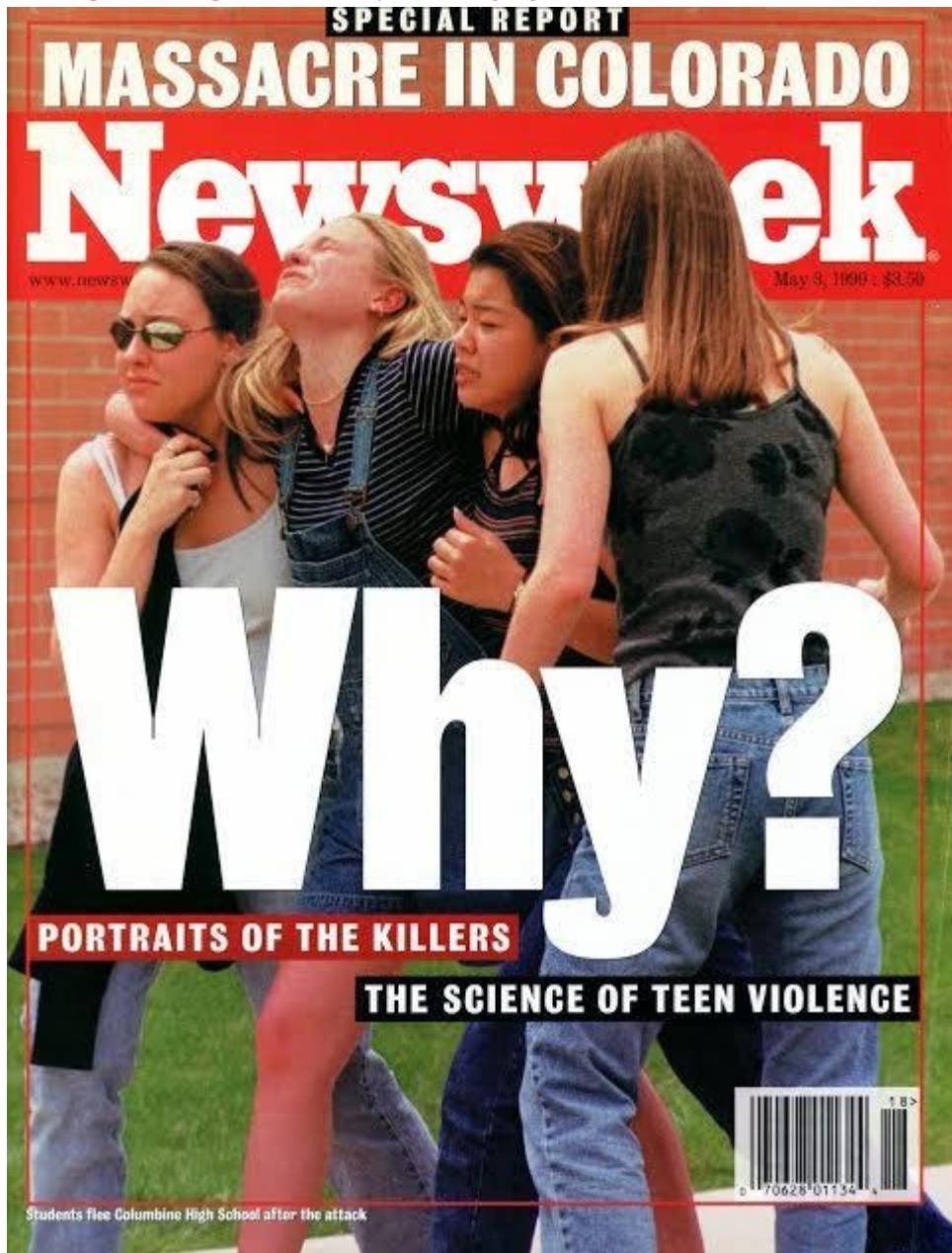


NEWSWEEK REWIND: 15 YEARS AFTER COLUMBINE, A NATION STILL ASKS 'WHY?'

