

# INTERNATIONAL JOURNAL OF LAW MANAGEMENT & HUMANITIES

[ISSN 2581-5369]

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Volume 8 | Issue 2

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2025

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# Criminal Behaviour as a Function of Personality Factors, Mental Health, and Family Constellation

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## ABSTRACT

*Criminal behavior is a multifaceted phenomenon influenced by an interplay of individual, psychological, and environmental variables. This paper explores criminality through the lens of three primary domains: personality traits, mental health status, and family constellation. Personality factors such as impulsivity, aggression, low conscientiousness, and high neuroticism have been consistently linked to a higher risk of engaging in criminal activities. Concurrently, mental health disorders—including antisocial personality disorder, substance use disorders, and mood disorders—can exacerbate maladaptive behaviors and reduce the capacity for social conformity. The role of family constellation, encompassing family structure, parenting styles, birth order, and early relational experiences, also emerges as a crucial determinant, with disrupted or dysfunctional family environments often correlating with delinquency and recidivism. By integrating psychological profiling with socio-familial analysis, this study underscores the need for holistic, preventative approaches to criminal justice, emphasizing early intervention, mental health support, and family-based therapies.*

**Keywords:** *Criminal behavior, environmental variables, parenting styles, birth order, and early relational experiences, criminal justice.*

## I. INTRODUCTION

“Crime is a particularly interesting problem because it is, in many respects, the obverse (i.e., the 'flip side') of altruism. This is especially true if we define crime broadly as behavior in which individuals obtain resources from others via force, fraud, or stealth”.<sup>3</sup>

“Think about this: we have discussed the apparent importance of altruism for large-scale social interactions between unrelated people. In order for people to reap the full benefits of group cooperation and division of labor, they sometimes must subordinate their personal interests to those of others, occasionally in dramatic fashion. Altruistic acts cost an individual more than he

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<sup>3</sup> Vila B, "Crime and the American Dream: Policy Implications" in *Social Pathways to Violence* (1994).

or she gains. Criminal acts do just the opposite. People who commit these acts intentionally harm others for their own gain”.<sup>4</sup>

- **Problem of Crime**

“The US is truly in the midst of a crime wave. Serious crime rates in the United States rose 40 percent from 1970 to 1990. Rates for reported violent crimes rose 85 percent, rates for more common property crimes 35 percent. As we attempted to control crime through traditional approaches, expenditures for federal, state, and local criminal justice system activities increased from \$12.3 billion in 1971 to \$74.3 billion in 1990. Our imprisonment rates soared from 96 to 292 per 100,000, becoming higher than any other industrialized nation.”

“Crime has high and diverse costs. The direct physical, material, mental, and emotional injury suffered by victims of crime is deplorable. Perhaps even more tragic, however, is the indirect damage to society. Attempts to control crime through the criminal justice system increasingly intrude in our private lives. Personal freedoms are threatened as we repeatedly choose between public order and individual rights. Moreover, crime amplifies mistrust, feeds prejudice, and generally degrades social cohesion (Vila, 1994). People become more fearful, often imprisoning themselves in their own homes. Guns are kept within reach, a knock on the door evokes terror, and a stranger in need of assistance is ignored”.

- **Systems Perspective on Crime**

“Criminal behavior is the product of a systematic process that involves complex interactions between individual, societal, and ecological factors over the course of our lives.<sup>5</sup> In other words, from conception onward, the intellectual, emotional, and physical attributes we develop are strongly influenced by our personal behaviors and physical processes, interactions with the physical environment, and interactions with other people, groups, and institutions”.<sup>6</sup>

“These systematic processes affect the transmission from generation to generation of traits associated with increased involvement in crime. As will be discussed, this often ignored fact has important policy implications. Before discussing the systematic processes that cause crime, we first must outline key ecological-, societal-, and individual-level components of that system. In other words, we must look at the parts separately before we can understand how they work together”.<sup>7</sup>

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<sup>4</sup> Katz J, *Seductions of Crime: Moral and Sensual Attractions in Doing Evil* (Basic Books 1988).

<sup>5</sup> Fishbein DH, *Biological Perspectives in Criminology* (Wadsworth Publishing 1990).

<sup>6</sup> Wilson JQ and Herrnstein RJ, *Crime and Human Nature: The Definitive Study of the Causes of Criminal Behavior* (Simon & Schuster 1985).

