

Worksites as Sacrifice Zones: Structural Precarity and COVID-19 in U.S. Meatpacking

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Abstract

As meatpacking facilities became COVID-19 hotspots, the pandemic renewed the importance of longstanding claims from environmental justice and agrifood scholars. The former asserts the perceived dispensability of marginalized populations sustains environmental injustices, whereas the latter stresses that decades of industrial consolidation created structural instability in the food supply chain. This article asks how industry and government leverage existing socio-ecological inequalities to ensure the continuity of the meatpacking supply chain during COVID-19, and the implications these actions hold for workers. To answer these questions, the authors perform case studies of meatpacking facilities in three Midwestern states. This article uses the critical environmental justice framework to expand research on sacrifice zones to include hazardous worksites such as meatpacking. We find that toxic employment flourishes through firms' labor practices that pass socio-ecological risks onto workers in the name of efficiency, and through a complicit state that prioritizes accumulation and consumption over workers' health.

Keywords

agrifood systems, COVID-19, environmental justice, global and transnational sociology, labor and labor movements, racial and ethnic minorities

Introduction

Agrifood scholars have long argued that decades of consolidation in the food system have placed the control of our food in the hands of few companies, creating conditions for labor, environmental, and food security crises (Hendrickson 2015). COVID-19 has deepened this crisis in U.S. meatpacking, as growing infections among a workforce disproportionately comprised of immigrants and refugees forced plants to close or slow down production. "The supply chain is breaking," warned one Tyson executive on April 26, 2020, with almost 5,000 COVID-19 cases at 115 facilities disrupting national supply (Reiley 2020). With killing floors closed or operating at reduced capacity, suppliers euthanized hundreds of thousands of animals, and processing came

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to a stand-still in the oligopolized industry (Estes 2020), thus revealing how plant workers were the lynchpin in a delicately balanced system. On April 28, 2020, President Trump used the Defense Production Act to classify meatpacking facilities as critical infrastructure, a decision that sought to restore production yet in doing so risked plant workers' lives.

These events underscore the relevance of ongoing debates in environmental justice and agri-food systems scholarship. The former is concerned with how the perceived dispensability of marginalized populations sustains environmental injustice. The emergent critical environmental justice (CEJ) framework interrogates how notions of expendability interact with myriad social categories, multiscalar relations across time and space, and state-backed power (Pellow 2017). The CEJ framework assumes that capitalist processes depend on devaluing certain populations to distribute environmental burdens, and that the state is central to defending such inequalities (Carrillo and Pellow 2021; Harrison 2019; Pulido 2017).

For agrifood scholars, intense industry concentration has led to the structural instability of our food system, resulting in a situation in which a handful of companies wield increasing control over the shape of our food system, determining how our food is produced and what we eat (Hendrickson, Howard, and Constance 2017; Howard 2016). The consolidation of the food system has increased structural risks, leaving the supply chain susceptible to socio-ecological disruptions (Hendrickson 2015). These scholars stress the need to further understand a key triad: the centrality of labor marginalization to the food supply chain; how concentrated corporate power influences the conditions of food system workers; and how structural vulnerability interacts with disruptive shocks (Harrison and Lloyd 2013; Hendrickson 2015; Ribas 2015; Winders and Ransom 2019).

Expendability and precarity within environmental and food systems merit deeper study. This article, therefore, asks two related questions: (1) how did industrial consolidation and the hiring of increasingly marginalized workers interact to heighten the exposure of meatpacking facilities to COVID-19? (2) how did industry and government exploit existing socio-ecological inequalities to respond to the supply chain crisis that COVID-19 deepened and what implications does this strategy hold for workers? To answer these questions, this article develops two concepts. The first is *precarity convergence*, a process in which social fields with growing risk merge to form a new relationship where the collective sharing of risk amplifies systemic vulnerability. The second involves extending the term *sacrifice zone* into the workplace. While sacrifice zone traditionally pertains to physical terrains and communities injured by toxic activities (Fox 1999; Lerner 2010), such as mineral extraction, we extend this term to investigate worksites where laborers are forced to bear potentially fatal socio-ecological risks.

We advance a twofold argument. First, industrial consolidation and labor marginalization interacted to produce a precarity convergence, thus heightening structural vulnerability in meat processing. The spread of COVID-19 shocked an already unstable system, critically disrupting the supply chain. Second, the classification of meatpacking facilities as critical infrastructure transformed plants into sacrifice zones, a conversion made possible by the perceived expendability of a precarious workforce. To support these claims, we conducted a qualitative content analysis of newspapers and industry, advocacy, and government reports to form case studies of COVID-19 hotspots in meatpacking in three Midwestern states. We use the CEJ framework to analyze three themes—multiscalarity, intersecting social categories, and state-backed power—to demonstrate how industry concentration and its related systemic vulnerability contributes to labor and environmental injustice.

This paper makes two contributions to ongoing debates. First, by using the CEJ framework to interpret industrial animal agriculture in a COVID-19 context, we illustrate key linkages between environmental injustice and worker characteristics, in this case, race, ethnicity, religion, and citizenship status. By focusing inside the workplace, we find that worksites can be toxic spaces where environmentally harmful activities take place due to work, legal, and structural conditions

that sacrifice some workers in the name of continuous production and profit. Second, we advance agrifood systems research by showing why industry concentration and power inequalities in the food system matter to food security. Through the case of meatpacking, we see numerous ways workplace vulnerability reproduces structural vulnerability. This case has broader implications in that it is reflective of industries in which workers are devalued economically and in terms of prestige and rights (grocery store workers, delivery drivers, farm workers, nurses' aids, etc.). During the pandemic, these workers are considered essential and rhetorically deemed heroes, yet treated as disposable with poor work conditions and limited legal protections. Our framework provides a new lens through which to analyze these types of workplaces and their implications for workers in times of crisis.

