Physiology, sociology and murder: a scientist looks at violence in America

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Base Instincts: What Makes Killers Kill? , *by Jonathan H. Pincus, M.D., W.W. Norton & Company, Inc., New York, NY, 2001*

This recent volume by neurologist Jonathan Pincus examines social, psychological and neurological reasons why certain people commit terrible acts of murder. While limited in its analysis of the social dimension of violence—the author focuses mainly on family circumstances, especially childhood abuse, rather than wider social factors—the book constitutes a powerful repudiation of the religious-moralistic view of violent behavior that currently dominates the media and public policy in America.

Dr. Pincus is the chief of neurology at the Veteran's Administration Hospital, Washington DC, and professor of neurology at Georgetown University School of Medicine. He seeks to examine violent crimes from an objective, dispassionate and scientific perspective. Much of the book presents a comprehensible, detailed explanation of the complex interrelationship between the brain and the environment.

Only about 6 percent of the population causes about 70 percent of violent crime, according to current statistics. Pincus's medical colleagues routinely label such people "sociopaths" or having "antisocial personality disorder." But Pincus believes that such descriptions are useless tautologies that do not explain why someone would commit an antisocial act. Diagnostic labels and understanding the issue are very different.

Pincus and his colleague Dr. Dorothy Lewis, a child psychiatrist, developed the view that murderers, and especially the most notorious kind, such as serial killers, are the product of the combination of child abuse with neurological damage and psychiatric illness. The three factors interact, as childhood abuse creates enormous anger, while neurologic and psychiatric diseases of the brain damage the capacity to stop urges to violence. A supplementary disinhibiting factor is the abuse of alcohol and drugs, involved in an estimated 70 percent of violent crimes.

Their theory does not at all suppose a mechanical or automatic correlation between any of these conditions separately and violent behavior. As Pincus emphasizes repeatedly, most people who suffer from brain damage do not exhibit violent behavior. Nor do most people who suffer from mental illness or who were abused as children. It is the combination of all three factors that correlates very highly with violent behavior.

It is widely accepted that child abuse has terrible psychological consequences for the victims both as children and as adults. What is still being researched is how the abuse affects the working and even the physical structure of the brain, altering its developmental anatomy, physiology and functioning.

Drs. Pincus and Lewis studied 14 death row inmates condemned for committing murder before they were 18 years old. They also evaluated 97 boys and 22 girls, average age 15, living in a reform school for violent and nonviolent delinquents. Dr. Pincus further examined 40 young men who were prisoner-patients at Bellevue Hospital in New York City.

Following publication of findings by Pincus and Lewis that violent behavior correlated strongly with neurologic abnormality, paranoia and abuse, some defense attorneys asked Pincus to examine their death row clients, in the hope of finding mitigating factors and saving their clients' lives. This gave Pincus an opportunity, which he sought for research purposes, to examine these individuals on death row who had been labeled unequivocally by society as "extremely violent."

During the past 25 years, Pincus has examined about 150 murderers, including such well-known cases as Kip Kinkel (the Oregon youth who killed his parents and two classmates), Susan Smith (the South Carolina woman who strapped her two toddlers into their car seats and drowned them by driving her car into a lake), serial killers Ted Bundy and Jeffrey Dahmer, and Russell Henderson and Aaron McKinney (the two Wyoming men who killed Matthew Shepherd, a young homosexual).

The results of this research, which Pincus details in his book, are striking. Of the 150 people studied, 94 percent had experienced severe physical and sexual abuse as children, including 13 of the 14 who were on death row at time they were interviewed.

Base Instincts vividly describes the interviews with these individuals, their family members and others. The two doctors went beyond the self-description initially provided by the prisoners. Through investigation, including interviews with relatives, they found patterns of abuse that were sometimes not admitted or not even remembered. As Pincus writes, he had to overcome the skepticism among professional colleagues that such conditions as dissociative identity disorder (DID), a precursor of multiple personality disorder, even existed, "particularly when the subject is a murderer suspected of malingering. Dr. Lewis and I, with colleagues, gathered data from medical, psychiatric, social service, school, military, and prison records; reviewed handwriting styles; and interviewed the subjects' family members and others. This study corroborated signs and symptoms of DID in twelve murderers whom we had examined and documented severe abuse in eleven of them. The subjects had amnesia for the worst of their abuse and systematically underreported what they remembered."

What emerges from the study is an overall picture of families and society in disintegration. Some of the figures show the relationship between abuse and the deteriorating social and economic circumstances confronting the vast majority of Americans, and affecting with special force the most vulnerable in society, children. The frequency of physical abuse, sexual abuse and neglect doubled between 1986 and 1993. Child abuse is the fourth leading cause of death for all children aged one to four in the US and the second leading cause for African-American children in that age bracket. It is also much more common for both whites and blacks in the Southern states. Children from families with incomes of less than $15,000 per year suffered more than twice the rate of physical abuse as children in families with incomes of $15,000 to $30,000. Population studies show that poverty, large families, single-parent families and illicit drug use are all associated with the likelihood of child abuse.

To his credit, Pincus comes down decidedly on the side of changing the

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conditions that produce violence, as opposed to the contemporary one-sided focus on either individual treatment or punishment, which have far less potential for beneficial results. He describes several programs in the economically depressed areas of American cities that provide social services, parent training and preschool to families with newborns and young children, and criticizes the notion that such efforts are unnecessary, expensive frills compared to the billions squandered on prisons.

