

**OUTLAW OPERATORS, THEN AND NOW: WHY THE 1969 FEDERAL COAL MINE
HEALTH AND SAFETY ACT FAILED TO PREVENT THE CONTEMPORARY
BLACK LUNG EPIDEMIC**

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Abstract

After being nearly-eradicated by the 1969 Federal Coal Mine Health and Safety Act, coal worker's pneumoconiosis is resurging at unprecedented rates—and predominantly in Central Appalachia's former company-owned coal towns. Seeking to address social determinants of health less reported on in existing black lung research, this article explores how systems present-day coal operators use to dodge accountability for worker's health and undermine public policy protections mirror behaviors exhibited by company town operators 100 years ago. Using the epidemic's epicenter, Harlan, Kentucky, as a case study, this article ultimately argues that the 1969 Federal Coal Mine Health and Safety Act failed to eradicate black lung because the policy, albeit largely successful, does not fully deter 'outlaw operating'—a modern practice rooted in the region's longstanding history of coal operators who deny accountability for workers' health.

Dedication

I dedicate this paper to the memory of grandfather, George McClellan Perkins, born in 1928 in the company-owned coal town of Stearns, Kentucky.

Acknowledgements

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Introduction

20 years ago, the Appalachian Citizens' Law Center was searching for a new mission. With black lung nearly eradicated, the pro-bono law firm, which had dedicated itself to serving low-income miners and their families in Central Appalachia, would no longer need to dedicate most of its time to federal black lung benefits cases.

For Director Wes Addington, this was a good problem to have. Growing up in Letcher County in the company-owned coal town of Jenkins, Kentucky, Addington had spent much of his early law career working with disabled miners whose lives had been upended by coal worker's pneumoconiosis. This preventable occupational disease, commonly known as black lung, had prematurely taken tens of thousands of miners' lives in Central Appalachia (American Lung Association 2023a). Caused solely by on-the-job overexposure [to](#) coal dust, black lung causes significant lung scarring, making it difficult or impossible for sick miners to work, breathe independently, or even speak (Wolf, Yancheski, and Halldin 2020).

Entering the new millennium, public health practitioners were optimistic about the end of black lung. The Center for Disease Control celebrated safer workplaces and the reduction coal worker's pneumoconiosis cases as one of the Ten Great Public Health Achievements of the 1990s (Center for Disease Control 1999, 242). The Kentucky government's Division of the Kentucky Coal Workers' Pneumoconiosis Fund was abolished and absorbed into a broader Division of Workers' Compensation Fund in 2001 (Kentucky Revised Statutes, Title 27, §

342.1243, 2020). From the federal level to the local level, black lung was popularly perceived as a “virtually eradicated” disease (Hamby 2012).

At the time, this perception was not entirely unfounded. After the passage of the 1969 Federal Coal Mine Health and Safety Act, the percentage of long-tenure, underground coal miners with black lung had dropped from 33% to just 5% by the late 1990s (Center for Disease Control and Prevention 2021). The handful of black lung patients frequenting clinics in eastern Kentucky were often miners in their sixties or seventies (Radmacher 2017).

Black lung was “virtually eradicated”—until it wasn’t (Hamby 2012).

After decades of decreasing caseloads, cases of coal worker’s pneumoconiosis began increasing at unprecedented rates (Blackley et al. 2018; Shriver and Bodenhamer 2018; Bodenhamer 2020). While cases nationally remained low, between 2013 and 2017, “416 cases of fatal black lung in three clinics in central Appalachia” were found in what became “the largest cluster of the disease ever found in the region (Shriver and Bodenhamer 2018). Appalachian miners were not only facing higher incidences of black lung—they were developing more severe cases, too. From 1998 to 2014, the percentage of black lung benefit claimants with the most severe form of black lung, progressive massive fibrosis (PMF), increased fourteen-fold (Almberg et al. 2018).

As one of the epidemic’s key whistleblowers, Pike County radiologist Brandon Crum initiated a National Institute of Occupational Safety and Health (NIOSH) investigation that identified 66 PMF cases in one eighteen-month period at Crum’s own radiology practice alone (Blackley et al. 2016). The NIOSH report confirmed two fears: modern coal miners who have only ever worked under the protections of the Coal Mine Health and Safety Act are developing

debilitating preventable illness on the job, and their suffering is likely underreported (Blackley et al. 2016; Shriver and Bodenhamer 2018; Shriver and Bodenhamer 2020).

“When I started these cases, you couldn’t have told 28-year-old Wes that I would be here dealing with what we’re dealing with today. I wouldn’t have believed you, because it wouldn’t have been possible—because we never used to get the most serious forms of the [black lung] disease,” Addington emphasized (Addington 2024).

At a time where there has never been so much public policy regulating mine safety, Central Appalachia’s black lung crisis is far from under control. Today, approximately one in five Appalachian coal miners have black lung, and approximately one in twenty are suffering from PMF (Gaffney 2020; Bodenhamer 2020; Center for Disease Control 2018; Blackley et al. 2018). If the 1969 Federal Coal Mine Health and Safety Act had successfully reduced incidences of black lung for decades, why today are we seeing increasing premature deaths of a preventable occupational disease?

