UNDER REVIEW

DID LEAD POISONING CREATE A GENERATION OF SERIAL KILLERS?

Ted Bundy, Charles Manson, and many other notorious figures lived in and around Tacoma in the sixties. A new book argues that there was something in the water.

By Gideon Lewis-Kraus

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Illustration by Hokyoung Kim

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In the winter of 2021, "Saturday Night Live" spoofed the true-crime industrial complex with a musical number called "Murder Show." The sketch sends up the consumption of spectacular depravity as an idle form of female self-care: "A

bodybuilder chopped up an old lady / I watch it while I text my sister about her baby / Murder show, murder show / Every type of murder show / Late-night true crime / This is my relaxing time." These binges aren't altogether passive—the cast member Ego Nwodim sings that she's "fully down the rabbit hole" as she stands in front of her own labyrinthine wall of clues and concordances.

The writer Caroline Fraser, who won a 2018 Pulitzer for the biography "Prairie Fires: The American Dreams of Laura Ingalls Wilder," addressed the routine derision of the genre a few months later, in an essay for *The New York Review of Books*. "A guilty pleasure—that's what true crime is said to be, by everyone from avid fans to literary scholars," she writes. Critics had long disdained the appetite for sanguinary entertainment as a symptom of decadence. Fraser cites the 1827 satirical essay "On Murder Considered as One of the Fine Arts," by Thomas De Quincey, which "mockingly elevates the genre, positing the existence of a gentleman's club, the 'Society of Connoisseurs in Murder,' whose members were aesthetes, 'Murder-Fanciers,' who 'amidst some carnal considerations of tea and toast' relished 'masterpieces' of the art."

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This assessment, Fraser allows, was historically warranted. Salacious treatments of rape and homicide often specialized "in the debasement of female sex objects: temptresses, sex kittens, jail bait, and lost women." The twentieth century saw a flourishing trade in pulpy detective magazines, with lurid covers "reflecting a noir underworld in which women are whores and villains, wielding guns and knives, or hapless victims of their own lust, barely clad, menaced by men in the frame or just

outside it: eyes wide, bosoms heaving, arms (or legs or necks) tied, red lips open, mouths screaming." The unsubtle indication was that these women probably got what they deserved. Even the more exalted contributions to the canon—"In Cold Blood," with its fictive embroideries—did the genre no favors. At stake was more than just representation. Fraser describes a perverse feedback loop between true crime and degeneracy in the real world; grisly depictions of evil acts were received as both prurient diversion and helpful instructions for homicidal aspirants.

Since then, Fraser argues, we have seen a revisionist turn in the murder-show business, one that merits a more sophisticated and generous appraisal. She writes, "In true crime's latest iteration, writers, reporters, bloggers, documentary filmmakers, and podcast hosts—many of them women (alongside empathetic men), many of them energized by the Me Too movement—have taken a soiled brand and turned it into a collective exercise in retributive justice, recording and correcting the history of sexual violence." She isn't referring to the streamers' pabulum but to such books as Ann Rule's "The Stranger Beside Me," about Rule's friendship with Ted Bundy; the late true-crime writer Michelle McNamara's "I'll Be Gone in the Dark," following her search for the Golden State Killer; and Jessica McDiarmid's "Highway of Tears," about Indigenous women and girls who have been abducted on Highway 16, in Canada. These are neither tawdry nor sheepish; they reclaim crime, especially against women, as "worthy of rigorous, accurate, and analytical attention."

Fraser's essay might be read as a preface to her new book, "Murderland: Crime and Bloodlust in the Time of Serial Killers," an extraordinarily well-written and genre-defying blend of memoir, social and environmental history, and forensic inquest. The book opens with a typically dry observation: "The Pacific Northwest is known for five things: lumber, aircraft, tech, coffee, and crime. Weyerhaeuser, Boeing, Microsoft and Amazon, Starbucks, and serial killers." What follows is a granular, if poetic, attempt to solve two related mysteries: What might account for

the abrupt rise and equally abrupt fall, between the nineteen-sixties and the turn of the century, of the "golden age" of serial killing? And why were so many of these brutes—almost all of them men—cradled in a crescent of psychopathy around Seattle's Puget Sound?

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Fraser admits that she, too, is a practitioner of what she calls the "crazy wall": "Amateur cartographer, I draw lines, making maps tied to timelines, maps of rural roads and kill sites and body dumps." She continues, "In a chaotic world, maps make sense. There are people who have gurus or crystals or graven images. I have maps. They tell a story. They make connections." She locates herself on the first and most puzzling of these maps: "It's August of 1961. I'm seven months old. There are three males who live in what you might call the neighborhood, within a circle whose center is Tacoma. Their names are Charles Manson, Ted Bundy, and Gary Ridgway. What are the odds?"

