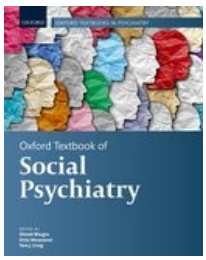

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CHAPTER

22 The impact of capitalism on mental health: An epidemiological perspective

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Abstract

Researchers have documented capitalism's pernicious effects on the health of the poor and working class since the beginning of the Industrial Revolution. This chapter summarizes and critically assesses the relationship between capitalism and mental health. It begins by defining capitalism: broadly, a socio-economic system characterized by the private ownership of the means of production and the exploitation and domination of wage labour for profit. Early research on capitalism and mental health is then reviewed, with a focus on the work of Engels and Marx, which described how nineteenth-century capitalist industrialization damaged workers' mental health by degrading their social, working, and living conditions. Next, quantitative research on capitalism and mental health since the mid-twentieth century is discussed. Although epidemiological research on the topic remains underdeveloped, research consistently finds that capitalism harms workers' mental health and exacerbates inequities. It does so through at least three mechanisms: alienation; exploitation; and domination. Finally, it is argued that the mental health effects of other axes of power, like racism, sexism, colonialism, and imperialism, cannot be fully understood without attending to their historically contingent forms under capitalism; likewise, capitalism's mental health effects cannot be understood without attending to these other axes of power.

Keywords: capitalism, epidemiology, mental health, mental illness, psychiatric, social class, social determinants of health

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Introduction

> *Capital … takes no account of the health and the length of life of the worker … Its answer to the outcry about the physical and mental degradation, the premature death, the torture of over-work, is this: Should that pain trouble us, since it increases our pleasure (profit)?*
>
> (Marx, 1990, p. 381)

Since the dawn of the industrial revolution, researchers have documented capitalism's noxious effects on the health and well-being of the working class, poor, marginalized, and oppressed. In the 1840s, for example, Frederick Engels decried the alarming rates of mortality, as well as mental and physical illnesses, among the nascent English working class—an injustice Engels deemed 'social murder' (Engels, 1950, p. 96). Nearly 200 years later, inequitable patterns of mortality and morbidity, including mental illnesses, persist and proliferate among the poor and working classes globally. For example, from 2000 to 2017, drug poisoning, alcohol poisoning, and suicide mortality rates among US adults increased by 400%, 40%, and 35%, respectively (Shiels et al., 2020), with larger increases among certain less educated and racialized populations (Shiels et al., 2020; Phillips & Hempstead, 2017). Worldwide from 1991–2016, the burden of disease attributable to mental and substance-use disorders rose by over 40% (Patel et al., 2018). Although the absolute burden of disease attributable to such disorders is lower in the Global South than elsewhere, Global South countries have suffered larger relative increases in the burden of disease attributable to such disorders (Patel et al., 2018), coinciding with increasing industrial production outsourced by transnational corporations in the Global North. Meanwhile, within countries, mental illnesses remain inequitably distributed, with those in the poor and working class—especially those from certain dispossessed and minoritized populations—facing greater risks than their wealthier, propertied, and non-minoritized counterparts. For example, in the USA, adults whose highest level of education is high school have twice the suicide rate of those with a college degree or more (Phillips & Hempstead, 2017), while non-Hispanic Indigenous adults have a 22% higher suicide rate than non-Hispanic white adults (Woolf et al., 2018).

What explains these trends and inequities? While this question has been a primary concern of quantitative social science, the resulting answers have not always engaged directly with capitalism—a socio-economic system that not only structures societal distributions of health-affecting resources and power but also modulates our very experiences of reality and the production of knowledge within it. Instead, mental health researchers have focused on the roles of individual-level factors like 'risk behaviours' or socio-economic status. Moreover, capitalism's ubiquity makes it difficult to isolate pathways through which it affects any single outcome like mental health.