Almberg et al. attribute the epidemic’s resurgence to “changes in mining processes associated with increased mechanization, mining of thin-seam coal, and an increase in silica exposure,” a dust twenty times more toxic than coal (Yost and Simcox 2019), as a possible influence, but acknowledge the need for more research (2018). Yet, amidst these changing factors, the epidemic’s resurgence should ~~have~~ still ~~have~~ been prevented: Mine Safety and Health Administration (MSHA) regulations in Title 30 of the Federal Code of Regulations mandate safety measures that theoretically prevent on-the-job dust overexposure.

Thus, the question at hand here is not what is causing increased black lung cases; scientists know increased overexposure to coal dust is the sole cause. The question is why miners are overexposed in the first place.

Questions as to whether specific dust exposure limits set by MSHA, NIOSH, or the Coal Mine Health and Safety Act are protective enough are beyond the purview of this article and require additional epidemiological research. Instead, with the understanding that merely epidemiological conversations about black lung underrepresent the role of social determinants of health in both the origin and the resurgence of the epidemic, I seek to offer a labor-focused history of black lung pre-1969 and post-2000 in the epidemic's epicenter, Harlan, Kentucky.

How do Central Appalachian coal operators' present-day methods of dodging accountability for workers' health mirror the methods operators used in the region 100 years ago? Could black lung's post-2000 resurgence in Central Appalachia be understood as a legacy of coal operators' economic, medical, and political monopolies levied in 20th-century coal towns? If the 1969 Federal Coal Mine Health and Safety Act nearly eradicated the disease, why did it not prevent the disease's resurgence in Appalachia?

Through asking these historical questions, I aspire to begin an intersectional conversation that posits black lung's resurgence as not only an epidemic, but also as a reflection of a region's complex history of labor struggles. By bringing literature from the fields of epidemiology, environmental justice, Appalachian studies, and labor history into conversation with the lived experiences of Harlan residents and local labor advocates, I will outline how modern structures that deny today's black lung patients safe working conditions, financial compensation, and

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medical diagnoses mirror tools used pre-1969 by company-town operators to dodge accountability for workers' health.

First, I will offer brief context for the exploitative origins of the Central Appalachian company town model. Then, I will detail company towns' intrinsic monopolies and the complicated road to federal regulation. After considering the initial impact of the 1969 Federal Coal Mine Health and Safety Act, I will introduce Harlan today with testimony from my own visit and discuss how today's outlaw operator problem is worsened by anti-labor public policy measures. While each of these topics could merit their own academic article, I believe offering primers as to how black lung's history intersects many facets of Appalachian life can work to combat the severe underrepresentation of narratives of black lung in academic literature.

Moreover, through Rob Nixon's model of slow violence, I will ultimately suggest that today's Central Appalachian black lung epidemic can be understood as a form of attritional violence linked to the region's long-standing struggle against coal operators' political, medical, and economic monopolies—monopolies that contributed to the initial black lung epidemic in the first half of the twentieth century. Because of the inextricable link between the growth of capitalism and the growth of occupational diseases, it can further be suggested that the underlying failure of the 1969 Federal Coal Mine Health and Safety Act is that federal regulation has not yet fully deterred profit-seeking “outlaw operators” (Bodenhamer 2020) from viewing Central Appalachian worker's health as an acceptable cost to cut.

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Methods

Limited epidemiological and historical data exists on the history of black lung pre-1969 and post-2000 in Central Appalachia (Shriver and Bodenhamer 2020). The research gap pre-1969 on black lung can be directly explained by the fact that the existence of black lung was consistently denied by coal operators, who, in company-owned coal towns such as Harlan, also controlled local health care systems (Derickson 1991, 783-785). Research gaps post-2000 are attributable to the fact that proving a regulation is being dodged is quite difficult, as rulebreakers naturally attempt to keep violations hidden.

Thus, much of what can be studied about black lung pre-1969 has to be deduced from what limited data we do have documented about Harlan miners in the 1920s. Narratives of immigrant life, oral histories, autobiographies, banjo songs, site visits, labor studies research, and newspaper articles were particularly helpful in exploring my research question.

Cantrell (1988) and Derickson (1991) provide detailed accounts of Harlan immigrant life and coal town health care, respectively, that were foundational in supplementing what I independently gathered while visiting former coal camp sites in the Harlan area. Oral histories from Alessandro Portelli's *They Say in Harlan County*, personal interviews with retired Lynch foreman Mike O'Bradovich, and Bill Turner's *Harlan Renaissance* offered additional context for the social dynamics of immigrants, white miners, and Black miners mixed in Harlan coal camps. In Harlan itself, I visited at Lynch and Benham coal camps, Mine 18, and the Kentucky Coal Museum, where black lung x-rays are a key exhibit in the story of Harlan's local history. My in-person site visits offered insight to both the modern economic legacy of the unsustainability of the company town model as well as a visual image of the area's coal camps' original composition.