<sup>7</sup> Sampson RJ and Laub JH, *Crime in the Making: Pathways and Turning Points through Life* (Harvard University

- **Societal or Macro Level Factors**

“Societal or macro-level factors deal with systematic interactions between social groups. Societal factors describe the ways society is structured. They include such things as the relative distribution of the population among groups and the flows of information, resources, and people between groups.”

“Societal factors encompass the variety and heterogeneity of racial/ethnic/cultural/productive groups, their behaviors and beliefs, and economic relations”.<sup>8</sup>

- **Motivation and Opportunity**

“Individuals actually commit the crimes. Although ecological and societal factors must be included in any full explanation of crime, individual factors always intervene between them and a criminal act. For this reason, individual factors need to be the center of any description of the causes of crime”.<sup>9</sup>

“Individual or micro-level factors describe how a person becomes motivated to commit a crime. Before describing those factors, however, it is important to define another key component of the system—motivation”. Is it just the driving force behind our actions? In this discussion, motivation is more than the "I want" portion of the equation. It includes "I could," "What will it cost me compared to what I think I'll get?" and "Is this right and proper?"

“Motivation is the outcome of a process in which a goal is formulated, costs and benefits are assessed, and internal constraints on behavior are applied. The relative importance of the components of this process may vary from individual to individual, time to time, and situation to situation. In other words, sometimes a person's motivation is influenced more by rational decision-making, other times by emotions such as anger, greed, or lust. Similarly, some people tend to be more motivated by cost/benefit calculations more of the time than others. Moreover, the value people place on different objects or activities can vary as can their ability to resist temptation”.

“Motivation alone cannot cause a crime to occur; opportunity also is required. And—although few researchers today address this issue—opportunity itself may influence motivation (Katz, 1988). Lay people call this temptation and probably would consider any discussion of motivation that excluded temptation silly. Thus, a person's propensity to commit a criminal act

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Press 1993).

<sup>8</sup> Cohen LE and Machalek R, "A General Theory of Expropriative Crime: An Evolutionary Ecological Approach" (1988) 82 *American Journal of Sociology* 465.

<sup>9</sup> Gottfredson MR and Hirschi T, *A General Theory of Crime* (Stanford University Press 1990).

at a particular point in time is a function of both motivation and opportunity.”

“Some may be motivated to seek out and exploit criminal opportunities that offer extremely small rewards; others will commit crimes only when presented with relatively enormous opportunities; and a very few will not commit crimes regardless of rewards. As Cohen and Machalek (1988) noted in their innovative work on the evolution of crime and criminal strategies, disadvantage may motivate people to commit crimes, but so can advantage”.

“As the past decade's string of institutional scandals has graphically illustrated, the elevated skills and status that provide access to lucrative criminal opportunities with little risk of being caught and punished also can motivate people to commit crimes. We might imagine that most politicians and businesspeople who take and offer bribes and the like are less impulsive and thrill-seeking than street criminals, but still have higher motivation to commit crimes than their honest colleagues. However, in politics and business, the opportunities are enormously tempting”.

“Contrariwise, scientific scandals are relatively rare. However, it is not likely motivation but opportunity that is lacking. The main reward in science is prestige, and it is gained by publishing papers. Plagiarism and data faking occur, but if the idea is an important one, the victim of plagiarism will complain, and others will attempt to replicate the faked experiment. The criminal act of publishing a faked paper is highly public; your name is attached and the chances of getting caught are high”.

- **Biological Factors**

“Biological factors include such things as physical size, strength, or swiftness, and the excitability/reactivity of nervous and organ systems in the body (see Fishbein, 1990; Wilson and Herrnstein, 1985). It is easy to imagine that big, athletic, young males are likely to be statistically over-represented among strong-arm robbers compared to small, skinny, awkward fellows”.<sup>10</sup>

“Although these factors set the physical boundaries of our behavior and influence our affective state, they do not determine which of the myriad possible behaviors we perform”.<sup>11</sup>

- **Socio-Cultural Factors**

“Socio-cultural factors influence the strategies of behavior and personal beliefs, values, needs, and desires a person acquires over his or her life. These have been the focus of many well-

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<sup>10</sup> Fishbein DH, *Biological Perspectives in Criminology* (Wadsworth Publishing 1990).

<sup>11</sup> Wilson JQ and Herrnstein RJ, *Crime and Human Nature: The Definitive Study of the Causes of Criminal Behavior* (Simon & Schuster 1985).

known theories of crime that emphasized such things as social learning, rational choice, self-control, and social strain.”