In this chapter, we summarize the limited existing research on the relationship between capitalism and mental health. We start by defining capitalism; we do not provide a comprehensive definition, but rather focus on features most relevant to health. Next, we describe early research on capitalism and mental health, focusing on the work of Engels and Marx, whose foresighted analyses laid the groundwork for much contemporary research on the topic. We then review quantitative research on capitalism and mental health since the mid-twentieth century, beginning with research on alienation and concluding with contemporary class analysis. Finally, we discuss research gaps and potential future research directions. Given our backgrounds and training, we note that we limit much of our discussion to epidemiological research, often research from the Global North (Lovell & Susser, 2014). We further note that we focus on research that explicitly engages with capitalism, although we recognize that all research on the social determinants of mental illness implicates capitalism.

Capitalism and early theories of its mental health effects

According to Marx, capitalism is a socio-economic system characterized by the private ownership of the means of production (i.e. of capital and the tools and machinery used to produce goods and services for consumption) and the exploitation and domination of wage labour for profit (Waitzkin, 1978; Marx, 1990). More simply, in capitalist societies, workers—who constitute a majority of the population (the working class)—own no capital. Thus, to survive, they must sell their labour power (i.e. their capacity to work) to capitalists for a wage. Meanwhile, capitalists (i.e. owners of capital)—who constitute a minority of the population (the capitalist class)—buy workers' labour power and exploit workers by appropriating as 'surplus value' the difference in value between the wages they pay workers and the value of the products that workers produce (Waitzkin, 1978; Marx, 1990). As capitalists' profits and accumulated capital flow from surplus value, capitalists are motivated (and, indeed, compelled by competition) to decrease labour costs by reducing wages, increasing hours, degrading working conditions, and accelerating labour processes (Marx, 1990, pp. 283–639). Thus, unless opposed by sufficient organized worker resistance, capitalism operates to degrade workers' working conditions relentlessly (Marx, 1990, pp. 283–639). As workers must sell their labour power to survive, they must suffer degraded conditions, risking unemployment and destitution if they refuse (Engels, 1950). Beyond contributing to workers' degraded working conditions, the profit motive also drives capitalism to continuously transform production and class relations in the pursuit of new profit outlets, such as from the industrial capitalism of Engels's time to the monopoly- and finance-dominated capitalism of today (Waitzkin, 1978; Amin, 2010).

Workers' formal 'freedom' to sell their labour power to capitalists for a wage distinguishes capitalism from some pre-capitalist modes of production. For example, under feudalism, ruling classes often appropriated the fruits of producers' labour through traditional commitments, legal regimes, or brute force (Wood, 2002). Moreover, whereas capitalism completely dispossesses workers of the means of production and of the products of their labour, in principle, feudal labourers retained part of their agricultural production and held certain privileges in land, giving them some direct access to their means of subsistence (Wood, 2002). Meanwhile, in contrast to both capitalism and feudalism, under socialism and communism, workers (or worker-controlled institutions) collectively own the means of production and produce with the goal of satisfying social needs rather than generating profit in the market (Gilabert & O'Neill, 2019).

Engels on capitalist industrialization and the health of the English working class

Engels's 1845 work, *The Condition of the Working Class in England*, was one of the first systematic studies of capitalism and health (Engels, 1950; Krieger, 2011). It was also one of the first modern epidemiological studies. Drawing from his own observations and official reports, Engels documented the vile working and living conditions, and the resultant illnesses and premature deaths, of workers in Manchester and Liverpool, England, cities at the centre of the Industrial Revolution. Engels cited official reports showing that labourers in Liverpool had life expectancies less than half that of the upper classes, an inequity driven by elevated mortality rates among working children. Moreover, Engels found that mortality rates often *increased* with industrialization, suggesting that premature death was caused by early capitalist industrialization, with its gruelling hours (often 16 or more per day) and brutal working conditions. For example, according to Engels (1950, p. 163) particle inhalation among labourers in unventilated and overcrowded textile mills often caused 'blood-spitting, hard, noisy breathing, pains in the chest, coughs, sleep-lessness—in short … asthma ending in the worst cases in consumption'. He (Engels, 1950, p. 167) argued that such harms were not natural features of labour, but rather embodied a social murder committed 'purely to fill the purses of the bourgeoisie'. Beyond working conditions, he also recognized that workers' abhorrent living conditions harmed their health, as dispossession and industrialization funnelled them from the countryside into overcrowded city slums in search of work. There, workers' paltry wages bought them only congested, sewage-ridden dwellings, tattered clothing, and spoiled food, precipitating diseases like typhus and scarlet fever.