To understand the modern epidemic, tips from labor lawyer Wes Addington and Bodenhamer’s research on outlaw operators provided the framework for my line of inquiry into present-day corruption among coal operators (2018; Shriver and Bodenhamer 2018). I also corresponded with the Center for Disease Control to receive a curated list of NIOSH’s published public health and surveillance work pertaining to black lung, which was foundational in developing my understanding of how disproportionate the burden of disease is on Central Appalachian mining towns. Grassroots news reports, an interview with MSHA Assistant Secretary Chris Williamson, and personal conversations with family members of black lung patients further helped me identify the scope of today’s epidemic.

“The greatest coal camp in the world”: Black lung in company-owned coal towns pre-1969

The company town model

Company towns first emerged in Kentucky’s Eastern Coalfields after the Civil War, when Northern businessmen and Southern plantation owners realized Appalachia’s sparsely populated, resource-rich wilderness had serious profit-generating potential (Eller 1977, 196). Southern barons, whose families had lost considerable wealth after the abolition of slavery, regarded Appalachia’s rebuilding coal industry as an opportunity to restore the family wealth through a new form of controlled labor: the company town.

“If you look back on it, you had all the names. Rockefeller, Carnegie, JP Morgan — every famous financial baron there is had coal mines in Eastern Kentucky,” Addington reflected (Addington 2024).

As barons entered Appalachia, small, agricultural communities saw their homesteads and forests handed to large, absentee corporate interests (The Appalachian Land Ownership Task

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Force 1983). In certain regions in North Carolina and Virginia, up to 90% of the land was owned by corporations by 1910 (The Appalachian Land Ownership Task Force 1983). JP Morgan's U.S. Steel Corporation and its subsidiary coal operations alone owned 750,000 acres of coal lands in Appalachia, including Addington's hometown of Jenkins (The Appalachian Land Ownership Task Force 1983). In Harlan, Kentucky, the U.S. Steel Corporation established the Lynch coal camp—a town named for the then-president of U.S. Steel, Thomas Lynch—to mine coal for fueling the company's steel production.

To recruit laborers for Lynch's mines, U.S. Steel operators focused on the post-slavery south and the industrialized north. While several Black southerners moved from Alabama to Lynch of their own volition, U.S. Steel took full advantage of the Jim Crow South's prison industrial complex, using the railroads between Alabama and Kentucky as a "Second Middle Passage" to transport Black prisoners to coal camps (Turner 2021). Immigrants were recruited through a "padrone system" where immigrant coal workers would visit immigrant communities in Chicago and New York as recruiters promising steady wages to anyone willing to buy a train ticket to Appalachia. (Cantrell 1988, 123).

Mike O'Bradovich, a retired mine foreman, described his immigrant parents' journey to eastern Kentucky's coalfields in the 1910s when I met him at Benham coal camp's former schoolhouse. His mother, a German orphan, entered the U.S. with no knowledge of English and was sent to the train station with a sign hanging from her neck to drop her off in Lynch (O'Bradovich 2024). His father, an immigrant from Montenegro who had worked in Pennsylvania mines, was sent to Lynch to help jumpstart the new mining project (O'Bradovich 2024). As the town's most active oral historian, 77-year-old O'Bradovich proudly identified as the last living child of the camp's original Eastern European immigrants remaining in Lynch

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(O’Bradovich 2024). He passed in August 2024, but in his lifetime, worked to preserve the diverse history of his hometown.

Beyond the padrone system, newspaper series like *Magyar Banyaszlap* (the Hungarian Miners Journal) or Tom Wallace’s 1916 series *Along The Dixie Highway* helped coal companies attract workers. In *Along The Dixie Highway*, Wallace praises Lynch’s town hospital, well-stocked clothing and hardware shops, a movie theater, and a wealth of local civil society groups, noting how coal barons transformed eastern Kentucky’s so-called “lawless land” into a “proper town” (Wallace 1916, 1). For immigrants living in crowded city slums with systemic sanitation and crime issues, the idea of a mountain utopia was worth upending their lives.

“This area was very lightly inhabited until the mining interests came in,” Addington described (Addington 2024). “They brought a lot of immigrants and a lot of Black people from the South were recruited. Basically, a lot of workers who didn’t have a lot of power, were brought into a new place and mined as much coal as possible.”

In a span of two decades, the mountain town of Harlan was transformed from sparse wilderness to a melting pot of immigrant life. Between 1910 and 1920, Harlan’s immigrant population increased one hundred-fold, from 12 to 1,269 (Cantrell 1988). The Black population, which hovered around 210 people in 1880, had skyrocketed to nearly 4,000 Black families living in a 75-mile radius of Harlan, making the community a cultural epicenter for Black Appalachians (Turner 2021).

Under U.S. Steel, Lynch became one of the largest and most robust coal camps in the world by the early 1920s. In 1923, Lynch boasted both the largest coal tippie in the world and the world record for most tons of coal mined in a single calendar day.