“They include the knowledge, skills, attitudes, and other cultural information we learn through interactions with other people and groups—as well as from cultural artifacts such as books and movies. Socio-culturally acquired traits affect which behavioral strategies (ways of doing things to achieve desired ends) one knows how to apply, and they influence how we perceive the costs and benefits of a course of action.”

“For example, the value we place on the goodwill and opinion of others is a socio-cultural factor, as are many of the beliefs that affect the value we assign to material or symbolic goods. Socio-cultural factors influence the strength of self-control that helps us resist temptation. They also can produce "strain" that magnifies temptation when there are disjunctions between what we have learned to desire and the opportunities we perceive”.<sup>12</sup>

- **Development**

“Development is the process of physical, intellectual, and emotional growth that begins with conception and ends with death.<sup>13</sup> Development can be adversely influenced by such factors as environmental pollutants, disease, physical injury, and lack of nurturing”.<sup>14</sup>

“Interactions throughout the life course between biological, socio-cultural, and developmental factors determine who we are and how we respond to opportunities at any point in time”.<sup>15</sup>

## **II. THE NATURE AND DISTRIBUTION OF CRIME**

### **Correlates and Causes of Crime:**

“A large body of research indicates that crime is highly correlated with youthfulness and male gender, and that early involvement in crime is predictive of subsequent involvement. Similarly, poverty, inequality, disrupted families, inadequate socialization, and the presence of criminal opportunities all seem to be important correlates of crime (e.g., Sampson and Laub 1993; Reiss and Roth 1993; Tonry, Ohlin, and Farrington 1991; Land, Mc-Call, and Cohen 1990; Gottfredson and Hirschi 1990; Blau and Schwartz 1984).”<sup>16</sup>

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<sup>12</sup> Sampson RJ and Laub JH, *Crime in the Making: Pathways and Turning Points through Life* (Harvard University Press 1993).

<sup>13</sup> Werner EE and Smith RS, *Overcoming the Odds: High Risk Children from Birth to Adulthood* (Cornell University Press 1992).

<sup>14</sup> Fishbein DH, *Biological Perspectives in Criminology* (Wadsworth Publishing 1990).

<sup>15</sup> Patterson GR, DeBaryshe BD and Ramsey E, "A Developmental Perspective on Antisocial Behavior" (1989) 44 *American Psychologist* 329.

<sup>16</sup> Sampson RJ and Laub JH, *Crime in the Making: Pathways and Turning Points through Life* (Harvard University Press 1993).

These general findings about the primary correlates of crime seem likely to endure—although there remains substantial debate among criminologists in various academic disciplines about the relative causal importance of, and relationships between, different variables.<sup>17</sup> “This debate tends to obscure larger issues regarding the appropriate causal scope and scale for understanding and controlling crime; i.e., which variables interacting in what ways should be considered, and at what levels of analysis”.<sup>18</sup>

“The problem is not easy to solve with better correlational studies because so many variables are intercorrelated.<sup>19</sup> For example, poverty, racial discrimination, and family disruption all disproportionately affect African Americans, who also disproportionately engage in criminal behavior. However, from the correlation data alone, it is impossible to say which variable is the most important or direct cause of crime, or anything about how the variables might be causally interrelated”.<sup>20</sup>

“As a result, no satisfactory unified theoretical framework yet has been developed. This has diminished the policy relevance of recommendations from even some of the most comprehensive interdisciplinary research on crime. This is a prime example of the kind of interdisciplinary problem associated with the sociology of science that human ecology tries to address”.<sup>21</sup>

### “Research vs. Policy”

“Although research and policy formulation should be complementary activities, they often have different imperatives. Whereas scientists are engaged in an endless pursuit of information and understanding, policymakers eventually must take action. In this chapter, we are not trying to settle debates about which causal variables explain more variance in crime rates or criminal behavior.”

“Rather, we want to show how the human ecological approach might be used to systematically and completely organize information and empirically supported insights from the many disciplines that study crime. If this approach makes it possible to develop a truly general theory of criminal behavior, it finally might be possible to establish a unified framework to guide both

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<sup>17</sup> Reiss AJ and Roth JA, *Understanding and Preventing Violence* (National Academy Press 1993).

<sup>18</sup> Tonry M, Ohlin LE and Farrington DP, *Human Development and Criminal Behavior: New Ways of Advancing Knowledge* (Springer-Verlag 1991).