Structural Precarity, Environmental Justice, and Agrifood Systems

Themes of precarity and risk permeate environmental justice and agrifood systems debates. The CEJ framework departs from earlier environmental justice research that tended to focus on one or two social categories; assume the possibility of racially equal treatment; and theorize the state as oriented toward promoting fairness (Pellow 2017). In contrast, the CEJ framework begins from the standpoint that the perceived dispensability of marginalized populations is central to inequality, with unequal treatment inherent to a political economy in which the state actively works to uphold disparities. Such perceived expendability is operationalized through: (1) intersecting social categories including, among others, race, class, gender, and species; (2) multiscalar relations operating across time and space; and (3) state-backed power that reinforces unequal treatment.

Recent researchers share the critical view of the state's complicity in imposing harmful burdens on populations perceived as expendable, perpetuating environmental racism to sustain economic growth (Kurtz 2009; Pulido 2017). Jill Harrison (2019) argues that state regulatory agencies are oriented toward protecting polluter interests rather than maintaining public welfare and racial justice, whereas Loka Ashwood (2018) illustrates how the state works hand-in-hand with companies to erode individual liberties. Overall, such research conceptualizes the state as acting frequently as a structural force that buttresses the unequal distribution of socio-ecological risks.

In agrifood systems research, the study of structural risk and precarity is hardly new, as scholars have documented how mergers and acquisitions have consolidated decision-making power among a few corporate actors, showing the consequences for the supply chain and its actors. Rural sociologists have pointed repeatedly to the fact that a handful of companies exert increasing control over the food system's structure, production strategies, regulation, and consumer options (Hendrickson et al. 2017; Howard 2016; Ipsen 2017). For example, farmers and consumers have fewer market choices, making it more difficult for newcomers to break into monopolized sectors. The state has actively enabled consolidation by permitting mergers and acquisitions and providing subsidies for land, insurance, and feed (Howard 2019).

For workers, consolidation also means fewer options, as meatpackers push risk and cost-cutting initiatives down the supply chain, resulting in deskilling of jobs, decreased wages, and increased vulnerability for workers. Past accounts document how firms turned to more controllable, marginalized labor pools—from African-Americans to Latinx immigrants to, more recently, refugees—to process much of the national meat supply in a small number of plants (Fink 1998; Miraftab 2016; Ribas 2015). Researchers, therefore, emphasize that the systematic imposition of risk onto workers depends on various forms of vulnerability, such as citizenship status, race, and ethnicity (Harrison and Lloyd 2013; Stuesse 2016).

These insights complement recent work by Arne Kalleberg and Steven Vallas (2018:1), who argue that 21st century labor markets are characterized by work that is “*uncertain, unstable*, and

insecure and in which *employees bear the risks of work* (as opposed to businesses or the government) and *receive limited social benefits and statutory protections*" [italics original]. Such a trend is rampant in meatpacking and farming, where employers exploit transnational labor flows to engineer workforce precarity (Schwartzman 2013).

The COVID-19 crisis in meatpacking highlights the collision of labor, environmental, and health precarities, while underscoring how structural dispensability is increasingly important for environmental justice and agrifood systems debates. Leading scholars call for studying perceived disposability through a perspective that accounts for intersecting social categories and the state's active collaboration with companies to reproduce inequalities (Clark, Auerbach, and Zhang 2018; Pulido 2017; Richter 2018). Agrifood researchers stress the need to further study the convergence of labor marginalization and industrial consolidation, highlighting how monopolized corporate sectors rely on labor marginalization to drive profit, and the implications of these strategies for food system workers (Harrison and Lloyd 2013; Stuesse 2016; Winders and Ransom 2019). There is also a need for a deeper understanding of how industry concentration enhances structural vulnerability to systemic shocks, such as a pandemic (Hendrickson 2015; Marten and Atalan-Helicke 2015).

Conceptual Frame: Precarity Convergence and Sacrifice Zones in Meatpacking

In spring 2020, COVID-19 destabilized U.S. meat production. The government and industry sought to restore production at meatpacking facilities by accepting the potentially fatal risk to workers. By building on the aforementioned debates and putting them into dialogue with this case, this paper develops the concepts *precarity convergence* and *sacrifice zone*. Agrifood scholars argue that COVID-19 revealed the perilous nature of a food system dependent on oligopoly power and the socialization of business costs (Benton 2020; Garcés 2020). As Mary Hendrickson (2020) wrote in April 2020: "It has only taken 6 weeks for the COVID-19 pandemic to brutally expose the flaws of our modern food system—flaws documented by scholars for decades." Precarity convergence seeks to capture the notion that consolidating and shifting risk onto vulnerable peoples and places increases possibilities for destabilization.

Second, we extend the term sacrifice zone into the workplace to study toxic labor processes. For Julia Fox (1999), an area is transformed into a sacrifice zone when external forces create a demand for the manufacturing or extraction of an environmentally hazardous product within its confines. The state makes these harmful activities possible through regulatory frameworks that accommodate polluting companies. By "surrendering an area" for the cheap production of a good, the state enables processes of accumulation and consumption (Fox 1999:167; Lerner 2010). Other scholars detail how "racial sacrifice covenants" enable the exploitation of one population for the benefit of another in the distribution of environmental goods and harms (Bell 2005; Seamster and Purifoy 2021).

While elevated in the COVID-19 context, precarity and sacrifice have long structured the meatpacking supply chain. A key strategy for achieving the economies of scale that buttress industry consolidation and profitability is for firms to externalize risks and costs onto workers, the public, and the environment. For instance, while producers view concentrated animal feeding operations (CAFOs) as necessary for operational efficiency, they are rife with unaccounted costs. Water, land, and air contamination—including odor, dust, airborne fecal particles, and fecal waste flooding—engender health problems, reduce quality of life, and decrease home values for neighboring populations (Imhoff 2010). Industrial animal agriculture involving pigs, cattle, and chicken and the cultivation of soy, grain, and corn for animal feed are major planetary contributors to land-use change and greenhouse gas emissions (Denny 2019; Dietz 2017). Furthermore, agrifood companies and CAFOs are routinely exempted from compliance with the Clean Air Act and Clean Water

Act (Ashwood, Diamond, and Walker 2019). Thus, before any animals arrive at a meatpacking facility, numerous injuries to the ecosystem and public have already occurred in the supply chain.

