma, loneliness, isolation, and ignorance of cybersecurity. These traits were the force of velocity. The more contact she had with her scammer in short amounts of time, the faster her mind flew in impulsive states. An object's (Dorsey) change in momentum is equal to it's impulse. An intense impulse has greater harder velocity in relation to the object (scammer). Momentum is measurable; how much force did it take for Dorsey to fall in love with a fiction? A baseball pitcher's throw is measurable over time. Change (C) in momentum of applied force and elapsed time (T): I = C = M = F = T. With energy and strength the force can keep growing and building as it did with Dorsey to the point of sending a scammer $500 thousand dollars. Her impulse was in high momentum, slamming into her object (scammer) with great force.

Extending time results in decreased force and minimizes the effect of force in a

collision. Dorsey never experienced a slowdown of velocity with the scammer until she went on a cruise with her family. That cruise excoriated Dorsey into intense rational thought processes. Suddenly she soaked up her brothers' words of caution and outright demands that she open her eyes. When she did the impulse, the velocity, the object, disappeared. Her loss was great: Both a lover and $500 thousand dollars. Dorsey's case is unique and so profoundly impulsive that such idioms are rare.

Timothy James (TJ) was a body in motion. A body that has motion cannot be stopped. Bodies in motion stay in motion. Apply a force against the motion for a particular duration of time and the velocity slows down or stops. TJ needed a force to slow his drug addiction, childhood neglect and abuse, and his antisocial traits and sates. The greater the motion the higher amount of force is required to bring the body to a stop; hence velocity changes momentum. Velocity moving in the opposite direction can shorten the time between the negative and positive momentum.

TJ's pathology presented a pervasive pattern of disregard for consequences for the rights of others beginning in childhood conduct disorder. He behaved as he wanted to without feeling remorse or guilt: Truancy, dismissal of private school rules, and his parent's installment of right and wrong. TJ's use of deceit and manipulation began in

youth against his parents, friends, siblings, and school. In psychotherapy he might have been rewarded for behavioral change had his therapist been a behaviorist instead of a psychoanalyst.

Impulsivity is directly correlated with a future increase in APD. TJ did not start out with antisocial personality disorder; his impulsivity progressed, unleashing a behavioral explosion of freedom from law, academic, and domestic integrity. Had his impulsivity been managed in his teen years it might have prevented APD. Impulsivity predicts early and adolescent APD. This is seen in TJ's disregard for his sister and her friends, for property, and family. His heroin abuse and social circle of drug addicts in the worst possible environment contributed.

The root of impulsivity is found in a family history of mental illness, exposure to trauma, violence, abuse, neglect, increase the risk and the risk for substance abuse which exceeds the impulsive positive urgency. The exact course of the trait is not fully understood but it is both environmental and genetic. Children who do not learn to regulate their behavior effectively experience greater impulsivity, as was modeled for TJ by his mother's bipolar illness. Genetic mutations of serotonin, dopamine, and neurotransmitters impact production. These factors create the perfect storm of environmental, genetic, and

physiological factors associated with impulsivity. Only therapy, mindfulness, and medication can change the destructive course (Nadean et al 2023).

Following is a list of psychological secondary states and traits of APD and impulsivity. The acquired brain injury and neurodegenerative disease almost mimic dementia: abruptly changing and cancelling plans; inability to remain still; binge eating, drinking; clearing out belongings to start anew; constantly turning over a new leaf; destroying property; escalating confrontations; frequent emotional outbursts; inability to receive criticism without affront; jumping to conclusions; joining and quitting groups; meaningless or risky sex; over-apologizing; too candid sharing of emotions; over-spending; physical violence; quitting a job without notice; self-harm; cutting; threatening harm; explosive; rash; unpredictable (Stalters et al 2023).