BY **ROB VERGER** ON 4/17/14 AT 6:15 AM



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U.S. SCHOOL SHOOTINGS COLUMBINE HIGH SCHOOL NEWSWEEK REWIND

This Sunday will mark a dark, bloody anniversary: It's been 15 years since the massacre at Columbine High School in Littleton, Colo., in which Eric Harris, 18, and Dylan Klebold, 17, murdered 12 fellow students and one teacher. Lest they not be forgotten, the victims were, of course, individuals with names and unique qualities. *Newsweek* printed a photo of each of their faces. Cassie Bernall, 17, was a photographer. Steven Curnow, 14, liked *Star Wars*. Dave Sanders, 47, a teacher, said, "Tell my girls I love them" before he died. The sad list goes on. The date of the attack, April 20, was no coincidence. It is Adolph Hitler's birthday, and the two troubled teens were taken with Nazism, reportedly shouting "Sieg Heil" during a bowling class earlier that day. Harris wore a shirt that said "NBK" and Klebold wore a shirt that read "Wrath."

Columbine was not the first school shooting, nor was it the last, but it was nonetheless an event of extreme national trauma. After any tragedy like this one—Sandy Hook Elementary, Virginia Tech—the pressing but ultimately unanswerable question is the simplest: why? This was the question featured on *Newsweek*'s May 3, 1999, cover, and it's also the question that the magazine's science writer, Sharon Begley, tackled in the following article. In it, she explores the complex intersections of factors like abuse, biology, culture, environment and childhood, and her nuanced take on such a difficult topic is well worth a read today, a decade and a half later.

Why the Young Kill

By Sharon Begley

THE TEMPTATION, OF COURSE, IS to seize on one cause, one single explanation for Littleton, and West Paducah, and Jonesboro and all the other towns that have acquired iconic status the way "Dallas" or "Munich" did for earlier generations. Surely the cause is having access to guns. Or being a victim of abuse at the hands of parents or peers. Or being immersed in a culture that glorifies violence and revenge. But there isn't one cause. And while that makes stemming the tide of youth violence a lot harder, it also makes it less of an unfathomable mystery. Science has a new understanding of the roots of violence that promises to explain why not every child with access to guns becomes an Eric Harris or a Dylan Klebold, and why not every child who feels ostracized, or who embraces the goth aesthetic, goes on a murderous rampage. The bottom

line: You need a particular environment imposed on a particular biology to turn a child into a killer.

It should be said right off that attempts to trace violence to biology have long been tainted by racism, eugenics and plain old poor science. The turbulence of the 1960s led some physicians to advocate psychosurgery to "treat those people with low violence thresholds," as one 1967 letter to a medical journal put it. In other words, lobotomize the civil rights and antiwar protesters. And if crimes are disproportionately committed by some ethnic groups, then finding genes or other traits common to that group risks tarring millions of innocent people. At the other end of the political spectrum, many conservatives view biological theories of violence as the mother of all insanity defenses, with biology not merely an explanation but an excuse. The conclusions emerging from interdisciplinary research in neuroscience and psychology, however, are not so simple-minded as to argue that violence is in the genes, or murder in the folds of the brain's frontal lobes. Instead, the picture is more nuanced, based as it is on the discovery that experience rewires the brain. The dawning realization of the constant back-and-forth between nature and nurture has resurrected the search for the biological roots of violence.