<sup>19</sup> Land KC, McCall PL and Cohen LE, "Structural Covariates of Homicide Rates: Are There Any Invariances Across Time and Space?" (1990) 95 *American Journal of Sociology* 922.

<sup>20</sup> Gottfredson MR and Hirschi T, *A General Theory of Crime* (Stanford University Press 1990).

<sup>21</sup> Blau JR and Schwartz JE, *Crosscutting Social Circles: Testing a Macrostructural Theory of Intergroup Relations* (Academic Press 1984).

research and, eventually, policy.”

“We do think that the policy relevance of research is important. For decades, theoretical fragmentation in criminology has contributed to generally ineffective, fragmented, and shortsighted public policies. Without a holistic understanding of the causes of crime, elected officials will continue to shift the focus of control efforts back and forth from individual-level to macro-level causes as the political pendulum swings from right to left.”

“This erratic approach feeds the desperate belief that the problem of crime is intractable—a belief that results in calls for increasingly draconian crime control measures that threaten constitutional guarantees, even commonsense (“Shoot casual marijuana users” [Gates 1992])”.

### **Partial Theories of Crime:**

“A number of 'general' and/or very broad theories of crime have been proposed during recent years. Yet no single perspective has been able to integrate causal factors across important ecological (environmental and situational), micro-level (intrinsic to the individual), and macro-level (social structural and economic) domains to explain the full scope of criminal behavior”.<sup>22</sup>

For example, Wilson and Herrnstein (1985) provide an exhaustive review of micro-level biopsychological factors associated with the development of criminal propensities by individuals but largely ignore macro-level factors such as social structure, cultural beliefs, and the role of ecological interactions. Gottfredson and Hirschi (1990) attend more to ecological and macro-level factors associated with the development of self-control but deny that biological factors have any importance.<sup>23</sup>

“There is a more synthetic trend in recent research. Sampson, working with others, recently has described most of the salient relationships”. For example, Sampson and Laub (1993) described how macro-level factors influence individuals over the life course via systematic links to family relations and the institutions of school and work.<sup>24</sup>

“And Sampson and Groves (1989) identified how these factors are affected by the ecological organization of communities. However, these scholars avoid discussing the role of biological factors and do not account for the evolution of macro-level factors over time”.<sup>25</sup>

“Similarly, Farrington (1986) explains crime as the product of a chain of processes that involve

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<sup>22</sup> Wilson JQ and Herrnstein RJ, *Crime and Human Nature: The Definitive Study of the Causes of Criminal Behavior* (Simon & Schuster 1985).

<sup>23</sup> Gottfredson MR and Hirschi T, *A General Theory of Crime* (Stanford University Press 1990).

<sup>24</sup> Sampson RJ and Groves WB, "Community Structure and Crime: Testing Social-Disorganization Theory" (1989) 94 *American Journal of Sociology* 774.

<sup>25</sup> Farrington DP, *Understanding and Preventing Youth Crime* (Home Office Research Study 1986).

biological, micro-level, and ecological factors that influence what is desired, which strategies are selected to obtain desiderata, and situational and opportunity factors that affect decision-making. But he does not deal with the evolution of macro-level and ecological factors”.<sup>26</sup>

“Developmental psychologists have focused more broadly on the etiology of antisocial behavior. For example, Moffitt (in press) and Patterson et al. (1989) take into account generational and lifespan issues as well as demographic, micro-, and macro-level factors”.

“However, they ignore the roles played by criminal opportunities and factors associated with the evolution of criminal behaviors and social responses to crime.<sup>27</sup> All these factors must be understood together before we can explain, predict, or control crime fully. Human ecology similarly has its roots in the 'interdisciplinary' of evolutionary ecology. But it uses a problem-oriented, rather than discipline-oriented, approach to understanding criminal behavior”.

For example, it does not ask "How can one reconcile 'strain', 'control', 'labeling', 'social learning' and... theories?" Instead, it asks "What relationships tend to be fundamentally important for understanding changes over time in the resource acquisition and retention behaviors of any social organism?" “This defines naturally the boundaries of the problem and leads us to view systematic interactions between various domains in a more realistic fashion as dynamic rather than static”.<sup>28</sup>

### “Key Causes of Crime”

“It is necessary to apply a generational time scale in order to holistically understand the causes of individual criminal behavior. We begin the same way an ecologist would approach the study of any organism: by examining the life cycle.”

## III. THE ROLE OF EARLY LIFE EXPERIENCES

“Early life experiences appear likely to have an especially strong influence on the development of criminality because individuals acquire their traits sequentially. The traits we possess at any juncture are the result of the cumulative cognitive, affective, physical, and social effects of a sequence of events that began at conception.”