Glade's impulse momentum for stealing is like the theorem: The impulse an object encounters is equal to the object's change in velocity. I = O = V. Thought equals impulse equals object equals velocity. The stronger the impulse, stealing, the stronger the velocity. Glade likes shiny objects, leather, and paper. She steals so quickly and with such connive that the thought and the impulse are one, velocity is a moment. Most shoplifters steal because they are economically disadvantaged—they steal for

gain—but some steal for no rational reason at all—things they don't want or need. Glade falls between the two states; she lives on SSD paycheck to paycheck, and is impulsively drawn to objects that fit her artistic style just because she sees them.

Glade has in the past unintentionally left stores with items in her hands; she intended to go back but was afraid she'd be accused. These situations are trauma-based. Glade will shoplift from any store if she is stricken by the beauty of the object; suddenly she has to have it. There is never enough money for her wants, only her needs. This state makes her feel irritated and bereft. Her impulsiveness is so out of control she will do anything to avoid total humiliation prior to, during, and at the instant of arrest. She has moved from poverty to criminality. Shoplifting stimulates dopamine in her brain in the same way as alcohol and drugs. The addictive personality is a person addicted to dopamine rushes.

Glade's shoplifting is not a rational decision executed with planning; it is sudden, and so far she has not learned to pause before action. It is also a faulty way of with coping with unwanted thoughts and feelings. She rages at her father, a multimillionaire, who left her and her three children out of his obituary and out of his will. She uses this unfortunate fact as justification for stealing.

TBI can cause people to steal as well as anyone with impulse disorders, including the above psychological profiles. So far there are no studies that use empirical and theoretically sound methodologies to study shoplifters. Glade does most of her shoplifting at her place of employment. There is some planning: Pure, Remainder, and Planned. She has scoped all areas in her store for camera blackouts, the most obvious is the dressing room. Pick up two identical jackets at the same time, put one on under her clothing, and carry out the second jacket. It appears on camera and to peers as if she only brought in one jacket. She wears cowboy boots so that she can put her hand over a piece of jewelry, as she shows pieces from the cabinet, slide out her hand, and drop the piece into her boot. Many tricks of the business of shoplifting, like magic, and she gets caught only when she becomes cavalier, such as picking up an item or objects in front of managers and walking out the door with them. Glade has been caught shoplifting three times; at no time was she arrested, but she had to pay for the items, and she had to endure the humiliation among her co-workers. Upshot: Her name is registered in the national database of retail shoplifters and big chains subscribe to the service, so she has trouble finding jobs. Also of note: Glade has a doctorate but no pension due to her mental illness. Is it also due to mental illness that she lowers her standards

to work in retail? Given her shoplifting history she should not be in retail at all.

Avery's case is the more dramatic and traumatic because of the TBI he suffered from an at-home frank breech birth in which he lost oxygen. Agony for the mother in which not just the buttocks, but the buttocks and legs, slipped into the maximally dilated cervix through which the baby would not fit. Impulsivity is unequivocally associated with TBI. Even his birth was impulsive having turned in uteri at the last hour.

Avery is also an alcoholic with impulsive anxiety and a fire setter. It is not known what effect his TBI has on these states but Avery is a person in momentum most of the day. He is anxious and cannot stop moving. His father has the same traits. An object's change in momentum is equal to it's impulse. An intense impulse has greater harder velocity in relation to the object. Momentum is measurable; how much force did it take for Avery to start a fire? Impulse equals change equals momentum equals force equals time. With energy and strength the force can keep growing and building. Avery delighted in fires and the forcefulness of his impulse reached a climax the night he allegedly set six houses on fire at nearly the same time. Time was compressed so the applied force of starting fires was changed, sped up, forced. Add alcohol and impulsivity grows and builds.

Avery's TBI, directly associated with impulsivity, has four dimensions: 1. Urgency; 2. Lack of premeditation; 3. Lack of perseverance; and 4. Sensation seeking (thrills, risk). Numbers two and three reveal a hierarchical model of premeditation and lack of perseverance, facets of a higher order construct, lack of conscientiousness, with urgency and thrills separate correlated factors (Rochat et al 2010). Three dimensions increased in urgency post-TBI; sensation seeking decreased. It became urgent for Avery to follow through on his plans. Impulse is a common debilitating sequel following TBI. Consequences following TBI diminishes the patient, relatives, safety, rehabilitation, healthcare, social and political outcomes. Impulse disinhibition. Since Avery's TBI happened at birth he grew up with these denominators as did his family and society.