A crazy wall can function as an actual tool. A good detective assumes, as a heuristic, that there are no coincidences. She uses pushpins and red yarn to reveal hidden patterns, and these patterns ensnare the perpetrator. A crazy wall is just as likely to function as a metaphor. A bad detective also assumes there are no coincidences, not as a heuristic but as a matter of conspiratorial or aesthetic principle. She uses pushpins and red yarn to create hidden patterns, and these patterns ensnare her.

Fraser's quarry is not an individual perpetrator, and her book is not a whodunnit, at least not in the traditional sense. The stories she recounts have been settled. Ted Bundy, the principal vector of Fraser's narrative, was a sadist who spent the nineteen-seventies raping and killing dozens of women—first in Washington State, then in the intermountain West, and finally in Florida—before he was executed, by electrocution, in 1989. He generally approached his targets posing as an injured man in need of some sort of aid; once in or near his car, he bludgeoned them as a prelude to rape, murder, and extended necrophilia. He squirrelled away the remains of his victims on remote logging roads or mountain passes, revisiting the sites until decomposition or wild animals rendered further abuse unfeasible. Fraser details these atrocities with clinical precision. She declines to indulge the allure of Bundy's Lecter-like cunning, emphasizing instead the innocent lives he cut short—and the raft of mistakes made by law-enforcement officers in their ham-handed pursuit.

Fraser wastes little time trying to figure out what went wrong for Bundy on the level of moral psychology. She is more interested in what went wrong in general: "There are 55 serial killers in 1940, 72 in 1950, 217 in 1960. By 1970 there are 605. By 1980, 768." Her childhood was colored by a sense of accelerating disorder. In 1975, in the middle of Bundy's spree, violent crime increased by fourteen per cent in Seattle, Tacoma, and Spokane. Tacoma measured a sixty-two per cent rise in murder and a twenty-eight per cent rise in rape. There were those who didn't seem to think that any special paranoia was called for."When it comes to serial killers, 1984 is shaping up to be what one scholar will later call 'a moral panic,' " she writes. "In the Pacific Northwest, however, it's difficult to tell what distinguishes a moral panic from a real one."

Among the observers who purported to take this savage crime wave seriously, there were plenty of theories to go around. One syndicated columnist from the New York *Times*, Fraser writes, "muses on 'mindless violence,' " blandly conjuring

such bugbears as "political turmoil and the dissolution of the family and the pernicious influence of television." The killers themselves occasionally betrayed greater insight. In 1978, Dennis Rader, who was known in Wichita as the B.T.K. Killer, for "bind, torture, kill," wrote a letter to the local newspaper in which he claimed to be under the influence of something he called "factor X," which he described as "the same thing that made Son of Sam, Jack the Ripper, Havery Glatman [sic], Boston Strangler, Dr. H. H. Holmes Panty Hose Strangler of Florida, Hillside Strangler," and, last but not least, "Ted of the West Coast" Bundy, who had recently been added to the F.B.I.'s Most Wanted list. Fraser appears to think that Rader was on to something: he "is aware that there's a pattern to his own behavior but senses a larger pattern as well, one involving multiple serial rapists and killers operating all over the country, displaying versions of his pathology and variations of factor X."

Fraser thinks the master key is to be found in the fact that these serial killers disproportionately originated in the counties and milieu of her childhood. The area south and southwest of Seattle was home to massive ore-processing facilities, and she, her classmates, and her subjects were reared in their murky, particulate shadows. "Spare some string for the smelters and smoke plumes," she writes of her crazy wall, "those insidious killers, shades of Hades." The smelters caused a profusion of heavy metals in the region's air and water, and toxins such as lead and arsenic were found in staggering concentrations in the blood of Tacoma's postwar children. Some were merely dulled, or delinquent; a few became tabloid monsters. Bundy was the most famous figure in "a long line of outlandishly wanton necrophiliac killers who've lived, at one time or another, within the Tacoma smelter plume." Fraser waxes in a self-consciously Lynchian register, with stygian and hallucinatory descriptions of the Pacific Northwest. In Tacoma, she writes, it was "as if someone had scratched through to the underworld and released a savage wave of sulfur."