Workers in Harlan had their financial lives completely controlled by U.S. Steel: families paid rent to live in company-owned homes, bought groceries at the company store, and ate meals at the company-owned restaurant. From sponsoring segregated baseball teams to donating churches, U.S. Steel sanctioned every aspect of social and community life. If a miner needed to go to the doctor, he went to U.S. Steel's doctor; if a miner needed flour, he bought it from U.S. Steel. Miners received pay in scrip, or company-conscripted coins only redeemable at a company-owned commissary.

With low wages paid in a currency no bank outside the company system would honor, Lynch residents of the 1920s were stuck in poverty without much opportunity for social mobility or career options beyond dangerous mine work. Born in 1928 in the company-owned town of Stearns, Kentucky, my grandfather always called scrip a system where “you could never get ahead.”

This inability to “get ahead” was especially harmful when employment status changed. If a disability or a lay-off left a miner out of work, his house could be taken by the company and his family would be displaced from town. When O’Bradovich’s father died of black lung, his younger brother dropped out of school to work for U.S. Steel’s restaurant: a move that narrowly saved his family from losing their company-owned housing (O’Bradovich 2024). My own great-grandfather, disabled by both emphysema and injuries from a mine collapse at Stearns Coal & Lumber Company’s Mine 18, had to herd mules to survive. Countless injured miners learned the hard way that coal companies lacked safety nets for workers injured on the clock.

Medical monopolies in coal camps

When U.S. Steel opened Lynch's hospital in 1920, Lynch's advanced healthcare became a point of local pride. Many nearby Eastern Coalfield towns lacked quality health care systems, resulting in high infant mortality, maternal mortality, and devastating epidemics. Although Lynch's hospital was comparatively well-equipped, there existed a key conflict of interest: as workers on coal companies' payroll, coal town doctors were partial to making decisions that favored their employers' interests.

In many company towns, company doctors played a key gatekeeping role to ensure that workers with underlying conditions or union activists would not receive employment (Derickson 1989, 711-712). Some Pennsylvania physicians in coal towns further "induced injured workers to waive their rights to benefits, forced men to return to work before they had recovered from injuries, and found other ways to avoid the payment of compensation" (Derickson 1989, 711). Black miners, who comprised over a third of Lynch's workforce in the 1930s, would often receive inferior healthcare benefits compared to their white counterparts and were often viewed as "invisible" (Derickson 1989, 715; Turner 2021). To add insult to injury, wages of these doctors were paid by steep wage deductions from the miners, who had no say in who was selected as town doctor (Derickson 1989, 715).

With medical facilities owned by coal companies, coal companies were well-positioned to fight grassroots efforts to recognize black lung as a legitimate occupational disease. In 1902, reports from *The Chicago Tribune*, *Pittsburg Press*, and the *New York Times* highlighted the perils of "miner's asthma," which appeared to afflict a majority of American miners (Derickson 1991, 783). At the 1902 hearing on miner's asthma in Scranton, Pennsylvania, pro-labor doctors testified about miners "gasping for breath" and theorized their symptoms correlated with inhaling "great quantities of coal" (Derickson 1991, 783).

What pro-labor doctors testified here was nothing new; for as long as humans have mined coal, observers have connected the inhalation of coal dust to respiratory illness. In *De Re Metallica*, a 1556 German pamphlet on mining practices, mineralogist Georgius Agricola (2011) described how coal dust “penetrates into the windpipe and lungs, and produces difficulty in breathing, and the disease which the Greeks call ἄσθμα.”¹

Coal operators, nonetheless, testified that mining was “more than ordinarily healthful” for workers (Derickson 1991, 784). A Pennsylvania-based company doctor asserted ‘miner’s asthma’ was “not very prevalent,” and operators forced employees and supervisors to testify that they rarely saw miner’s asthma among co-workers (Derickson 1991, 785). Derickson (2013) argues state-level coal dust regulations set before the 1969 Federal Coal Mine Health and Safety Act were “arbitrary,” uninformed by private or public recommendations, and entirely “unprotective.” Coal dust was popularly considered as less threatening than silica dust, despite both being byproducts of the mining process that can afflict miners with severe respiratory illnesses. In 1929, the American Public Health Association even suggested inhaling coal dust could be a “harmless” way to “assist in removing the harmful dust,” or silica” (Derickson 2013). This culture of black lung denial across other states and federal associations meant miners in small town Lynch would have faced significant barriers receiving diagnoses for their disabilities.

Political control

¹Greek physician Aretaeus of Cappadocia first discovered asthma, or ἄσθμα, in the 1st century CE. Agricola is likely using ἄσθμα to refer not only to asthma, which can arise in coal miners, but other not-yet-classified conditions, such as COPD, silicosis, emphysema, and coal worker’s pneumoconiosis.