Early experiences seem to be especially powerful: A child's brain is more malleable than that of an adult. The dark side of the zero-to-3 movement, which emphasizes the huge potential for learning during this period, is that the young brain also is extra vulnerable to hurt in the first years of life. A child who suffers repeated "hits" of stress—abuse, neglect, terror—experiences physical changes in his brain, Dr. Bruce Perry of the Baylor College of Medicine says. The incessant flood of stress chemicals tends to reset the brain's system of fight-or-flight hormones, putting them on hair-trigger alert. The result is the kid who shows impulsive aggression, the kid who pops the classmate who disses him. For the outcast, hostile confrontations—not necessarily an elbow to the stomach at recess, but merely kids vacating en masse when he sits down in the cafeteria—can increase the level of stress hormones in his brain. And that can have dangerous consequences. "The early environment programs the nervous system to make an individual more or less reactive to stress," says biologist Michael Meaney of McGill University. "If parental care is inadequate or unsupportive, the [brain] may decide that the world stinks—and it better be ready

to meet the challenge." This, then, is how having an abusive parent raises the risk of youth violence: it can change a child's brain. Forever after, influences like the mean-spiritedness that schools condone or the humiliation that's standard fare in adolescence pummel the mind of the child whose brain has been made excruciatingly vulnerable to them.

In other children, constant exposure to pain and violence can make their brain's system of stress hormones unresponsive, like a keypad that has been pushed so often it just stops working. These are the kids with antisocial personalities. They typically have low heart rates and impaired emotional sensitivity. Their signature is a lack of empathy, and their sensitivity to the world around them is practically nonexistent. Often they abuse animals: Kip Kinkel, the 15-year-old who killed his parents and shot 24 schoolmates last May, had a history of this; Luke Woodham, who killed three schoolmates and wounded seven at his high school in Pearl, Miss., in 1997, had previously beaten his dog with a club, wrapped it in a bag and set it on fire. These are also the adolescents who do not respond to punishment: nothing hurts. Their ability to feel, to react, has died, and so has their conscience. Hostile, impulsive aggressors usually feel sorry afterward. Antisocial aggressors don't feel at all. Paradoxically, though, they often have a keen sense of injustices aimed at themselves.

Inept parenting encompasses more than outright abuse, however. Parents who are withdrawn and remote, neglectful and passive, are at risk of shaping a child who (absent a compensating source of love and attention) shuts down emotionally. It's important to be clear about this: inadequate parenting short of Dickensian neglect generally has little ill effect on most children. But to a vulnerable baby, the result of neglect can be tragic. Perry finds that neglect impairs the development of the brain's cortex, which controls feelings of belonging and attachment. "When there are experiences in early life that result in an underdeveloped capacity [to form relationships]," says Perry, "kids have a hard time empathizing with people. They tend to be relatively passive and perceive themselves to be stomped on by the outside world."

These neglected kids are the ones who desperately seek a script, an ideology that fits their sense of being humiliated and ostracized. Today's pop culture offers all too many dangerous ones, from the music of Rammstein to the game of *Doom*. Historically, most of those scripts have featured males. That may

explain, at least in part, why the murderers are Andrews and Dylans rather than Ashleys and Kaitlins, suggests Deborah Prothrow-Smith of the Harvard School of Public Health. "But girls are now 25 percent of the adolescents arrested for violent crime," she notes. "This follows the media portrayal of girl superheroes beating people up," from Power Rangers to Xena. Another reason that the schoolyard murderers are boys is that girls tend to internalize ostracism and shame rather than turning it into anger. And just as girls could be the next wave of killers, so could even younger children. "Increasingly, we're seeing the high-risk population for lethal violence as being the 10- to 14-year olds," says Richard Lieberman, a school psychologist in Los Angeles. "Developmentally, their concept of death is still magical. They still think it's temporary, like little Kenny in *South Park*." Of course, there are loads of empty, emotionally unattached girls and boys. The large majority won't become violent. "But if they're in a violent environment," says Perry, "they're more likely to."