Engels also addressed capitalism's effects on mental health, identifying occupational hazards that researchers would 'rediscover' in the mid-twentieth century. He argued that capitalist industrialization and urbanization harmed workers' mental health by degrading their social, occupational, and living conditions. Socially, Engels (1950, p. 24) observed, capitalism fosters societies rife with competition, among both workers (for employment) and among capitalists (for profits), with escalating loneliness and 'brutal indifference … [and] unfeeling isolation of each in his private interest'. For factory workers, Engels contended that the incessant repetition of menial tasks, with no creativity or autonomy, induced boredom and depression. He wrote: 'it is, properly speaking, not work, but tedium, the most deadening, wearing process conceivable. The operative is condemned to let his physical and mental powers decay in this utter monotony' (Engels, 1950, p. 177). Moreover, he found that workers' work-related physical morbidities often induced or exacerbated their psychological pathologies, including irritability, hopelessness, and depression. Thus, workers frequently drank heavily to endure their bleak existences.

Marx on the heath-degrading effects of the profit motive under capitalism

Marx, who collaborated with Engels, also used observations and official reports to investigate capitalism's health effects in England, Ireland, and elsewhere, and he provided a theoretical framework to explain the drivers of the noxious conditions and resultant illnesses that Engels described two decades earlier. In his foundational 1867 work, *Capital* (Marx, 1990, pp. 283–639), Marx characterized surplus value as the source of capitalists' profits, and thereby exposed capitalists' inherent need to degrade workers' working and living conditions to maximize profits, inexorably perpetrating the 'systematic robbery of what is necessary for the life of the worker' (p. 553). Marx, as well as Engels, noted that women and children had constituted a significant segment of domestic, service, and factory labourers since the inception of the Industrial Revolution, and their wages were often lower and their working conditions unhealthier than their adult male counterparts (Engels, 1950; Marx, 1990; Ghosh, 2012). Owing to their low wages, Marx observed, women and children were a majority of workers in many industries, where they—and their counterparts—suffered hazardous working conditions (Marx, 1990, pp. 340–416), causing exhaustion, pulmonary diseases, injuries, poisonings, and 'extraordinarily low' (p. 354) life-expectancies, or 'disguised infanticide' (p. 522).

Concerning mental health specifically, Marx identified several ways in which capitalism produces isolation, powerlessness, boredom, purposelessness, and anxiety among the working class. For example, he argued that capitalist production tends towards the extreme division of labour, which increases efficiency and productivity (and thus profits), but which degrades and deskills labour (Marx, 1990, pp. 455–639), issues taken up in detail in the twentieth century by researchers like Braverman (1998). Workers can no longer exercise their abilities or creativity through work; rather, the division of labour transforms workers into machines' 'living appendages' (Marx, 1990, p. 548), working not to satisfy their mental, intellectual, and material needs but rather to maximize capitalists' profits (pp. 455–639). While a machine may lighten physical labour, it 'becomes an instrument of torture, since the machine does not free the worker from work, but rather deprives the work itself of all content' (Marx, 1990, p. 548). Moreover, the constant introduction of labour-saving and cost-cutting machinery creates a reserve army of unemployed, desperate workers, 'held in misery' (Marx, 1990, p. 618) at the mercy of capitalism's changing requirements. According to Marx, labour conditions under capitalism tend to grow only more degraded over time, as the 'accumulation of wealth at one pole is, therefore, at the same time accumulation of misery, the torment of labor, slavery, ignorance, brutalization and moral degradation at the opposite' (Marx, 1990, p. 799). Moreover, workers' gruelling hours usurp their free time for intellectual development and social fulfilment (Marx, 1990, pp. 340–416). In summary, capitalism's orientation around profit production rather than needs satisfaction leads it to squander 'not only flesh and blood, but nerves and brain as well' (Marx, 1991, p. 182).