As an unincorporated community, Lynch had neither a city council nor a mayor in its early days. Instead, coal barons were in charge of all town affairs. Oral histories suggest U.S. Steel hired its own guards and private agencies to ensure union organizers could be kept out and to intimidate any miners that were acting ‘out-of-line’ (O.W. Harris 1988). When Harlan did hold elections, operators intimidated immigrant workers without citizenship or residence requirements to cast false votes (Cantrell 1988, 136).

Systemically suppressing coal workers’ autonomy allowed operators to dodge accountability for compensating their employees’ injuries and ensure the economy would not be diversified away from coal. Although black lung cases were commonplace, there existed no pension system to protect sick workers in the 1920s. While miners mobilized to push the United Mine Workers of America to advocate for black lung benefits as early as the 1940s, it would take decades of grassroots efforts before unions or governments would pay serious attention.

The Road to Recognition and the Federal Coal Mine and Safety Act of 1969

Bloody Harlan

When systemic monopolies prevented Harlan miners’ suffering from reaching the policy agenda, they took to the streets and to their banjos. In Harlan County, the National Communist Union emerged in the 1930s as a more radical alternative to the United Mine Workers of America, sparking an intense, decades-long labor battle known as ‘Bloody Harlan.’ Pro-union activists like Harlan’s Aunt Molly Jackson spread their anti-capitalist messages through Bluegrass tunes like “I Am A Union Woman” and “Kentucky Coal Miner’s Wife.” Harlan’s

Florence Reece's "Which Side Are You On?" became an anthemic folk song for union miners' families:

Don't scab for the bosses,

Don't listen to their lies

Poor folks ain't got a chance

Unless they organize (Reece 1931).

The Bloody Harlan era was such an intense point of anti-capitalist, grassroots activism that the term *Bolshevik* and *redneck* became nearly interchangeable in the Central Appalachian region (Huber 2006, 197). The "reign of terror," marked by bombings and beatings from pro and anti-labor organizations alike, ended with the United Mine Workers of America dominating in the labor struggle, although little progress was made in securing better environmental or medical protections for coal workers (New York Times 1935).

Mine disasters

While the Bloody Harlan conflict received national attention, occupational illness in Appalachia did not. As ecocritic Nixon put it in *Slow Violence and the Environmentalism of the Poor*, occupational illness is a type of violence that is "incremental and accretive" that "occurs gradually and out of sight"—often a type of "attritional violence that is typically not viewed as violence at all" when compared to "explosive" violence like Bloody Harlan (Nixon 2011, 2). Black lung, silicosis, COPD, emphysema and other forms of respiratory illness are forms of

attritional violence intrinsic to jobs that may force dust overexposure, and for Black miners especially, this violence went underreported.

In the 1930s, thousands of West Virginian miners developed severe cases of silicosis following months of dangerous drilling work in an incidence of workplace attritional violence that would later become known as the Hawks Nest Mine Disaster (Lancianese 2019). Three-fourths of the Hawks Nest workers were Black miners, many of whom testified being denied breaks or even being held in bed at gunpoint if they fell ill (Lancianese 2019). Eighty percent of the projects' miners would eventually experience severe respiratory illness, and an uncounted number—though, estimated in the hundreds—died within mere years of working on the project (Lancianese 2019). Victims of the Hawks Nest disaster were buried in unmarked graves, and no attempts would be made to contact the miners' family members. The tunnel company, unsurprisingly, stated they knew of “no case of silicosis contracted on the job” (Lancianese 2019).

Though countless Black families were devastated by silicosis in the Hawks Nest project, it would take another thirty years for the federal government to address occupational illness. On November 20, 1968, the Farmington Mine Disaster killed 78 coal workers in Marion County (Rakes 2023). After United Mine Workers of America President Tony Boyle defended Consolidation Coal and suggested explosions were an “accepted risk,” outraged miners, doctors, and physicians mobilized to form the Black Lung Association, a group dedicated to lobbying for occupational illness benefits (Rakes 2023). Statewide strikes in West Virginia brought the issue of black lung to the national policy agenda, resulting in Congress passing the Federal Coal Mine Health and Safety Act of 1969.

The Federal Coal Mine Health and Safety Act of 1969

On December 30, 1969, President Richard Nixon signed into legislation the most sweeping piece of occupational safety legislation that had ever been passed in the United States (Bailey 1976). The Coal Mine and Safety Act centralized a fragment system of labor regulations that had previously caused much ‘passing the buck’ when it came to regulating coal companies. By setting a national standard for dust exposure at no more than three mg/m³, the United States had now adopted the strictest dust exposure limits for coal miners in the entire world (Derickson 2013). A key victory of the act was that it paved the way for the Black Lung Benefits Act of 1972, which made it legally possible for orphans and family members of black lung victims to receive compensation. Additionally, the act set hundreds of federally mandated safety standards pertaining to ventilation, working conditions, equipment, coal dust exposure, and noise. Beyond setting safety regulations, the act created the Occupational Safety and Health Administration and the Black Lung Surveillance Programs, both of which serve as enforcement and monitoring agencies for the act’s safety standards.