The perpetrators of these environmental crimes have been hiding in plain sight for generations: "It takes two great American family fortunes to build a city of serial killers: the Rockefellers and the Guggenheims." The Rockefellers built the American Smelting and Refining Company, and in 1901 the Guggenheims assumed its ownership. ASARCO ultimately controlled virtually all of American lead production—much of it at the company's sprawling Tacoma plant. Fraser's portrayal of the family is akin to my colleague (and friend) Patrick Radden Keefe's genealogy of the Sacklers, in his book "Empire of Pain," as the malevolent force behind the opioid epidemic. Both dynasties knew what they were doing while they were doing it, and both went on to whitewash their exorbitant sins with exorbitant largesse. Meyer Guggenheim's money, she writes, "keeps throwing off culture the way clay flies off a potter's wheel, obliterating any association with slag and smoke."

In the course of the twentieth century, America's manic industrialization became a kind of industrialized mania. Nature was incrementally plated in concrete and metal infrastructure, which Fraser frames as an epidemic of heedlessness and hubris. The smelter plumes may have done the most concentrated damage to young brains locally, but leaded gasoline democratized American access to diffuse toxicity, especially in poorer communities that lived along busy roads. Proliferating metals were treated as blameless economic inputs that fuelled the "frothy postwar fizz of euphoria, when people are eager to swallow the cost of progress."

Sometimes this cost took the form of a direct trade-off: mass mobility and mass convenience simply required a little tolerance for some minor mass death. Fraser's recurring example of this is a poorly designed floating bridge that connected her childhood home, on Mercer Island, to Seattle. "Every great psychopath wants a floating bridge," she writes, and this one in particular was built (and subsequently dismantled) with utter disregard for the volatility of the local environment. Fatal incidents became a fact of life on the island: "Floating femme fatale, she presides

over mayhem as if she were born for it, designed for it, engineered for it. In 1961, the bridge kills more people than Ted Bundy."

Unlike the bridge fatalities, Bundy's lurid crimes naturally attracted mass attention. On the afternoon before Bundy was executed, in 1989, he gave an interview to the evangelical broadcaster James Dobson. Bundy performed the role required of Dobson's moral diagnosis, blaming his psychopathy on the proliferation of pornography. The morbid spectacle of an interview, which aired shortly after Bundy's death, was consumed with fascination by an audience eager for potted analyses of cultural derangement. In the wake of the interview, Fraser adds, this magazine published a Comment by the late writer Roger Angell, who rebuked both Dobson and a "complicit" viewership. "I don't believe that Ted Bundy or anyone else understood what made him commit and repeat the crimes he confessed to," Angell writes, "which were rape-murders of an unimaginable violence and cruelty."

As Fraser puts it, "We pay attention to the wrong things. We make a mystery of Jack the Ripper. It's not a mystery. It's history." Americans had fallen for metaphysical or cultural interpretations of an effect that was, in her view, mechanistic. Bundy's victims were the collateral damage of prosperity—not a direct trade-off, as the bridge fatalities were, but an indirect consequence of our country's insatiable appetite for growth. Greedy people despoiled our habitat, which despoiled Bundy and his dark fraternity, who despoiled young women. The overbuilt environment and serial killers were two sides of the same coin. The true-crime industrial complex comes full circle to represent the entirety of the industrial complex itself: "The true crime," Fraser writes, "lies in what we've done with the place."

But then we managed to undo it. By 1990, the year after Bundy's execution, lead had been almost entirely phased out of gasoline. The country simultaneously began to phase itself out of serial killing, which followed lead exposure on a

twenty-year time lag: "Throughout the 1990s, nationwide there are 669 serial killers. In the 2000s: 371. From 2010 to 2020: 117."

"Murderland" is exhaustive—four hundred dense, conscientious pages, with an even denser and more conscientious fifty pages of endnotes. (As Janet Malcolm once noted, "books of this genre published in America today apparently need to fulfill only one requirement—that they be interminably long.") But Fraser's argumentative style is one of association, a vast crazy wall studded with murders and smelters and industrialists, yoked into patterns with skeins of gripping red yarn. It's never quite clear whether she thinks she's really caught the bad guy or created an impressionistic tableau of America's helter-skelter years. She has, after all, warned the reader up front that maps are to her what gurus and crystals are to other seers.

Taken in this latter, atmospheric mode, "Murderland" is something of a moody masterpiece. Fraser is an outstanding social, cultural, and environmental historian, and she has an effortless way of turning pontoon bridges into villains. As a persuasive work of criminology, however, her book leaves something to be desired. In her final chapter, Fraser refers to the work of the economist Jessica Wolpaw Reyes, who published an influential article, in 2007, linking lead exposure to violent crime. This suspicion had been around since the nineteen-nineties, but Reyes gave a definitive sheen to what has come to be known as the "lead-crime hypothesis." Reyes's study is invoked as a kind of capstone, an empirical piece of scholarship to crown Fraser's more ethereal conjecture.