Impulse is multidimensional: Motor impulse impacts physical, verbal impacts interpersonal. Avery grew up with therapy for fine and gross motor skills and speech therapy beginning at age three. The following symptoms of TBI are based on a 124 article synthesis: Motor disability, Avery acts without thinking; Cognitive quick decisions; Non-planning present orientation. TBI's decision making is more impulsive and scored higher on three dimensions: Aggression. Verbal performance tasks, motor impulse are higher by direct observation: Urgency, lacks, sensations,

positive affect, restless, wandering, verbal aggression.

Avery presents with orbital frontal damage, inability to engage in goal directed behavior. He is distractible resulting in a diagnosis of ADHD as a child. He was not ADHD and the medicine affected his personality negatively. He has deficits in control of emotion and acts impulsively without consideration of consequences or concern for social values. Low tolerance, short enthusiasm, emotional labile erratic behavior, frustration, all of which lead to irritability and impulsive aggression.

Avery, with his family, has disinhibited conversational behaviors, saying embarrassing words, such as, upon meeting a new person, “Mom, why is that woman so fat?” His tone of voice, although soft, can be rude, assuming wrong impressions, answering without thinking, and sidetracked by noise. His self- regulatory dysfunction affects empathy and appropriate judgement in social situations. Then there is echolalia, repeating what people say below his breath, but some of the dysfunctions he has outgrown or relearned though behavior regulation. The biggest risk is boredom, which in his case, is synonymous with risk-taking. His is an athlete today, he stopped drinking, attends 12-Step program, and that has deflected much boredom with positive urgency in his spare time.

IMPULSIVITY IN THE HEALTHY POPULATION

Impulsivity in the general population Is studied as a construct of personality differences, psychological disorders, and risk behaviors from a representative sample of the U.S. population, a study from PubMed.gov of 34,653 thousand individuals aged 18 plus. Seventeen percent of the sample were males and young people with a broad range of axis I and II disorders. They were more likely to engage in behaviors dangerous to themselves and others, such as, reckless driving, fights, shoplifting, domestic violence, suicide, and cutting.

Those with impulsivity (ID) 55 percent male, 72 percent white, with 91 percent of the population suffering from some kind of impulsivity. So the problem is common, especially with risk taking and negative outcomes. The most common side effect of impulsivity was on Axis I: Alcohol dependence and anxiety, the profile of impulsivity in the U.S. is a white U.S. born male with at least one psychiatric disorder.

Those with ID have a higher lifetime trauma rate with depression and anxiety most prevalent, comorbid. Following are the demographic statistics: Psychiatric disorders Axis I—79%; substance abuse 62%;

nicotine 37%; mood disorders 38%; depressed 20%; anxiety 42%; personality disorders 46%. Consequences regarding rapid unplanned actions to external stimuli and diminished regard for others include the following: Quick sexual relationships 34%; overspending 18%; fidgeting 26%; interrupting 24%; attention deficits 23%; problems waiting their turn in a line 16%; sudden changing goals and plans 21%.

Impulsivity works two ways: Positive and negative. Positive urgency and impulsivity is good when there's a fire in a house or a gunman by the car—any impulsive decision is better than none at all—and the victim has to proceed with the idea that the next move is the right move. Negative urgency is impulsivity that hurts self or others—the impulse to kiss a coworker that leads to an outside marital affair; the impulse to throw rocks at cars off a bridge—impulses that result in damage and danger.