Although Kentucky’s coal industry was in decline by the 1960s, federal legislation nonetheless created a foundation for safer working conditions in Central Appalachian communities. In the decades that followed, black lung cases in Central Appalachia steadily declined, reaching near-eradication by the start of the 2000s. This decline of cases, however, did not necessarily correspond to a higher quality of life for existing black lung patients. While a federal benefits system existed on paper, the program historically had and currently has high denial rates that “deny the rights of claimants and block them from truly participating in the

system” (Murchison 2002, 1034). In Appalachian Kentucky, it often took miners years, if not decades, to receive any federal benefits—not to mention the fact that federal benefits often are not enough to cover a miner’s family’s monthly expenses (Addington 2024).

Even though many company towns’ original parent companies had left the region in the 1960s and most towns in Harlan County became incorporated under city councils, the Federal Coal Health and Safety Act has not undone the legacies of the company town model. These legacies, I argue, include anti-worker legislation sponsored by politicians with close ties to the coal lobby, medical doctors with close ties to the coal lobby who deny black lung patients diagnoses, and the lack of economic opportunities available in the region due to coal companies’ original monopoly on the labor economy in the region. Modern systems of pro-coal corruption, worsened by “right-to-work” state laws and union-busting measures that deprive workers of self-advocacy, arguably contribute to the empowerment of outlaw operators and continued attritional violence toward black lung patients.

The Post-2000 Resurgence of Black Lung and Harlan Today

A Post-Company Town

Driving around Harlan County today, the ghost of U.S. Steel is an omnipresent force. The houses, buildings, and churches are the same houses, buildings, and churches U.S. Steel and International Harvester built decades ago: the commissary is now a museum; the company restaurant is now a mission-owned coffee shop; the old white and colored high schools stand abandoned and hollowed. Piles of coal are commonplace roadside attractions, and the houses are crowded between abandoned railroad tracks. Kopple’s genre-defining 1976 documentary *Harlan*

County: USA, a chronicle of labor struggle in a declining coal community, is how the town is best remembered in the national imagination. Locals tell their own story in a variety of preserved historical sites and museums: a quaint mining museum, a fascinating mine tour of the U.S. Steel mine, Kingdom Come State Park.

Speaking with locals about U.S. Steel's withdrawal from Lynch in the 1960s reopens what feels like a fresh wound. Residents' pride in their **diverse coal heritage** is sharply juxtaposed with the harsh reality that coal companies neglected to invest in the vitality of their community. When the coal companies left, immigrant families and Black families unable to secure work in the mountains migrated North. Lynch's hotel closed, and the local businesses followed. Today, a town in which 10,000 people lived in a **three-by-one mile block** is home to less than 700 today (U.S. Census Bureau 2023).

"As time goes by, resources dwindle, people leave, and the town downsizes," O'Bradovich put straightforwardly (O'Bradovich 2024).

With the coal industry's decline, governmental aid has been Harlan County's **only safety net**. In 2016, 54% of all income in Harlan County came from programs like Social Security, food stamps, and Medicaid (Porter 2018). Over a quarter of residents live below the poverty line (U.S. Census Bureau 2023). Although the coal industry is in jeopardy, 3.4 million tons of coal were extracted in Harlan County in 2016, and coal worker jobs account for over 13% of the county's employment (Kentucky Energy and Environment Cabinet 2017). The fate of these coal workers' health is inextricably connected to the generation of coal workers before them, as today's coal workers live with the political, medical, and economic legacies of company towns. Namely, as a consequence of living in a territory abandoned by a previous coal company, black lung patients

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of in Harlan juggle an outlaw operator problem, face limited access to both medical care and medical insurance, and struggle to either receive benefits or live on the low compensation federal benefits provide, often causing black lung patients to ‘work sick’ in other manual labor positions.

Outlaw operators

As sociologist Ayesha Bodenhamer writes, “If dust protocols were followed, black lung would not exist” (Bodenhamer 2020). Across Central Appalachian communities, coal operators pressure workers to ignore federal dust standards in favor of maximizing profits: a practice labeled as outlaw operating.

NIOSH epidemiologists have established that the rise of PMF, the severe form of black lung, from 1970-2016 does not correlate with the dust samples provided to MSHA. Almberg et al. (2018) establish that cumulative dust exposure is an “important risk factor” for PMF and that although MSHA samples indicate “compliance with the appropriate regulations, their “findings suggest that miners may have been exposed to higher average dust concentrations than reported.”

Although the federal government mandates dust sampling, oral histories and epidemiological data confirm cheating on sampling, hiding evidence, and reporting false numbers is commonplace (Bodenhamer 2020; Almberg et al. 2018). In 2023, Harlan County coal dust examiner Walter Perkins was sentenced to a 12-month split sentence after lying to MSHA investigators about Black Diamond Coal Company’s falsified coal dust samples (U.S. Attorney’s Office 2023). In the unlikely event that an outlaw operator is taken to court, the punishment is minimal: in the case of Black Diamond Coal Company’s 2023 sample falsification scandal, the

company paid only \$200,000 for ignoring safety violations that could potentially take decades off their workers' lives (U.S. Attorney's Office 2023).