Yet for all Fraser's research, and her commitment to the "rigorous, accurate, and analytical attention" to true crime she praises in her *New York Review of Books* essay, she neglects to devote any rigorous or analytic attention to the two decades of debate that Reyes's work inspired. There is absolutely no question, on a micro level, that lead exposure increases rates of delinquency and aggression. In 2019, the economists Anna Aizer and Janet Currie found that, among boys, a "1 unit

increase in lead increased the probability of suspension from school by 6% and detention by 57%." In 2020, three Swedish researchers exploited a natural experiment—the differential phaseout of leaded gasoline in Sweden—to conclude that "even a low exposure affects long-run outcomes, that boys are more affected, and that changes in noncognitive skills explain a sizable share of the impact on crime and human capital." Another report found that homicide rates were as much as twice as high in cities with significant lead exposure than in cities without.

A 2022 meta-analysis of twenty-four studies of the relationship between lead and crime, however, found strong evidence of a publication bias in the literature—that is, studies that showed a strong correlation were published, and studies that showed a weaker or nonexistent one were shelved as inconclusive. In the United States, the authors of the meta-analysis found, the abatement of lead explained at most a twenty-eight-per-cent decline in homicide rates. This upper-bound estimate is certainly substantial, but it suggests that a variety of other factors played equally significant roles. There are moments in the book where Fraser pauses to hedge her bets. "Recipes for making a serial killer may vary, including such ingredients as poverty, crude forceps delivery, poor diet, physical and sexual abuse, brain damage, and neglect," she writes at one point, backing off slightly from her central thesis. "Many horrors play a role in warping these tortured souls, but what happens if we add a light dusting from the periodic table on top of all that trauma? How about a little lead in your tea?"

Despite these caveats, Fraser writes with great confidence. She has lucked out insofar as the lead-crime hypothesis is politically and morally convenient. She never brings herself to acknowledge that her account happens to flatter liberal preconceptions, and she only really gestures to politics in passing, when she disparages an alternative view that is popular among conservatives: that the rapid decline in the homicide rate since the nineteen-nineties ought to be attributed to President Clinton's notorious 1994 crime bill and a subsequent investment in more aggressive policing. It's much more ideologically agreeable for liberals to

argue for less lead than it is to argue for more police. It's also a little quixotic. With a few notable exceptions—including the crisis in Flint, Michigan, a few years ago—lead abatement has already been widespread, and even proponents of the lead-crime hypothesis concede that further remediation is unlikely to have an appreciable effect on crime.

There is a third possible explanation for the serial-killer epidemic, and although Fraser doesn't mention it, it happens to be the prevailing inclination among contemporary criminologists. "Routine-activity theory," which was first elaborated by sociologists in the late nineteen-seventies, treats crime as a matter of ecology. The "golden era" of serial killers was made possible by the contingent rise of some technologies and practices—the automobile, the interstate highway system, the prevalence of hitchhiking—that happened to facilitate crimes of opportunity. In the last quarter century, the development of other technologies and practices—surveillance cameras, phone tracking, interjurisdictional coöperation, and DNA evidence, along with a much greater degree of interpersonal paranoia—have drastically limited those opportunities. Ted Bundy might have been profoundly lead-poisoned, but he also lived in a time and a place where it wasn't hard to kill with impunity.

What's ultimately bizarre about Fraser's omission is that "Murderland" presents just as much evidence in favor of routine-activity theory as it marshals in support of the lead-crime hypothesis: Ted Bundy is constantly filling his 1968 VW with gas, prowling dark, unsupervised parking lots in pursuit of innocently unparanoid victims, leaving their corpses in remote ravines, and driving on to some other jurisdiction. Doors are frequently unlocked, parents aren't home, and windows are easily pried open. Bundy was caught, but many cold cases, like that of the Golden State Killer, went unsolved until DNA evidence became tractable. This additional story is perfectly compatible with Fraser's prosecution of lead—and with her overarching point that there is no mystery to be solved, only history to be laid

bare. It doesn't excuse the Guggenheims or the Rockefellers. But it does make it a little harder to accept the witchy incantation with which she concludes the book: "Hand the engineers their heads; hang them from lampposts on a floating bridge." The implication is that we were better off in some prelapsarian era, though the points Fraser has assembled are equally legible as a tale of progress. This, too, is history. ♦

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