Labor and environmental hazards are endemic to activities inside industrial animal processing facilities. Processing requires rapidly and repeatedly disassembling animals weighing hundreds of pounds, provoking common accidents such as knife cuts, back injuries, and falls (Groves 2020; Occupational Safety and Health Administration [OSHA] 1988). Additional health and safety risks involve exposure to toxic substances, cumulative trauma disorders, and animal-based infectious diseases (OSHA 1988). Compared to other food processing workers, meatpacking employees have much higher rates of missed-work days, severe injury, and mortality, primarily due to accidents involving trauma with other employees, animals, machines, or toxic chemicals (Newman, Leon, and Newman 2015). There are currently 194,000 frontline meatpacking workers in the Animal Slaughtering and Processing Industry, of which 80 percent are people of color and 51 percent are foreign-born (Fremstad, Brown, and Rho 2020). Processes of racialization and otherization are therefore engrained in the distribution of socio-ecological risks in meat processing employment.

The concepts precarity convergence and sacrifice zones make visible the structural inequalities intrinsic to the meatpacking business model and trace how these inequalities are institutionalized through firm strategies and government policies that actively prioritize profit over workers' health. These strategies are often taken for granted as necessary and, therefore, remain outside the realm of analysis. We argue that these decisions are central to understanding the current dilemma presented by COVID-19 and the implications these business strategies and regulatory decisions have for workers and consumers. Continuously externalizing risk onto workers has systemic consequences, especially in times of crisis.

By focusing on meatpacking facilities in a COVID-19 context, our analysis reconceptualizes the dimensions of sacrifice zones. First, meatpacking facilities are important sacrifice zones since their siting in rural areas arises from a logic of expediency seeking the path of least resistance. This majoritarian and utilitarian logic accelerates accumulation by systematically shifting burdens onto rural areas, where the minority of people and money reside (Ashwood and MacTavish 2016). Second, unlike past research on sacrifice zones that tends to study areas external to production sites (Lerner 2010), we look within environmentally hazardous worksites. In doing so, we focus on the frontline workers who bear socio-ecological risks in everyday practices and the labor market dynamics that create and sustain such inequality. Lastly, by studying meatpacking facilities as critical infrastructure in the COVID-19 pandemic, we find a scenario in which workers are coerced to *stay in* a sacrifice zone. This differs from the traditional focus on domains that expel workers through labor-saving technology, such as mountain top removal for coal extraction (Fox 1999). Our focus on the workplace elucidates new dimensions for understanding how "racial sacrifice covenants" implicitly shape the devaluation of racialized and otherized populations (Bell 2005; Seamster and Purifoy 2021). We study how dispensability aids the realization of sacrifice zones, with the bodies of workers deemed an essential yet expendable asset: precarious people upon whom socio-environmental risk can be dumped.

Data Collection and Analysis

To answer our research questions, we constructed an original dataset of national, local, and regional news stories, industry and advocacy reports on COVID-19 and meatpacking, and government websites related to our study. Our analysis focuses on counties in Kansas, Iowa, and Wisconsin where COVID-19 cases are concentrated in the beef and pork industries. We selected these states because they represent key centers in the meatpacking industry and possess political economies in which agribusiness interests have significant political sway. These sites also meet

State	County	Rate of infection per capita	Ranking in per capita infection rate within state
Wisconsin	Brown	1 in 126	1 st
Kansas	Ford	1 in 27	1 st
Kansas	Seward	1 in 30	2 nd
Kansas	Finney	1 in 30	2 nd
Iowa	Louisa	1 in 37	1 st
Iowa	Woodbury	1 in 47	2 nd
Iowa	Dallas	1 in 109	9 th
Iowa	Buena Vista	1 in 247	16 th

Figure 1. Major covid-19 cases in Wisconsin, Kansas, and Iowa (May 2020).

Source. *The New York Times* (2020).

the criteria of theoretical interest as areas where: (1) plants have undergone industrial restructuring; (2) meatpacking communities have undergone demographic shifts; and (3) meatpacking communities are statistically considered viral hotbeds in their states. Figure 1 illustrates relevant information on cases of interest.

To construct our dataset, we first identified local and regional newspapers in the outbreak areas. Due to the limited availability of online archives for these papers, we used different sources to access them: NewsBank, Lexis Nexis, and the online papers' archives. We used NewsBank to search for articles in the *Garden City Telegram*, *The Southwest Times* (Liberal, KS), and *The Gazette* (Cedar Rapids, IA). We used Lexis Nexis to search for articles in *The Capital Times* (Madison, WI) and *Telegraph Herald* (Dubuque, IA). Finally, we accessed online archives of *Green Bay Press Gazette*, *Des Moines Register*, and *Sioux City Journal* through their websites.

Within the identified local and regional newspapers, we searched for the words “immigrat*” OR “refugee” and “meatpacking”¹ with an end date of July 1, 2020. However, we continued searching sources to triangulate data through December 31, 2020. After developing a preliminary list of articles from our keywords search, we reviewed each article to create a timeline of key events related to meatpacking in each site, such as when major companies arrived on site, shifts in labor demographics, and how policy changes or local events, such as immigration raids, affected plants and communities. We supplemented these data with secondary data from scholarly accounts about meatpacking plants. We additionally draw data from *The New York Times*, *Washington Post*, *Los Angeles Times*, and *ProPublica*, government websites, and advocacy organization reports when seeking broader national-level or state-level statistics on COVID-19 infection rates, demographics of the meatpacking workforce, relevant policy changes, and broader accounts of workplace practices, and to triangulate data from March 1, 2020–December 31, 2020. In total, our analysis included 5,217 articles from the eight local papers mentioned above, ranging from the most articles from *The Telegraph Herald* (3,005) and the least articles from *The Green Bay Press Gazette* (4).