As a consequence of increased dust overexposure, the sick miners seeking black lung benefits assistance from the Appalachian Citizens' Law Center are younger and younger. "There was a company here in Letcher County [KY] that went bankrupt. [Workers] came in a week after they had been laid off... they had been just working underground the week before. I told them, it's gonna be hard for me to prove you're disabled, because you were working last week. They went to the rest, and they were under the regulations—their lungs were so bad. They clearly qualified," Addington recalled (Addington 2024). His testimony refers to the degree to which scarring had accumulated in miners' lungs, a telltale sign of severe respiratory illness.

With no unionized mines left in Kentucky, workers have limited bargaining power over workplace safety negotiations. Obstacles to unionization in Kentucky are both temporal and political. As the amount of available coal reserves depletes, miners are increasingly working in mines with more rock to cut through, resulting in an increased need for lower silica exposure limits. Since most of these mining projects are short-term, it is difficult for unionization efforts to occur in mines where miners may only spend less than a few years before the coal reserves are depleted. When discussing obstacles to unionization efforts with Addington, he offered a straightforward explanation: "By the time you'd organize, the coal is gone" (Addington 2024).

Beyond temporal obstacles, right-to-work laws in Kentucky and other states put restrictions on union behavior that make it increasingly difficult to organize (Sherer and Goul 2024). Without unions to hold coal companies accountable, it is easier for outlaw operators to ignore silica and coal dust safety restrictions.

Political and social barriers to medical care

As a consequence of outlaw operators and coal companies' political relationships with anti-union, conservative lawmakers, black lung patients seeking federal benefits in Harlan are left with only two options for a black lung diagnosis: Dr. Bruce Broudy or Dr. Byron Westerfield. In 2018, former Kentucky Governor Matt Bevin backed H.B. 2, a 2018 state law that intentionally bars radiologists from being allowed to diagnose black lungs for the purposes of obtaining federal benefits (Gaffney 2020). As a result of H.B. 2, Harlan miners seeking black lung benefits are only allowed to see pulmonologists with a specific black lung diagnostic certification, a political measure intentionally designed to create obstacles for miners filing for federal black lung benefits (Hicks 2024). This measure has only created heinous legal obstacles for sick miners seeking justice. Both available doctors in Kentucky deny plaintiffs' black lung status in 86% of cases, even if other medical professionals in the plaintiffs' care team assert the plaintiff has black lung (Peterson and Boles 2020).

Dr. Brandon Crum, a radiologist and former coal miner in Pikeville, Kentucky, has been outspoken in his belief that the Kentucky legislature passed H.B. 2 to cover up the rise of black lung. Despite being certified by the National Institute for Occupational Safety and Health, because Crum is a radiologist, he does not meet Kentucky's unusual standards for a valid black lung diagnosis (Peterson and Boles 2020).

"I know of nowhere in the United States of America or the world, except Kentucky, where a radiologist cannot read chest x-rays to diagnose a disease," Crum said in an interview with Louisville Public Media (Hicks 2024).

Whistle-blowers who advocate for black lung patients have been targeted by coal's allies. In an extreme example, Scott Laney, a respiratory health specialist at NIOSH, found a bomb in the mailbox of his Morgantown, West Virginia home the day after publishing a report on a new lung abnormality detected in coal miners (David J. Sencer CDC Museum 2017). In an interview for the Center for Disease Control's Oral History Project, Haney expressed the tension of being a black lung advocate in what he believes is a climate where both workers and coal companies dislike federal regulations.

"It's a serious business where we make recommendations that cost potentially millions of dollars, and there is a tremendous pushback. There is a long history of this in black lung in particular that, you know, there have been people killed over this thing, and that sort of thing has sort of normalized in more recent years," Haney said (David J. Sencer CDC Museum 2017).

The obstacles to diagnosing black lung are not merely political; low-income rural communities also may lack the equipment necessary to help miners access diagnosis. The equipment needed to diagnose black lung "is not available in all clinics," and "while high-resolution scans are the most sensitive in detecting CWP, they are not always used because of the cost" (Shriver and Bodenhamer 2020). If a miner is unable to receive a formal diagnosis—whether due to political or economic reasons—they cannot receive state or federal benefits.

While some resistance to federal medical agencies comes from coal companies, other resistance comes from coal workers. Coal workers, struggling to secure jobs in declining communities, fear that increased federal regulations could reduce the amount of available coal jobs or result in companies leaving their communities (David J. Sencer CDC Museum 2017).

With doctors ~~that~~ who frequently side with the modern-day coal establishment and limited access

to healthcare resources as a legacy of the company town model's collapse, Central Appalachian black lung patients are also often [skeptical](#) of medical authority or unable to access or afford the healthcare they need. The skepticism has a direct impact on miners' participation in the voluntary Black Lung Surveillance Program: fewer than 40% of miners are enrolled in the program (Shriver and Bodenhamer 2020). Thus, the power politics coal companies maintain in Central Appalachia still holds considerable influence on workers' faith in governmental systems and medical authority in the 21st century.