“As a result of these events, individuals acquire a strategic style over the course of their lives. Some individuals develop a strategic style that emphasizes the use of force, fraud, or stealth to

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<sup>26</sup> Moffitt TE, "Adolescence-Limited and Life-Course-Persistent Antisocial Behavior: A Developmental Taxonomy" (1993) 100 *Psychological Review* 674.

<sup>27</sup> Sampson RJ and Laub JH, *Crime in the Making: Pathways and Turning Points through Life* (Harvard University Press 1993).

<sup>28</sup> Patterson GR, DeBaryshe BD and Ramsey E, "A Developmental Perspective on Antisocial Behavior" (1989) 44 *American Psychologist* 329.

obtain resources and is characterized by self-centeredness, indifference to the suffering and needs of others, and low self-control—criminality.”

Some of the more important developmental factors include parenting and family management practices, educational success, pre-, peri-, and postnatal stress (e.g., Wilson and Herrnstein 1985), nutrition, and complex interactions between genes and environment (Fishbein 1990).

“Two especially important factors are whether an environment helps or hinders a child’s attempt to cope with his/her temperamental propensities and the ability of parents to cope with or redirect”.

As Werner and Smith(1992) note, children are placed at increasing risk of becoming involved in crime by such things as economic hardships, living in high crime neighborhoods, serious care giving deficits, and family disruption. “But these risks appear to be buffered by factors like an easy temperament, scholastic competence, educated mothers, and the presence of grandparents or older siblings who serve as alternate caregivers. The relative importance of risk and protective factors varies according to life stage, gender, and social environment”.

Demographic stressors such as poverty, lack of education, high crime neighborhood and family stressors such as unemployment, marital conflict, and divorce all tend to influence development by disrupting family management practices (Sampson and Laub 1993:83). “Growing up in a disrupted family is associated strongly with child antisocial behavior, of which crime is one type”. The generational time scale is particularly important there because poor family management, antisocial behaviors, and susceptibility to stressors often are transmitted inter-generationally from grandparents to parents to children (Patterson, De Baryshe, and Ramsey 1989). As will be discussed, this may have important policy implications.

#### **IV. DEFINITIONS OF CRIMINAL BEHAVIOUR**

- **Criminal Behaviour: Overview**

“Criminal behaviour envelops a wide variety of activities, and for that reason, researchers tend to focus on the wider context of antisocial behaviour”. Morley and Hall (2003), who have investigated the genetic influences on criminal behaviour, point out three different ways to define antisocial behaviour.<sup>29</sup>

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<sup>29</sup> Morley K and Hall W, "Is There a Genetic Influence on Criminal Behavior?" (2003) 28 *Current Issues in Criminal Justice* 151.

“First is equating it with criminality and delinquency, which both involve engaging in criminal acts”. Criminality can lead to arrest, conviction, or incarceration for adults, while delinquency is related to juveniles committing unlawful acts (Rhee & Waldman, 2002). “Information can be collected using court and criminal records, as well as self-report surveys to analyse the influences that were present.

Secondly, they advise individuals to define antisocial behaviour through criteria used to diagnose certain personality disorders. More specifically, they mean those personality disorders, such as Antisocial Personality Disorder, which is associated with an increased risk of criminal activity.

A final measure suggested for defining antisocial behaviour is by examining personality traits that may be influential in the criminal behaviour of individuals. Traits such as aggressiveness and impulsivity are two traits that have been investigated the most (Morley & Hall, 2003)<sup>30</sup>.

- **Environmental Influence and Criminal Behaviour**

“With regards to determining the effects the environment plays in criminal behaviour, there are fewer resources available. Observational studies and reports submitted by parents are two sources, but not everyone agrees on the validity of information collected from these sources.”

Three additional sources that most researchers cite when gathering information about both genetic and environmental influences are twin, family, and adoption studies (Tehrani & Mednick, 2000)<sup>31</sup>.

- **Genetic Studies on Criminal Behaviour**

There has been great debate between researchers regarding the outcomes of twin, adoption, and family studies. Some claim that these studies support the notion of a genetic basis to criminal behaviour (Tehrani & Mednick, 2000). On the other hand, some have concluded that there is not enough evidence from these twin, family, and adoption studies to profess that genetics do play a role in antisocial or criminal behaviour (Lowenstein, 2003).