To analyze the articles, we used a combination of deductive and inductive coding. Within the articles identified, we searched for theoretically derived themes related to the CEJ framework—multiscalarity, intersecting social categories, state-backed power, and precarity and dispensability. We then identified lists of codes that we would take as evidence of the presence of each theme inductively. For example, (1) multiscalarity—temporal and spatial changes at the micro, meso, and macro levels related labor and industrial (re)structuring of meatpacking, and in virus transmission in plants and communities; (2) intersecting social categories—COVID-19 patterns and

demographic changes, events, or tensions relating to race, ethnicity, citizenship, and religion in meatpacking communities; (3) state-backed power—policymaking, laws, and rule enforcement related to meatpacking, labor, environment, immigration, and COVID-19; and (4) precarity and dispensability—worker risk, safety, and coercion. In developing our coding strategy, we first conducted a pilot analysis for Kansas to identify codes related to our framework, and then we replicated it for Iowa and Wisconsin. If new codes arose in this process, we revisited the coding framework. To develop the coding framework, one author coded and the other checked for consistency. Once we coded the articles, the coded sections were analyzed to produce the timelines and narratives of events.

Prior to constructing the database of cases, we synthesized relevant secondary data on meatpacking and related environmental justice literature, including important industry shifts in meatpacking and worker demographics, to better contextualize the analysis. We triangulated primary and secondary data sources. If inconsistencies arose and we were unable to triangulate a claim or data point, the claim was excluded.

Findings: Worksites as Sacrifice Zones

We use the CEJ framework to understand precarity convergence in the meatpacking industry and the conversion of facilities into sacrifice zones. We present the data through the analytic frames of the CEJ approach, which guides the identification of key categories and processes in the dataset. We center the notion of perceived dispensability to show how it permeates multiscalar relations, intersecting social categories, and state-backed power. Overall, we illustrate how structural precarity accumulated and converged, making the meatpacking industry more susceptible to shocks. We show how the industry and government made decisions and employed strategies that exploited long-standing inequalities to resolve COVID-19 disruptions.

Multiscalarity

The CEJ framework states that injustices arise from multiscalar relations, referring to the “spatial and temporal dimensions of how objects, ideas, bodies, beings, things, and environmental harms and resilient practices are linked, how they are connected ecologically” (Pellow 2017:20). In the meatpacking industry, spatial and temporal relations function on macro, meso, and micro levels to shape the conditions preceding COVID-19 and the subsequent transmission of the virus.

We start our spatial analysis at the meatpacking plant, or meso-level, because transmission and spread of COVID-19 radiated from this space. As discussed below, this space was central in connecting the pandemic to micro- and macro-levels. For instance, at two plants in Brown County, Wisconsin, it became immediately clear that the spatial management and routinization of tasks upon which profit margins and operational efficiency rested would be incongruent with mitigating viral transmission (Mizan and Matthew 2020). The refrigeration needed to keep meat fresh required plants to be compact to economize space and cooling expenses. Ventilation systems that keep air moving to guard against meat contamination from pathogens had unforeseen consequences of accelerating and expanding the movement of viral particles between workers. The plants’ compact construction additionally led workers to operate in close contact. On assembly lines, workers were often elbow-to-elbow, making the Centers for Disease Control and Prevention (CDC) recommendation of six-foot distancing difficult, if not impossible (Mizan and Matthew 2020).

One infected meatpacking worker, a Cuban immigrant, recounted how plant managers exacerbated conditions by forcing workers to complete shifts on the line while awaiting test results. Confined to a hospital bed, three months before dying, he asked, “They brought me back, for what? For me to die there?” (Axon, Bagenstose, and Crowe 2020). On typical shifts, it is

estimated that “workers can encounter 1,000 people on a given day in break rooms, bathrooms, and production lines at JBS Packerland” with workers nearly colliding in narrow walkways (Mizan and Matthew 2020). The firm additionally kept infected workers in the plant by not providing paid sick-leave and incentivizing workers to not miss shifts by offering “free T-shirts, ground beef, and toilet paper” (BeMiller 2020a).

These meso-level practices reveal how the transformation of worksites into sacrifice zones depends on structural precarity limiting worker choices. Echoing Albert Hirschman (1970), exit, voice, and loyalty are useful frames for understanding the uneven distribution of risk and sacrifice. As the above examples show, employers’ denial of welfare supports limits worker choice and mobility, thus forcing workers to remain in worksites for economic survival during the pandemic. As the following sections elaborate, qualified immunity for employers means that workers are unable to seek redress in the workplace for rights violations, while employers use rhetoric invoking heroism to rationalize coercing workers to stay in dangerous worksites.

Such meso-level factors had direct implications for individuals and households at the micro-level. Workers who contracted COVID-19 at a plant were likely to expose family and friends in homes. These individuals then further spread the virus at other nodes of high-concentration, such as nursing homes and prisons, which also disproportionately employ minority and immigrant workers (Foley 2020a). One county sheriff in Iowa described how the plant experienced a surge that then spread through nursing homes and jails, “places where we did not want to fight the COVID-19 virus” (Foley 2020b). So, COVID-19 exposure went from the meso-level down to the micro-level and then back up to the meso-level as workers spread the virus at home and their family members and housemates took it to their workplaces and other high-risk institutions, such as prisons, which also tend to be clustered in similar areas. This particular spatial clustering means that rural counties with meatpacking plants have a COVID-19 infection rate nearly five times higher than rural counties without a plant (Douglas and Marema 2020). Moreover, racial and ethnic disparities are apparent in community viral spread: despite comprising only six percent of each states’ population, the Latinx population accounts for 19.3 and 23.2 percent of all cases in Iowa and Wisconsin, respectively (Russell 2020; Wisconsin Department of Health Services 2020).

The workplace, household, and community spread of COVID-19 were connected to two macro-level spatial tendencies—ruralization and transnationalization—that transformed the meatpacking industry over previous decades. Ruralization entailed changes in how and where meat is produced, shifting partially to accommodate industry desire to cut costs by moving processing facilities closer to where animals are raised and to areas with lower wages and rents and less stringent regulation. Transnationalization involved the increased recruitment of foreign-born workers to rural areas for employment. The facilities in Garden City, Kansas exemplify these trends. In the 1960s, Iowa Beef Processing (IBP) sought to break meatpacking’s urban, unionized character by locating facilities in rural areas, pursuing a competitive strategy through freeze packaging, long-distance shipping, and a cheaper labor market (Fink 1998; *The Gazette* 2007). In 1980, IBP founded a plant in Garden City, and began recruiting immigrant and refugee workers from Asia and Latin America. Garden City’s population received 6,000 new residents between 1980 and 1985, making it the fastest growing Kansas municipality, with 4,000 workers employed at two ConAgra and IBP plants by 1990 (Minton 2017; Stull 1990).