Working sick

Even if Kentucky miners are able to make it past the egregious courtroom standards for proving black lung, federal benefits do little to compensate a sick miner. Because federal benefits have not kept up with inflation, a primary beneficiary is only eligible for \$772.60 per month, and a primary beneficiary with children can only receive \$1,545.20 per month (Office of Workers Compensation Programs 2024). A living annual wage for a single adult in Harlan County is \$35,502, and yet, black lung federal benefits would give a Harlan miner less than \$10,000 annually (MIT Living Wage Calculator 2024).

As a result, falling ill with black lung is more than just a medical issue: it is an economic issue. As Kentucky's economy de-transitions from coal, sick Appalachian coal workers lacking federal benefits or the physical capacity to serve in other physical labor positions lack critical resources necessary to escape poverty. Although many free healthcare services exist, such as NIOSH's free lung screenings for coal workers, the lack of affordable long-term care options for

coal workers or widespread legal aid funds for coal workers are company town legacies that impede the success of governmental aid programs.

Today, interdependent social, economic, behavioral, and environmental challenges cause a disproportionate prevalence, morbidity, and mortality of lung disease in Central Appalachia (Debolt et al. 2021). In Kentucky, lung cancer rates exceed every other state in the nation and over 20% of residents over 40 battle COPD: challenges that reflect a clear need for improved access to preventative lung illness care (Debolt et al. 2021; American Lung Association 2023b).

Conclusion

When coal companies left Central Appalachia, their attritional violence stayed: Central Appalachians is facing systemic premature loss of life, the displacement of residents in dying coal communities, disproportionate health outcomes for workers of different backgrounds, and a lack of alternative jobs for sick workers to pursue. By offering a history of Harlan's establishment, abandonment, and present-day struggles, I seek to dispel the harmful stereotype that Appalachians' poor health or economic outcomes should be blamed on Appalachians themselves. Grassroots activists from these diverse communities were the driving force behind the 1969 Federal Coal Mine Health and Safety Act. Today's epidemic is attributable to changes in mining practices and increased dust exposure, yes, but it can also be framed as part of a larger historical conversation about the consequences of the company town model and the century-long issue of outlaw operating. Harlan residents have demonstrated resilience, and despite the decline of the local coal industry, the population of coal miners remaining deserve to have long, healthy careers.

By framing the black lung crisis through an intersectional historic lens, it is clear what social influences have led to the disease's resurgence in Central Appalachia: a century of political, medical, and economic monopolies created by exploitative coal operations have enabled, if not heinously endorsed, this preventable health crisis. Before 1969, political, medical, and economic corruption barred early miners from having free choice in their health care options and securing federal protections. Following 2000, as cases began to resurge, anti-union and anti-black lung legislation, obstacles to medical access, and increased savviness among outlaw operators has created a storm of corruption in the Central Appalachian region that mirrors corrupt practices in early company-owned coal towns.

The Federal Coal Mine Health and Safety Act of 1969, although revolutionary for its time, could not fully undo a culture of corruption once initiated by town owners and carried on by the few corporations left in the region. With fifty years to learn the new regulations, it appears operators have also gotten better at learning to dodge them. Nonetheless, I argue the case of the Federal Coal Mine Health and Safety Act offers proof that public policy is the best available instrument to improve public health—a forty-year decline and near-eradication of cases is an incredible public health feat, and it can be done again because it has been done before.

While some miner's safety progress is being made—MSHA's April 2024 update to its federal silica regulations improved safety measures for all airborne hazards and will expand free health services—dwindling coal operators continue to wield influence over the policy agenda (Mine Safety and Health Administration 2024). House Bill 85, approved in April 2024 by the Kentucky House Natural Resources Committee, is set to reduce the amount of required mine emergency technicians (MET) on-site at mines from two to one (Niemeyer 2024). Kentucky state Rep. Bill Wesley, echoing the rhetoric of 100 years of coal miners, says the cut in METs is

necessary to make sure small mines can afford to stay in business (Niemeyer 2024). Beyond Appalachia, the epidemic is also having a disproportionate burden on coal miners in the Navajo nation—a population whose history of black lung is severely under-researched (U.S. Department of Labor 2022).

The right to breathe, a human right noted by environmental justice scholar Julie Sze as an intersectional issue pertinent to achieving both racial and environmental justice, has been systemically stripped from coal miners in American communities that have been systemically denied voice and autonomy (Sze 2020). The continual underreporting of this public health crisis will only result in more communities facing preventable death. Although occupational-related illness from coal mining will likely not vanish until coal mining itself is phased out, stricter public policy measures and enforcement mechanisms can create a world where fewer miners will ever have to know what it feels like to, as one black lung patient put it, “drown on dry land” (Bodenhamer 2020).

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