There seems to be a genetic component to the vulnerability that can turn into antisocial-personality disorder. It is only a tiny bend in the twig, but depending on how the child grows up, the bend will be exaggerated or straightened out. Such aspects of temperament as "irritability, impulsivity, hyperactivity and a low sensitivity to emotions in others are all biologically based," says psychologist James Garbarino of Cornell University, author of the upcoming book *Lost Boys: Why Our Sons Turn Violent and How We Can Save Them*. A baby who is unreactive to hugs and smiles can be left to go her natural, antisocial way if frustrated parents become exasperated, withdrawn, neglectful or enraged. Or that child can be pushed back toward the land of the feeling by parents who never give up trying to engage and stimulate and form a loving bond with her. The different responses of parents produce different brains, and thus behaviors. "Behavior is the result of a dialogue between your brain and your experiences," concludes Debra Niehoff, author of the recent book *The Biology of Violence*. "Although people are born with some biological givens, the brain has many blank pages. From the first moments of childhood the brain acts as a historian, recording our experiences in the language of neurochemistry."

There are some out-and-out brain pathologies that lead to violence. Lesions of the frontal lobe can induce apathy and distort both judgment and emotion. In the brain scans he has done in his Fairfield, Calif., clinic of 50 murderers, psychiatrist

Daniel Amen finds several shared patterns. The structure called the cingulate gyrus, curving through the center of the brain, is hyperactive in murderers. The CG acts like the brain's transmission, shifting from one thought to another. When it is impaired, people get stuck on one thought. Also, the prefrontal cortex, which seems to act as the brain's supervisor, is sluggish in the 50 murderers. "If you have violent thoughts that you're stuck on and no supervisor, that's a prescription for trouble," says Amen, author of *Change Your Brain/Change Your Life*. The sort of damage he finds can result from head trauma as well as exposure to toxic substances like alcohol during gestation.

Children who kill are not, with very few exceptions, amoral. But their morality is aberrant. "I killed because people like me are mistreated every day," said pudgy, bespectacled Luke Woodham, who murdered three students. "My whole life I felt outcasted, alone." So do a lot of adolescents. The difference is that at least some of the recent school killers felt emotionally or physically abandoned by those who should love them. Andrew Golden, who was 11 when he and Mitchell Johnson, 13, went on their killing spree in Jonesboro, Ark., was raised mainly by his grandparents while his parents worked. Mitchell mourned the loss of his father to divorce.

Unless they have another source of unconditional love, such boys fail to develop, or lose, the neural circuits that control the capacity to feel and to form healthy relationships. That makes them hypersensitive to perceived injustice. A sense of injustice is often accompanied by a feeling of abject powerlessness. An adult can often see his way to restoring a sense of self-worth, says psychiatrist James Gilligan of Harvard Medical School, through success in work or love. A child usually lacks the emotional skills to do that. As one killer told Garbarino's colleague, "I'd rather be wanted for murder than not wanted at all."

THAT THE LITTLETON MASSACRE ended in suicide may not be a coincidence. As Michael Carneal was wrestled to the ground after killing three fellow students in Paducah in 1997, he cried out, "Kill me now!" Kip Kinkel pleaded with the schoolmates who stopped him, "Shoot me!" With suicide "you get immortality," says Michael Flynn of the John Jay College of Criminal Justice. "That is a great feeling of power for an adolescent who has no sense that he matters."

The good news is that understanding the roots of violence offers clues on how to prevent it. The bad news is that ever more children are exposed to the influences that, in the already vulnerable, can produce a bent toward murder. Juvenile homicide is twice as common today as it was in the mid-1980s. It isn't the brains kids are born with that has changed in half a generation; what has changed is the ubiquity of violence, the easy access to guns and the glorification of revenge in real life and in entertainment. To deny the role of these influences is like denying that air pollution triggers childhood asthma. Yes, to develop asthma a child needs a specific, biological vulnerability. But as long as some children have this respiratory vulnerability—and some always will—then allowing pollution to fill our air will make some children wheeze, and cough, and die. And as long as some children have a neurological vulnerability—and some always will—then turning a blind eye to bad parenting, bullying and the gun culture will make other children seethe, and withdraw, and kill.