The majority of the U.S. population experiences positive urgency and negative urgency, so much so that it has become an epidemic of loose dynamite. Crime in cities is at an all time high (2020-2023) and nothing is done about it. New York City, Camden New Jersey, Philadelphia Pennsylvania, Chicago, Detroit—these cities have become war zones; hence the government's excuse is to provide housing and income to a foreign population, public housing to equalize the class systems, electric cars out of monetary reach to force

public transportation, and crush capitalism. But this causes more crime and poverty when the human instinct to own and blossom in business is thwarted. A person is like a plant that seeks water, sunshine, warmth so that it can grow to its fullest potential; an economy mimics nature and so does the U.S. Constitution. Climate change is another means to convince the U.S. population to let go of private property for the good of the planet as is open borders—if the country is flooded with open mouths unable to pay for their own care, sustainability and the welfare economy are flooded beyond cities' resources. Hence, violence in the streets. Government intervention. Socialism, Communism. Impulsivity run amok.

A PubMed study, Biological Basis of Personality Traits, looks at the use of neuroimaging techniques, the PET scan and the MRI scan, to study the brain's and genetics' role in impulsivity in the healthy individual. Molecular biology, genetics mapping, and the function of genes, has revolutionized personality psychology; i.e. individual differences in personality traits related to individual differences within specific genes. This is the neural and genetic basis of trait impulsivity. It is the Reductionist Theory—start at the behavioral level, move to the brain stem systems, to biopsychology, to the molecular level of genetics. The idea is to study impulsivity within personality psychology and refine the definition measurement of the construct. At

the end of all that there is a rue: Behavioral inhibition (BI). How to control BI. Attempts to combine methodologies in psychology have ended here in neural BI and in the integration of neural and genetic data.

BI represents the core aspect of the impulsivity construct: The ability to inhibit a motor response. Serotonin is a factor in the neural circuitry that mediates behavior. Personality differences are related to cortical arousal and to autonomic arousal. There is no consensus on how to conceptualize structural impulsivity rarely studied in isolation of other symptoms or how to measure it until separate and distinct personality facets previously grouped together are looked at gene by gene. Impulsivity can be condensed into two dimensions: Disinhibition and impulsive choice. To date impulsivity has been conceptualized a multidimensional construct with dysfunctional behaviors, psychopathologies, substance abuse, suicide attempts, spending, aggression, antisocial behaviors, PTSD, and the inability to inhibit actions without concern for consequences.

The core of the impulsivity construct is an inability to inhibit action since all behaviors in which impulsivity manifests are lacking planning and concern for consequences. It is the author's goal to identify neurogenetic correlates of impulsivity. Behavioral inhibition is impaired and has known neural correlates;

BI is the core of the impulsivity construct. Here the definition and the neural genetic search may be abridged to behavioral inhibition impulsivity. In healthy adults (no mental illness) differences in impulsivity relate to differences in neural pattern activity seen in BI in the right frontal striatal pathway that underlies BI. Implicated is the right lateral neural circuit. Different tasks may activate different neural circuits not associated with impulsivity. How to separate these circuits from those not strictly related to BI? Matching impulsive constructs and sub facets with appropriate tasks to map impulsivity onto neural circuits is possible. There is white matter and gray matter volume density that relates to individual differences in impulsivity. White matter elevated predicts BI in healthy adults. Gray matter volume and density when reduced correlates with BI.

The author of the study (J Pers 2008) is following a Reductionist Path toward understanding impulsivity and has deconstructed the multidimensional approach to BI and its correlated neural and genetic matter. Twin studies have shown that genetic components of impulsivity are definite. Strong heritable and familial transmission is certain. Gene polymorphisms influence impulsivity in three receptors: D4 dopamine receptor; transporter DAT; and enzyme COMT. These areas confer individual differences in impulsive related behavior differentials

distributed across frontostrital networks underlying BI. Dopamine binds to the receptors cerebral cortex, amygdala, hypothalamus, hippocampus, pituitary and basal ganglia, specifically D4. COMT differences in cognition and emotion degrades dopamine in the frontal cortex where there is a lack of DAT. Suicidal and aggressive behaviors are associated with variations in COMT. Inhibition and conflict are central effects of COMT. Enzymes leave either high or low levels of dopamine in the sub cortical and prefrontal cortex and the COMT enzyme affects cognition functioning directly. Neuroimaging studies report activation within frontostriatal networks during inhibition. Dopamine genes modulate this network by effecting its structure and/or its functioning. This is what generates individual differences in BI. This is the significant role for COMT in BI: COMT is the predominate enzyme in dopamine in the prefrontal cortex. No other study has focused on BI and impulsivity (J Pers 2008).