Other co-constitutive systems of oppression, exploitation, and domination

Although *Capital* focused on conditions in England during the Industrial Revolution, Marx acknowledged the roles of slavery and colonialism in capitalism's ascendance, and their pernicious effects on the health of enslaved and colonized populations, including mass death (Marx, 1990; Virdee, 2019). Indeed, the slavery and colonization that facilitated the Industrial Revolution by providing cheap labour and resources led Marx to argue that 'capital, comes dripping from head to toe, from every pore, with blood and dirt' (Marx, 1990, p. 926). For instance, Marx described how the English ruling class's colonization of Ireland and evictions of Irish agricultural labourers from their lands forced the labourers into poorly paid, hazardous wage labour in city slums, contributing to disease, famine, and misery (Marx, 1990, pp. 854–70). Nonetheless, although Marx recognized the functions and deadly effects of slavery and colonialism, he did not provide a general theory of the roles of oppressive systems like racism and sexism within capitalism (Virdee, 2019).

Feminist and black radical theorists have filled these gaps, arguing that capitalism depends on racism and sexism to maximize profits through hyper-exploitation, colonialism, imperialism, and patriarchy (Virdee, 2019; Robinson, 2000; Federici, 2004; Burden-Stelly, 2020; Laster Pirtle, 2020; Kelley, 2017). Historically, they argue that: (i) capitalism has been racialized and gendered since its inception; and (ii) that it has used such hierarchies to expand—by appropriating resources and labour from Africa, the Americas, other parts of the Global South, and elsewhere, and by creating and exploiting a gendered division of labour (Virdee, 2019; Robinson, 2000; Federici, 2004; Burden-Stelly, 2020; Laster Pirtle, 2020; Kelley, 2017). Indeed, according to Robinson (2000), the first European workers were racial subjects, targeted for expropriation and exploitation because they were Irish, Jewish, Roma, and so on. Theoretically, concerning labour, capitalism's profit imperative runs up against the working class's interest in resisting exploitation (Ghosh, 2012; Virdee, 2019). To ensure less working-class resistance, capitalists rely not only on state violence, but on the ideological and material production of racial and gender differences to undermine worker solidarity, suppress wages (e.g. the gender pay gap (Platt et al., 2016)), and justify inequities (Ghosh, 2012; Virdee, 2019). Moreover, the ideology of 'female difference' and of 'male breadwinner, female homemaker' relieves capitalists from paying for the maintenance and reproduction of the workforce, and enables them to profit from women's—especially black women's—unpaid or low-paid domestic labour (Ghosh, 2012; Jones, 1949; Ferguson et al., 2019). This patriarchal regime not only disempowers and impoverishes women, but also burdens them with 'double shifts' of waged and unwaged labour (Ghosh, 2012; Jones, 1949; Ferguson et al., 2019) . In this chapter's concluding sections, we describe relationships between these systems of patriarchy and racial capitalism and global patterns of mental health inequities (Laster Pirtle, 2020), both through mechanisms that Marx identified, like resource theft (Foster & Clark, 2018), and through other mechanisms, like the stress among women arising from their double shift of labour (Ghosh, 2012).

Summary

Although Engels and Marx wrote their foundational works over 150 years ago, their analysis of how capitalism impairs mental health by shaping workers' socio-economic conditions remains essential. Specifically, under capitalism, most workers cannot work to exercise their creativity or abilities, or to satisfy their mental, intellectual, and material needs; rather, they must work under terms and conditions calculated to maximize their employers' profits. These conditions foster deprivation, isolation, boredom, disempowerment, and despair. In the next section, we show that Engels' and Marx's research influenced—and was corroborated by—modern social science research on alienation, exploitation, and domination.

Early quantitative research on capitalism and mental health

In this section, we outline significant developments in quantitative research on capitalism and mental health from the second half of the twentieth century, when psychiatric epidemiology formalized as a discipline (Lovell & Susser, 2014). Groundwork for such research was laid earlier in the twentieth century by scholars influenced by Engels, Marx, and other nineteenth-century theorists, including Du Bois (1906, 1996), who documented the psychological and physical trauma that white supremacy inflicted on black Americans (Du Bois, 1906, 1996); Zetkin and Jones, who investigated women's oppression in patriarchal, capitalist societies (Lynn, 2014; Gaido & Frencia, 2018); and Fanon (1988, 2008), who explored the dehumanizing effects of colonialism and imperialism. Writing in 1952, for example, Fanon—a psychiatrist—described how racism and French colonialism contributed to loneliness, estrangement, and pain among Algerian migrants in France (Fanon, 1988).