For meatpackers, the appeal of siting a facility in Garden City was to escape the middle-class wages and worksite protections of the urban labor market. In turn, low wages, hazardous conditions, mechanization, and increased injuries made high-turnover rates standard at new rural facilities. These practices quickly exhausted the local labor market pool and required “incessant recruitment by meatpackers” (*The Garden City Telegram* 2006), who expanded their search for workers to include those in precarious situations. For instance, IBP initially recruited at homeless shelters in Midwestern urban areas (Wineke 1997). In the 1980s to 1990s, the annual turnover rate at Kansas and Iowa plants was estimated at 100 percent, as local residents sought work

elsewhere (Cohen 1991; Stull 2011). These changes went hand-in-hand with Reagan's anti-union policies and falling unionization rates in meatpacking, which decreased from 46 to 21 percent between 1980 and 1987 (*Telegraph Herald* 2007). While IBP and ConAgra recruited workers at the U.S.-Mexico border in the 1980s, they established an office in Mexico City in the 1990s that offered to pay the travel costs for new recruits. Between 1990 and 2000, the Hispanic² share of workers at Garden City's ConAgra and IBP plants rose from 56 to 88 percent and 58 to 77 percent, respectively (Stull and Broadway 2004). According to a spokesman for an Iowa plant whose workforce was forty percent Hispanic in the early 1990s: "The meatpacking industry is one of the last in the country where people with basically no marketable skills have a chance to make a decent income" (Cohen 1991).

The intentional targeting of marginalized populations for labor recruitment engrained structural precarity into the meatpacking labor market. As Faranak Miraftab (2016) and Michael Grabell (2017) meticulously document, this phenomenon is closely tied to industry consolidation, which gave meatpackers newfound power vis-à-vis workers. Since workers had few employment options locally, firms threatened to move elsewhere to demand concessions and force worker compliance.

In sum, the spatial and temporal processes associated with industry consolidation heightened the instability of meatpacking and passed increasing risk onto workers. The pandemic multiplied this volatility, resulting in a precarity convergence in which workplace insecurity and systemic vulnerability became locked in a self-reinforcing cycle. Seeking to consolidate production and lower costs, meatpacking companies drew on macro-level processes of ruralization and transnationalization, which dangerously clustered risk. The recruitment of marginalized workers became key to sustaining meso-level production processes and aided in the creation of worksite conditions that fueled COVID-19 transmission at the micro-level.

Intersecting Social Categories

The CEJ framework recognizes that oppression operates along intersecting social categories, with mistreatment in one category often correlating with oppression in another (Pellow 2017). Such dynamics are present in the meatpacking model, where firms recruited marginalized workers who differ from local populations in terms of race, nationality, and religion. Perceived expendability manifested in (1) plants where exploitation and high turnover rates required a constant influx of workers and (2) local communities where the demographic change meatpackers ushered in was met with racism and nativism (Miraftab 2016). These intersecting forms of devaluation disproportionately exposed workers to COVID-19 and served to rationalize related mortality risks.

Immigrant mistreatment stemmed from accusations of threatening safety, democracy, and culture. In Kansas, since the 1990s, the Liberal and Golden City papers routinely published articles linking immigration and violence (Carpenter 2017; Delaney 2002; Lesniewski 2015). One commentator argued that undocumented immigration and birthright citizenship will produce a "conquered" U.S. (Phillips 2020). These reactionary statements followed local demographic shifts brought on by meatpacking recruitment changes. Between 1990 and 2000, the percentage of white workers in the IBP plant fell from 37 to seven percent, whereas the percentage of Hispanic and Asian workers increased, respectively, from 58 to 77 percent and from 4 to 15 percent (Stull 2011). This shift in workers' racial and ethnic profiles changed Garden City demographics: between 1980 and 2010, non-Hispanic whites fell from 82 to 30 percent of the population, whereas Hispanic residents increased from 16 to 47 percent (Stull 2011). In 2007, the accumulating effects of refugee and immigrant settlement resulted in Finney County, where Garden City is located, becoming majority non-white (Sattler 2009).

In Iowa and Kansas, meatpacking facilities have recruited refugee workers for decades. Iowa's refugee settlement office, founded in the 1970s, is central to steering labor, mostly from Asia and

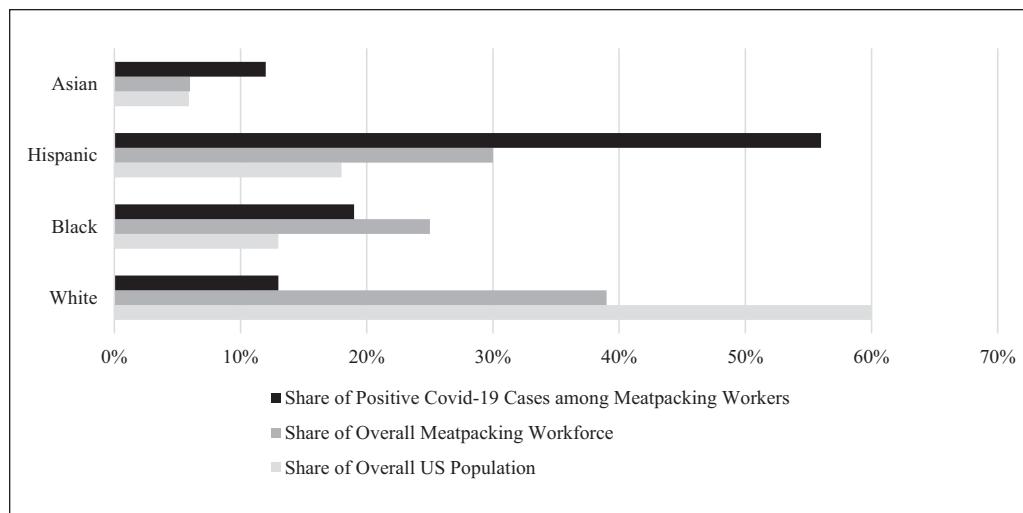


Figure 2. Covid-19 infections in meatpacking facilities by race and ethnicity.