COMT, an enzyme, metabolizes neurotransmitters dopamine and epinephrine. The exact chromosome is locked on 22q11. Individuals with mutations in the COMT gene have higher pain tolerance and lower sensitivity to stress. Changes in the COMT gene due to mutations, or aberrations as Darwin might note, are prone to anxiety, BI, and neuroticism. Any individual may obtain a test kit to confirm the presence of the COMT gene.

Aggressive and impulsive behaviors have become a public health problem. It is as if a generation of children have experienced early onset conduct disorder and aggression which can lead to the mutations discussed in the case studies. Oxidative stress is a public health disease. Truckloads of antioxidant compounds coadjutant to treatment. COMT stands for Catechol-O-Methyltransferase, the name of the enzyme that metabolizes neurotransmitters dopamine and epinephrine. Environmental factors play a prominent role in violent and criminal activities in offspring caused by early life stress in the statistically maternal caretaker home. COMT is positively correlated to a measure of impulsivity and BI. COMT is the enzyme responsible for the degradation of dopamine, the chemical released in the brain that makes an individual feel good. Dopamine dysfunction transmission increases in response to any type of reward: Money, love, addiction. The COMT gene in conjunction with environmental variables and stressful life events is what is called the gene-environment. As in the case studies, COMT causes aggressive behavior meant to harm self or others, antisocial behavior, stealing, and vulnerability to fraud or fraudsters. Reactive aggression is impulsive as opposed to proactive aggression, offensive. Norepinephrine is synthesized from dopamine; both work in conjunction to create joy in the brain along with serotonin reuptake. MAOIs increase norepinephrine,

serotonin, dopamine transmitters. Inhibitor drugs prevent dopamine from re-entering and being absorbed by the nerve cell that released it. This occurs via DAT in normal striation brain regions with sparse dopamine in the prefrontal cortex.

Dopamine modulation of behavior and cognition may be achieved by movement, motivation, reward, sleep, production, dreaming, sleeping, mood, attention, memory, working, and learning. Dopamine is deactivated by sex, shopping, trigger rush reinforcement.

Dorsey, TJ, Glade, Avery each show mutations in the COMT gene. An impulse occurs because of a nerve, the difference in electrical charge across the plasma membrane of a neuron. TJ and Glade came from hostile home environments while Dorsey came from a stable enmeshed family, and Avery experienced neglect. The families of the case studies were intact except for Avery whose parents divorced but stayed close and eventually reunited. All of them benefited from dopamine behavior modulation, BI medications, and projects. Avery became a century bike rider; Glade stopped shoplifting via medication and therapy as well as resumed vigorous exercise, and Dorsey made herself immune to fraud and lending money by taking time to herself, abstinence from the trigger, and making up her own mind. All of them took on projects: Dorsey bravely set out to the

northeast with her dogs to buy a home in the country setting she had loved with her husband; Glade began writing books as her life work; and Avery set out to ride his bike to every state surrounding New York State. Bodies in motion stay in motion. Apply a force against the motion for a particular duration of time, and the result is decreased motion. The greater the motion the higher amount of force is required to bring the body to a stop; hence velocity changes momentum. Or, as Biden would say "To anyone thinking of taking advantage... I have one word for you: Don't!"

Force, time, and motion are in relationship. Positive impulsivity is good: Don't do it, don't jump off that cliff; don't steal that briefcase; don't believe in fraudsters; don't set fires; don't take drugs. All of these cases, as well as healthy individuals in the general population, have to some degree experienced negative lapses in their synapses, the absolute heart of impulsivity.

END