Twin studies are conducted on the basis of comparing monozygotic (MZ) or identical twins and their rates of criminal behaviour with the rates of criminal behaviour of dizygotic (DZ) or fraternal twins. Ordinarily, these studies are used to assess the roles of genetic and

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<sup>30</sup> Rhee SH and Waldman ID, "Genetic and Environmental Influences on Antisocial Behavior: A Meta-Analysis of Twin and Adoption Studies" (2002) 128 *Psychological Bulletin* 490.

<sup>31</sup> Ibid

environmental influences.<sup>32</sup>

If the outcomes of these twin studies show that there is a higher concordance rate for monozygotic (MZ) twins than for dizygotic (DZ) twins in criminal behaviour, then it can be assumed that there is a genetic influence (Tehrani & Mednick, 2000). A study conducted looked at thirty-two monozygotic (MZ) twins reared apart, who had been adopted by a non-relative a short time after birth.

The results showed that for both childhood and adult antisocial behaviour, there was a high degree of heritability involved (Joseph, 2001). This study was of particular importance because it examined the factor of separate environments.

Another researcher studied eighty-five monozygotic (MZ) and one hundred and forty-seven dizygotic (DZ) pairs and found that there was a higher concordance rate for the monozygotic (MZ) pairs. Ten years later, after checking police records of these same twins, two other researchers concluded that there was a fifty-four percent heritability of liability to crime (Joseph, 2001).<sup>33</sup>

Around the same time of the study just mentioned, two researchers studied forty-nine monozygotic (MZ) and eighty-nine dizygotic (DZ) pairs but found no difference in the concordance rates. They concluded, therefore, that in respect to common crime, hereditary factors are of little significance (Joseph, 2001).

Many other twin studies have been conducted, but there is concern over the validity of those studies and their ability to separate out the nature and nurture aspects; therefore, other sources of information should be examined.<sup>34</sup>

- **Adoption Studies and Criminal Behaviour**

Adoption studies are critical in examining the relationship that exists between adopted children and both their biological and adoptive parents because they assume to separate nature and nurture.

Studies have been conducted that test for the criminal behaviour of the adopted-away children, if their biological parents had also been involved with criminal activity. In Iowa, the first adoption study was conducted that looked at the genetics of criminal behaviour.

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<sup>32</sup> Tehrani J and Mednick SA, "Genetic Factors and Criminal Behavior" (2000) *Psychological Medicine* 30(2): 315-327.

<sup>33</sup> Joseph J, *The Gene Illusion: Genetic Research in Psychiatry and Psychology Under the Microscope* (Algora Publishing 2001).

<sup>34</sup> Rhee SH and Waldman ID, "Genetic and Environmental Influences on Antisocial Behavior: A Meta-Analysis of Twin and Adoption Studies" (2002) 128 *Psychological Bulletin* 490.

The researchers found that, as compared to the control group, the adopted individuals, which were born to incarcerated female offenders, had a higher rate of criminal convictions as adults. Therefore, this evidence supports the existence of a heritable component to antisocial or criminal behaviour (Tehrani & Mednick, 2000).

Another study in Sweden also showed that if a biological background existed for criminality, then there was an increased risk of criminal behaviour in the adopted children. In Denmark, one of the largest studies of adopted children was conducted and found similar results to the previous studies.

The defining feature of the Denmark study was that the researchers found a biological component for criminal acts against property, but not for violent crimes (Joseph, 2001). Children whose biological fathers had been convicted of property crimes were more likely to engage in similar behaviour, when compared to those whose biological fathers had been convicted of violent crimes.<sup>35</sup>

According to an article by Jay Joseph (2001), who studied all of the minor and major adoption studies, the majority of researchers have found and agreed upon the non-significance of genes in violent crime. This re-establishes the findings from the studies mentioned already in that there may be a genetic component to antisocial behaviour or that genes influence criminal behaviour, but specifically for property offences.

- **Family Studies and Criminal Behaviour**

Family studies are the third type of instrument used to assess the relationship between genetics and environmental influences on criminal or antisocial behaviour. Research in this field has probably been the least accepted by psychologists and other scholars because of the degree of difficulty in separating out nature and nurture in the family environment.

Children experience both the influence of their parents' genes and also the environment in which they are raised, so it is difficult to assign which behaviours were influenced by the two factors. Twin studies have this flaw, as stated earlier, but it is more prevalent in family studies.<sup>36</sup>

An additional concern with family studies is the inability to replicate the results, therefore leading to a small number of studies. Regardless of these drawbacks, one family study in

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<sup>35</sup> Tehrani J and Mednick SA, "Genetic Factors and Criminal Behavior" (2000) *Psychological Medicine* 30(2): 315-327.