Source. Centers for Disease Control and Prevention (2020); U.S. Census (2020).

Africa, into meatpacking (Moris 2019; *Telegraph Herald* 2008a, 2008b). The first refugees arrived in Garden City in the 1980s, primarily from Vietnam, with a second wave arriving in the mid-2000s when plants recruited Burmese, Somalian, and Ethiopian refugees (Ahmadsahmad 2010; Stull 1990). In Garden City, the U.S. State Department helped open a refugee settlement office in 2014 (Minton 2017). In Liberal, Kansas, Asian and African refugees have similarly been settling for two decades (Coleman 2011). It is uncoincidental that firms came to see refugees as ideal workers, as federal immigrant enforcement performed raids, deportations, and identity fraud investigations in meatpacking firms in the 2000s (*Telegraph Herald* 2008a). Refugee recruitment was strategic in targeting and cultivating a specific dispensability—a pool of workers more difficult to deport, but still financially and socially vulnerable. They were less likely to know labor rules and regulations, and more likely to acquiesce to worksite conditions.

A consequence of demographic change was racist and nativist hostility toward new immigrants and refugees who were not white Christians (Whitehead and Perry 2020). Media and political figures racialized and otherized meatpacking workers to portray them as criminals threatening civilization and democracy. In Liberal and Garden City, local commentators called for renewing the eugenics-based 1924 Immigration Act; painted immigrants as disease-ridden, and stressed “the Heartland’s fear of terrorism and dislike for diversity” (Morris 2019; Schiffelbein 2005; Watt 2019). In 2016, with dehumanizing language prominent in public discourse, white supremacist groups attempted bombing a Liberal apartment complex where Somali Muslim refugees resided (Haflisch 2016).

Prominent political figures further energized hostility against demographic change. In Kansas, Kris Kobach³ sought to end birthright citizenship, accused immigrants of defrauding democracy, and stated that “Christian values” are part of the “American creed” (Holman 2019; Smith 2018; Watt 2011). In Iowa, congressman Steve King warned of a jihadist conspiracy involving Muslim workers in pork plants, stating that the arrival of non-white, non-Christian immigrants would lead to “race suicide” and civilizational decline (Opsahl 2019; Pfannenstiel 2018; Ta 2018).

Racialization and otherization have been central to devaluing immigrants and refugees in meatpacking, increasing the likelihood that COVID-19’s impact would be racially unequal. By August 7, 2020, 39,905 meatpacking workers tested positive for COVID-19 at 462 plants, with 184 fatalities (Douglas 2020a). While racial and ethnic data for COVID-19 at individual plants is

limited, national surveys on meatpacking plants reveal racialized patterns in infection rates. Based on data from 239 facilities in 21 states, Figure 2 shows that 80 percent of workers with confirmed cases are people of color. Among positive cases in meatpacking, Hispanics and Asians are overrepresented based on their share of overall meatpacking employment and the U.S. population.

The virus's racially uneven effects are similar at the county level. In Brown County, Wisconsin, Hispanics account for 60 percent of infections despite comprising 8.7 percent of the county population (BeMiller 2020a). However, the precise impact is unknown due to rampant undercounting of positive cases since meatpacking companies and public health agencies at the county and state levels have withheld data on infection rates. For instance, a plant in Louisa County, Iowa reported on May 5, 2020 that 221 employees tested positive, but privately documented 522 cases, nearly half of the plant's 1,300 workers (Foley 2020a).

In Iowa, one JBS employee, a Mexican immigrant, died after contracting COVID-19 in April. His daughter blames JBS for not following health and safety protocols: "I was mad. I was. I had a lot of anger toward (JBS). It would have been nice to see them care more for their employees. I think that would have saved my dad's life" (Bowman 2020). Industry and government officials rationalized the uneven spread of COVID-19 by blaming the cultural habits of immigrant workers. Wisconsin state representative Robin Vos said viral transmission was due to "a large immigrant population where it's just a difference in culture where people are living and working much closer" (Vetterkind 2020). County health officials argued that growing case counts were due to "residents' failure to socially distance instead of workplace outbreaks" (BeMiller 2020a). Worker advocates countered that immigrant culture was not responsible for viral transmission, but rather the structural labor market conditions steering people of color into work, such as meatpacking, where employers fail to meet health and safety standards and where low wages limit housing options (Cepeda 2020). In shifting blame onto workers, local leadership therefore sought to evade legal responsibility for workplace conditions that endangered workers in the first place.

In May 2020, debates on statewide shelter-in-place orders focused on plant workers in Brown County. As the state supreme court assessed the governor's right to issue a statewide shutdown, proponents of the order pointed to the outbreak in Brown County, where cases jumped from 60 to 800 in days. Chief Justice Patience Roggensack, who voted to invalidate the order, interjected: "These were due to meatpacking, though. That's where Brown County got the flare. It wasn't the *regular* folks in Brown County" [emphasis added] (Cepeda 2020). Roggensack thus perpetuated the long-standing practice of otherizing a meatpacking workforce disproportionately comprised of people of color. As the following section details, in the COVID-19 era, the state was integral in institutionalizing the perceived expendability of workers and establishing the legal framework for shifting risks onto a precarious workforce.

State-backed Power

The final CEJ pillar focuses on the state's use of laws, regulations, and courts, among other instruments, to create and reproduce the socio-ecological inequalities intrinsic to capitalist growth (Pellow 2017). In response to COVID-19, the state used institutional tools to shape the work experience in meatpacking plants, such as classifying facilities as critical infrastructure, restricting welfare supports, and limiting worker options to redress employment grievances. These policies extended decades-long policy trends placing industry profit over worker well-being.