Pincus's description of the brain's development is fascinating. At birth the brain weighs 400 grams and it continues growing for about three decades, when it reaches 1,100 grams. The impact of the psychosocial environment is a major factor in its development and maturation. This environment affects how the brain is "hardwired."

The author states, "The biology of the brain is not shaped only by genetic influences. What the brain registers through its sensory systems about the surrounding environment is increasingly recognized as a critical factor that permanently changes the brain by altering its connections." Synapses that are used during development are the ones that last, while unused synapses disappear or become ineffective.

He gives the example of the growth of two oak trees from two seeds of the same parent, one on the sunny side of a house, the other in shade, to explain how differences in light, water, nutrients and other variations in the environment can lead to different configurations even though the genetic inheritances are identical. "The development of branching is the trees' response to their genetic instructions and to what they sense in the environment. The development of synapses [connections] between nerve cells is quite similar—the result of genetic instructions and sensory input during early life.... The development of the synapses is very sensitive to the outside environment, including the psychosensory environment."

Pincus points out, for example, that if an infant is born with a cataract in one eye, unless it is removed early, vision will not develop. The child will permanently lose sight in that eye even if the cataract is removed at a later time. This shows the sensitivity of the immature nervous system to necessary stimuli at certain times.

He describes how social development takes place as children learn how to solve problems effectively. What they learn from mistakes, failures and successes guides actions in the future. During development, the neural networks underlying various possible strategies become part of the brain's physical structure.

The author argues that conscience, empathy and ethics are not inborn qualities, but are learned behaviors. In emotionally deprived children, Pincus theorizes, brain development is permanently skewed by abusive upbringing. Impulses created by abuse are encoded in their brains. When mental illness and neurologic damage are added—which may be caused by fetal exposure to drugs or alcohol, a birth defect, an accident, or the abuse itself—conditions exist that are quite likely to produce violent antisocial acts.

Pincus cites a study that looked at a playschool group of 20 toddlers. Ten had been seriously abused and ten had not. When a fellow classmate cried in distress, the nonabused children showed concern and tried to give comfort. None of the abused children tried to give comfort or to help. They showed fear and distress, and some were angry and even struck the crying child.

He asks, "What if the tears of an infant are totally ignored, if his signals for help are constantly misread or disregarded, if his mother punishes his persistent crying by striking him, slapping him with a belt, or burning him with a cigarette?"

Myelination of the back of the brain, the occipital lobes, is nearly complete at birth. Myelin is a fatty insulating material surrounds the nerve fibers. Without it, nerve fibers do not carry impulses. Myelination moves toward the front of the brain, with the frontal lobes the last to be fully myelinated, at about 20 years of age.

The incompletely myelinated frontal lobes of children only gradually join the grid of electrical activity that operates the brain. There is both normal "immature" behavior caused by as yet unmyelinated fibers and immature behavior resulting from a damaged brain. Pincus is critical of the pediatric psychiatric field because no normative data exists for school-age children with regard to the signs of frontal lobe disfunction.

The frontal lobes account for about one-third of the cortical mass in humans. The frontal lobes focus attention and can modify or inhibit instinctual behavior, impulses and antisocial urges that come from other parts of the brain. In the majority of murderers the author examined, he found evidence of neurological abnormalities, primarily in the frontal lobes.

The book's weakest chapter is entitled "Hitler and Hatred," in which Pincus tries to show that "political and criminal violence spring from a similar source." Pincus quotes from a report prepared in 1944 by psychiatrist Walter Langer giving a psychological evaluation of Hitler. And no doubt Hitler manifested many signs of mental disturbance and a past of physical and sexual abuse.

However, Pincus unfortunately exhibits the typical prejudice of a liberal academic, lumping together all forms of violence—the revolutionary violence of the oppressed as well as the counterrevolutionary violence of a Hitler.

There is another and more fundamental problem: Pincus seeks to extend a valuable insight about the material causes of violent behavior into the sphere of politics, in a way that is far too mechanical. The political life of society has its own laws, which must be investigated independently, and cannot simply be derived from insights into neurology and individual psychology.

It is all very well to diagnose Hitler as a madman. But we must ask the question why, at certain point in its historical development, a given capitalist society called on such a madman to be dictator. Or in the case of the individuals whom Pincus has been examining, we must ask, what type of society creates conditions of growing abuse and neurological damage to children?

The book's value is that Pincus, through an examination of the interrelationship between individuals and their environment, seeks to understand what makes people capable of brutality. His research points to deeper causes—not the religious rigmarole of "evil," not pious abstractions about "human nature," but the material conditions of life in which people find themselves.

These deeper causes cannot be understood merely through a biographical examination of the individual and his immediate physical and family environment, but require an analysis of the social structure that conditions the development of individuals. Here the author stops short, in some apparent confusion, admitting that there is a link between poverty and child abuse, but noting that there was more poverty during the Great Depression, but far less abuse. (One could reply, however, that in the Great Depression there were mass social and political movements from below, while, in the current crisis, mass struggles have yet to develop.)

The conditions that have given rise to a terrible growth of homicidal violence in the United States include physical factors directly affecting child development—malnutrition, pollution, lead poisoning, drug and alcohol abuse in pregnant women. They include social problems such as the decay of public education and the cutting back in counseling and other social services. Added to this are political phenomena like the collapse of the old organizations—political parties, civil rights groups, trade unions—that once provided a political and social outlet for the anger and frustration produced by life under capitalism.

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