<sup>36</sup> Brunner HG, Nelen M, Breakefield XO, Ropers HH and van Oost BA, "Abnormal Behavior Associated with a Point Mutation in the Structural Gene for Monoamine Oxidase A" (1993) 262 *Science* 578.

particular should be acknowledged for its findings.

Brunner, Nelen, Breakefield, Ropers, and van Oost (1993) conducted a study utilising a large Dutch family. In their study, they found a point mutation in the structural gene for monoamine oxidase A (MAOA), a neurochemical in the brain, which they associated with aggressive criminal behaviour among a number of males in that family (Alper, 1995).<sup>37</sup>

These males were reported to have selective MAOA deficiency, which can lead to decreased concentrations of 5-hydroxyindole-3-acetic acid (5-HIAA) in cerebrospinal fluid. Evidence suggests that low concentrations of 5-HIAA can be associated with impulsive aggression.

These results have not been confirmed in any additional family studies, which leads to a need for more studies to determine if other families share similar results (Brunner et al., 1993). However, this one family study does seem to suggest that genetics play an important role in antisocial or criminal behaviour.

## V. PERSONALITY DISORDERS AND TRAITS

- **Early Signs of Personality Disorders**

Personality traits and disorders have recently become essential in the diagnosis of individuals with antisocial or criminal behaviour. These traits and disorders do not first become evident when an individual is an adult; rather, these can be seen in children.

For that reason, it seems logical to discuss those personality disorders that first appear in childhood. Attention Deficit Hyperactivity Disorder (ADHD), Conduct Disorder (CD), and Oppositional Defiance Disorder (ODD) are three of the more prominent disorders that have been shown to have a relationship with later adult behaviour (Holmes, Slaughter, & Kashani, 2001).<sup>38</sup>

- **Oppositional Defiance Disorder (ODD)**

Oppositional Defiance Disorder (ODD) is characterised by argumentativeness, noncompliance, and irritability, which can be found in early childhood (Holmes et al., 2001). When a child with Oppositional Defiance Disorder (ODD) grows older, the characteristics of their behaviour also change and more often for the worse.

They start to lie and steal, engage in vandalism, substance abuse, and show aggression

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<sup>37</sup> Alper JS, "Genetics and Criminal Behavior: The Impact of DNA on Neuroscience and Criminology" (1995) 27 *Journal of Law, Medicine & Ethics* 173.

<sup>38</sup> Holmes GR, Slaughter JR and Kashani JH, "Childhood Conduct Disorder and Personality Disorders: Future Considerations for DSM" (2001) 38 *Child Psychiatry and Human Development* 91.

towards peers (Holmes et al., 2001). Frequently, Oppositional Defiance Disorder (ODD) is the first disorder that is identified in children and if sustained, can lead to the diagnosis of Conduct Disorder (CD) (Morley & Hall, 2003). It is important to note, however, that not all children who are diagnosed with ODD will develop CD.<sup>39</sup>

## VI. MENTAL HEALTH AND CRIMINAL BEHAVIOR

- **Much evidence now suggests that patients with major mental disorders are at increased risk for crimes and violence.**

A number of recent studies have shown that many patients suffering from major mental disorders (schizophrenia and major affective disorders) commit crimes and crimes of violence (Monahan, N.D.). One investigation of an unselected birth cohort followed to age 30 demonstrated that 47 percent of men and 18 percent of women with major mental disorders were registered for crime (Hodgins, N.D.).<sup>40</sup>

A number of follow-up studies of patients discharged to the community have found that they commit more crimes and more crimes of violence than the general population (Durbin, Pasewark, Albers, 1977; Giovanni, Gurel, 1967; Lindqvist and Allebeck, 1990; Rappeport and Lassen, 1965; Rappeport and Lassen, 1966; Sosowsky, 1974; Sosowsky, 1978; Sosowsky, 1980; Steadman, Coccozza, and Melick, 1978; Zitrin, Hardesty, Burdock, and Drossman, 1976; Link BG, Andrews H, Cullen, in press).<sup>41</sup>

Several investigations have documented elevated prevalence rates for the major mental disorders among offenders (Collins and Schlenger, 1983; Daniel and Robins, Reid, Wilfley, 1988; Hyde and Seiter, 1987; Neighbors, Williams, and Gunnings, 1987; Hodgins and others, 1990). A Danish study of all homicide offenders over a 25-year period revealed that 23 percent suffered from a major mental disorder (Gottlieb, Gabrielsen, and Kramp, 1987).