The virus's initial spread in plants shocked a key production point in the supply chain that induced cascading effects. Plant closures and assembly line slowdowns put enormous pressure on animal suppliers. For instance, the closure of a plant in Waterloo, Iowa, which normally processes 19,500 hogs daily, resulted in excess animal stock for farmers, disrupting a delicately

balanced and timed system of preparing pigs for slaughter weight and managing new piglets replacing market-ready animals (Foley 2020a). Such a holding pattern increased costs for farmers, who were forced to maintain pig weight, buy additional feed, and spatially accommodate excess animals. Many farmers facing this dilemma opted to mass euthanize hundreds of thousands of market-ready pigs (Eller 2020; Estes 2020).

On April 28, 2020, warning of national meat shortages, President Trump invoked a wartime law, the Defense Production Act (DPA) of 1950, to declare meatpacking facilities critical infrastructure (Eller 2020). In justifying the order, the proclamation recognized how industry concentration fuels food insecurity (The White House 2020):

It is important that processors of beef, pork, and poultry (“meat and poultry”) in the food supply chain continue operating and fulfilling orders to ensure a continued supply of protein for Americans. . . . Closures threaten the continued functioning of the national meat and poultry supply chain, undermining critical infrastructure during the national emergency. Given the high volume of meat and poultry processed by many facilities, any unnecessary closures can quickly have a large effect on the food supply chain. For example, closure of a single large beef processing facility can result in the loss of over 10 million individual servings of beef in a single day. Similarly, under established supply chains, closure of a single meat or poultry processing facility can severely disrupt the supply of protein to an entire grocery store chain.

While the statement defends the order on the grounds that the hyper-concentration of meat production creates vulnerability to food supply disruption, record-high exports of beef and pork during the first quarter of 2020 suggest that meeting food needs was not the motivation for invoking the DPA (National Corn Growers Association 2020).

This invocation came at a crucial moment for viral spread. A consensus of economists (IGM Forum 2020) argued that flattening the curve through economic contraction would be necessary before economic growth could safely resume. The pandemic therefore unsettled orthodox notions of labor supply and demand, as combating COVID-19 would require creating incentives *to not work*. To do so, workers should receive welfare support through cash transfers, paycheck guarantees, and other mechanisms, to stay home and reduce community transmission. Government instead opted to declare facilities critical infrastructure. Despite industry leadership seeking to instill loyalty by calling plant employees “heroic men and women,” the structural conditions toward coercive labor showed that workers had little choice (Vaagen 2020). One plant worker described confronting this dilemma:

A coworker vomited on the line and management let him continue to work . . . There are eight people working in front of me and another 10 or more behind me . . . I am scared I will die because of work, but I need to work to buy food for my family. (Grabell and Yeung 2020)

The state’s decision to transform plants into sacrifice zones was based on prioritizing industry accumulation and national consumption over worker well-being. This strategy is institutionalized through laws and policies that coerce workers into working during the pandemic and limit workplace protections, creating a false binary of choices for workers: their livelihood or their health. Many meatpacking companies additionally engaged in coercive practices aimed at keeping workers at work during the pandemic, including adding disciplinary points to workers’ records for missing shifts and not waiving waiting periods for short-term disability claims (Grabell 2020). While some companies already denied paid sick-leave before the pandemic, the DPA locked this into place since companies declared critical infrastructure with at least 500 employees are exempt from sick-leave protections. Furthermore, for undocumented immigrant workers lacking access to health or unemployment insurance or stimulus checks, there is little option

other than risking infection or, if already infected, exposing other workers (Grabell 2020). In Iowa, workers who quit their job are not eligible for unemployment insurance, further coercing workers into staying in hazardous environments (Iowa Department of Human Rights 2020). Immediately after invoking the DPA, industry allies at the state and federal levels began developing legislation to confer qualified immunity to meatpacking companies, which would shield plants from lawsuits involving workers infected with COVID-19 in the workplace (Richardson and Jett 2020; Swanson and Rappaport 2020).

These legal changes continued long-standing regulatory trends at the state and federal levels, where large firms, such as Tyson, Smithfield, and JBS, have tremendous control over the conditions in which they operate, partially due to their strong lobbying presence and recent trends in self-regulation. In the Trump administration, the number of OSHA inspectors and enforcement units reached an all-time low in the agency's history (Berkowitz 2019). While this decline already complicated the investigation of routine claims, the low number of inspectors further hinders OSHA's ability to process COVID-19 claims (Berkowitz 2020). Large firms also target state-level judiciaries and licensing commissions to ensure that judges and officials who rule against industry are either not nominated, or are fired or pressured to resign. Such dismantling of the legal infrastructure protecting worker compensation rights likely has newfound implications for coronavirus-related claims (Grabell 2015).

In 2019, the Trump administration eased oversight of swine slaughterhouses through a controversial U.S. Department of Agriculture (USDA) final rule allowing firms to remove maximum line speeds on hog processing and take over some inspection responsibilities. Subsequently, the number of USDA inspectors at plants is expected to fall by 40 percent (Khimm 2019). With the former limit of 1,106 hogs per hour lifted, critics argue that speed-ups will increase the likelihood of worker accidents and quality inspectors failing to detect contamination, risks that a COVID-19 workplace further amplifies (Eller 2020; Khimm 2019; USDA 2019). In April 2020, despite an ongoing lawsuit over the final rule pursued in part by labor unions, the USDA (2020) doubled down by approving speed waivers at 16 beef and poultry plants, with one facility in Finney County, Kansas granted a waiver months earlier. It is noteworthy that the USDA justifies the rule change by saying it lacks the legal authority to regulate worker safety (Davies 2020).⁴