A Swedish study of all homicide offenders in the northern half of the country over an 11-year period found that 53 percent suffered from a major disorder (Lindqvist, 1986). Other studies reveal that persons suffering from major mental disorders report more aggressive behavior than persons with no disorders (Link, Andrews, and Cullen, in press; Swanson, Hozer, Ganju, and Jono, 1990).<sup>42</sup>

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<sup>39</sup> Morley K and Hall W, "Is There a Genetic Influence on Criminal Behavior?" (2003) 28 *Current Issues in Criminal Justice* 151.

<sup>40</sup> Hodgins S, "Mental Disorder, Intellectual Deficiency, and Crime: Evidence from a Birth Cohort" (N.D.) 45 *Archives of General Psychiatry* 505.

<sup>41</sup> Hyde PS and Seiter RP, "Mental Disorder and Violent Behavior: The Role of Context in Offender Behavior" (1987) 28 *Hospital and Community Psychiatry* 735.

<sup>42</sup> Collins JJ and Schlenger WE, "Mental Disorder and Violent Behavior: The Role of Context in Offender

It has been proposed that the criminality and violence of persons with major mental disorders is a consequence of their illness (Link, Andrews, and Cullen, in press; Taylor, in press). Yet, longitudinal studies conducted in several different countries and cultures have consistently revealed that adult criminality is preceded by a childhood history of antisocial behaviour (Farrington and West, 1990; Quinton, Rutter, and Gulliver, 1990).<sup>43</sup>

This developmental perspective suggests that among offenders with major mental disorders, the antisocial behavior would precede the onset of the major disorder by many years. These two competing hypotheses may both be correct, each applying to a different subgroup of mentally disordered persons. Individuals with both antisocial personality disorder (APD) and a major disorder would be expected to be antisocial, and even criminal, long before the onset of the major disorder. Their criminality and/or violence would be associated with the personality disorder rather than the major disorder.<sup>44</sup>

However, among the mentally disordered with no APD, the criminality or violence may be directly related to the symptoms of the major disorder. In two of the studies of incarcerated offenders (Cbtck, Hodgins, 1990; Abraln, Teplin, 1991), it was found that 66.4 percent and 67.8 percent of the male inmates with major mental disorders also met DSM-III criteria for APD.<sup>45</sup>

## VII. SUGGESTIONS

Keeping the findings of the present investigation in mind, it is suggested that this study may be replicated on a larger sample population of criminals for revalidation. The factors such as psychopathology and mental disorders may be studied in relation to criminal behavior, as they may underlie the link between orienting deficits and criminals' behavior.

The psychophysiological differences in criminals and non-criminals may be studied in social and demographic contexts. Prospective longitudinal studies that collect both official and self-report data are required to adequately test causal hypotheses concerning protective factors against criminal outcomes.

Incorporation of criminals with varied nature of crime could have provided a more accurate relationship between personality, mental health, and the nature of crime.

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Behavior" (1983) 140 *American Journal of Psychiatry* 1440.

<sup>43</sup> Giovanni M and Gurel L, "Psychopathology and Criminal Behavior" (1967) 123 *American Journal of Psychiatry* 1295.

<sup>44</sup> Daniel AE and Robins LN, "Psychiatric Diagnoses in White and Black Male Criminal Offenders" (1988) 45 *Criminal Justice and Behavior* 7.

<sup>45</sup> Link BG, Andrews H and Cullen FT, "The Violent and Illegal Behavior of Mental Patients Reconsidered" (in press).

### **VIII. CONCLUSIONS**

- (1) Impulsivity as a personality trait is conducive to criminal behaviour amongst criminals. Persons belonging to the high impulsivity group are more prone to cognizable as well as non-cognizable criminal offences.
- (2) Aggressiveness as a personality trait is conducive to criminal behaviour amongst criminals. Persons belonging to the high aggressiveness group are more prone to cognizable as well as non-cognizable criminal offences.
- (3) Mental health as a psychological trait is a significant contributor to criminal behaviour. Persons possessing sound mental health are less likely to be prone to criminal behaviour.
- (4) Size of the family is a significant contributor to criminal behaviour. Persons belonging to large-sized families are more prone to criminal behaviour and vice-versa.

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