The government's approach to anti-trust legislation additionally enabled the extreme concentration of meatpacking. The concentration ratio for feeding and slaughtering operations has increased in the last three decades, with the four largest firms controlling upward of 87 percent of market share in each area (Hendrickson 2015), establishing a clear oligopoly by surpassing commonly accepted levels of market competition. Unsurprisingly, COVID-19 cases are extremely concentrated among top firms (CDC 2020). According to the USDA, the number of slaughtering facilities has fallen 70 percent in the last fifty years (Skerritt 2020). Oligopoly formation can be partially attributed to the minimal investment in anti-trust enforcement, with few state attorneys general offices possessing lawyers with anti-trust expertise. Across the United States, there are 151 full-time anti-trust lawyers, primarily clustered in states with little to no meatpacking presence. Iowa, Kansas, and Wisconsin employ, respectively, two, one, and one (Yale 2020). The risks of market concentration became evident with COVID-19, as the closures of 22 plants resulted in "a 25 percent reduction in pork slaughter capacity as well as a 10 percent reduction in beef slaughter capacity" (United Food and Commercial Workers International Union 2020). In contrast, in Europe, where the largest fifteen firms control about a third of market share, COVID-19 engendered fewer supply chain disruptions (Skerritt 2020).

In summary, the state enabled multiple forms of precarity that converged prior to COVID-19 to make the meat supply chain susceptible to disruption. Following COVID-19, the state sought to restore supply chain production by effectively transforming plants into sacrifice zones. This

involved the state's use of legal and regulatory power to grant employers legal impunity while passing tremendous risk onto workers, putting them in hazardous situations with few protections. The state thus deepened the precarious conditions long central to the meatpacking labor market. In other words, state policies "aimed at stabilizing" the meat supply chain are based on destabilizing the health and security of a workforce disproportionately comprised of people of color (BeMiller 2020b).

Conclusion and Discussion

This paper analyzes how long-standing trends in meatpacking—industrial consolidation and labor marginalization—produced a precarity convergence, heightening structural vulnerability in the food system during the pandemic. The government responded to supply chain disruptions by declaring meatpacking to be critical infrastructure, thus shielding firms from legal liability. In doing so, the government institutionalized practices that place risks and socioecological burdens onto already vulnerable workers, converting meatpacking plants into sacrifice zones. The perceived expendability of meatpacking workers was central to establishing both the precarity convergence and the sacrifice zone. Firms' profitability depended on industry deregulation and the devaluation of immigrant and refugee workers, upon whom socio-ecological risk could be increasingly dumped.

This article extends environmental justice debates to study inequality within agrifood systems. Our case uses the CEJ approach as a frame to analyze the COVID-19 crisis in meatpacking, documenting how the dynamic interaction between multiscalar relations, intersecting social categories, and state-backed power sustains injustices. By expanding research on sacrifice zones to include worksites, we show how environmentally hazardous employment is allowed to flourish through firm strategies that pass socio-ecological risks onto workers in the name of efficiency and through a complicit state that prioritizes accumulation and consumption over worker health. We elucidate how the increasing concentration of power within the food system has gone hand-in-hand with labor marginalization, with COVID-19 underscoring how workplace vulnerability engenders systemic vulnerability.

This article's relevance extends beyond the meatpacking industry. While Hirschman's (1970) exit, voice, and loyalty had immediate implications for front-line health workers in the pandemic's early stages, it is now clear that such dilemmas are felt in other essential work domains, such as education and farm workers, among others. Although worker rights legislation protects educators, those protections are at best contingent during the pandemic. In contrast, farmworkers have never enjoyed basic worker rights in most states. Analyzing how workers fare in professionalized sectors such as teaching, and in areas where worker's rights were never fully institutionalized—such as agriculture or gig work—is needed to craft better protections for workers at all times (Wolf 2021).

The pandemic also fundamentally altered the relationship between work and home. Focusing on worksites as sacrifice zones reveals inter-locking features that reproduce existing inequalities, as community spread is facilitated between work, home, and family. With many homes serving as residences, worksites, and schools, we need to be attuned to how differences at home matter for work and education. An intersectional analysis of workplace dynamics around childcare and employment burdens are not studied in this paper, but merit further research, particularly in worksites with high rates of COVID-19. While employers and the state traditionally under-provided such worker protections, COVID-19 has exposed fissures that deepen vulnerability and exacerbate inequality.

Hopefully COVID-19 serves not only as an alert that we have built a system that profits off of vulnerable labor, but as a call to action to improve the institutions, structures, and conditions of

work, particularly for those deemed essential. Unions have been active players in fighting for worker rights in this sector, yet a significant number of workers are not unionized. Recent examples of collective action both inside and outside of unions in the agrifood system reveal potential pathways for workers. First, an alliance between rancher associations and the United Food and Commercial Workers Union against top meatpacking firms seeks to enhance worker safety protocols for COVID-19 and to launch federal investigations into price-fixing during the pandemic (Douglas 2020b). Such an alliance is also relevant outside the agrifood system, as it affirms the need to collectively organize across sectors and with diverse stakeholders who, despite different identities, pinpoint shared interests that concentrated power structures threaten. Second, families of meatpacking workers initiated protests in front of plants to lobby for labor protections. While citizenship status may limit workers' willingness to voice grievances, their U.S. citizen relatives have more legal power for advocacy (Fromartz 2020). This strategy could be applied in other industries disproportionately reliant on immigrant labor. We hope this research reminds us that the food system is only as strong as its weakest link. If we want to improve food security, we need to critically examine self-regulation and deregulation schemes for industry and anti-trust laws, as they can potentially disrupt our food system, putting the health and safety of workers and the public at great risk.

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Notes

1. African-American workers had a minimal presence in the meatpacking communities of interest in this article. For example, searches using the terms "African-American" or "Black" alongside "meatpacking" in databases yielded minimal, if any, results. For more detailed accounts of African-American workers in meatpacking, see Miraftab (2016) and Vanesa Ribas (2015).
2. We use the term Hispanic when it appears in the original source.
3. Kobach is an attorney, Kansas Republican Party chairman (2007-09) and Kansas Secretary of State (2011-19).
4. In March 2021, a federal judge recognized that Trump's USDA violated basic principles of administrative law by not considering how workers' safety would be affected by the rule change. The judge threw out the elimination of pork line speeds and gave the USDA 90 days to decide on a course of action (Davies 2021).

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