However, unlike these earlier theorists, psychiatric epidemiology has rarely focused explicitly on capitalism. Moreover, as we describe in the next subsection, the late-twentieth-century ascendency of individualistic

theoretical and methodological approaches inhibited such research (Muntaner et al., 2013). In this section, we begin by describing the primary theoretical approaches taken by psychiatric epidemiologists who study the social determinants of mental illness, then describe quantitative research on capitalism and mental health, starting with mid-twentieth-century research on alienation and ending with neo-Marxist research from the turn of the century. We return to the issues raised by Du Bois, Zetkin, Jones, and Fanon in the concluding sections.

Relational versus stratificationist approaches to research on mental health inequities

Researchers since Engels and Marx have documented greater rates of mental illnesses among those in the working class than among those in the upper classes (Muntaner et al., 2013). Psychiatric epidemiologists have used two main approaches to investigate the social causes of the inequities: relational and stratificationist. Researchers using relational approaches, including Marxist theory, analyse mental health inequities in terms of social relations and processes, such as conflicts between classes struggling for power and control over resources. They theorize that inequities arise because the welfare and security of particular classes causally depends on the deprivation of others (Muntaner et al., 2013). Marxists further theorize that health inequities between capitalists and wage labourers are *inevitable* because capitalists' material abundance *depends* upon labourers' disempowerment (Crinson & Yuill, 2008).

In contrast, researchers using stratificationist approaches analyse the social causes of mental health inequities in terms of differences in inherited or achieved attributes of individuals, like their incomes and educations (i.e. their socio-economic status) (Muntaner et al., 2013). Stratificationist measures have proven to be powerful predictors of mental health outcomes. Indeed, there is a granular inverse relationship between socio-economic status and most mental health outcomes (Prins et al., 2015). However, by reducing the causes of health inequities to differences in individual-level attributes, stratificationist approaches ignore social relations that do not operate directly through socio-economic status, and elide the structural factors (e.g. political and economic systems) that *produce* socio-economic status and *cause* inequitable distributions of health-promoting resources (Muntaner et al., 2015a). Thus, stratificationist approaches are less powerful than relational approaches in explaining the mental health effects of structural arrangements like capitalism.

By the late twentieth century, stratificationist approaches dominated psychiatric epidemiology, in part because they enabled researchers to sidestep contested social and political mechanisms (Muntaner et al., 2015a; Ng & Muntaner, 2014). The hegemony of stratificationism sidelined epidemiological research on structural factors (Muntaner et al., 2013), including not just capitalism, but also structural racism and sexism (Krieger, 1994). Moreover, stratificationist approaches influenced prominent research on work organization and the psychosocial work environment, hindering occupational health research on the effects of socio-structural relations by shifting attention towards individual- and workplace-level stressors (Muntaner & O'Campo, 1993). Nonetheless, as we describe in the following, researchers did apply relational approaches, including neo-Marxist approaches, to mid-twentieth-century research on alienation and wage labour.

Alienation

Marx's theory of alienation informed mid-twentieth-century research on capitalism and mental health. In the *Economic and Philosophic Manuscripts of 1844*, Marx theorized that the structure of capitalist production 'alienates' workers from their labour (Braverman, 1998; Marx, 2007). Under capitalism, workers must sell their labour power to capitalists in order to survive; as such, capitalists own the processes and products of workers' labour (Marx, 2007). Thus, workers are confronted by the goods and services they produce as *alien* objects, no longer their own products, but rather the products of capitalists (Marx, 2007). The structure of capitalist production also alienates workers from themselves and each other (Marx, 2007; Page, 1998). Under capitalism, workers cannot work freely and cooperatively for self-expression, self-fulfilment, or self-subsistence, but instead must work for wages under terms and conditions dictated by others; they are surveilled, controlled, and exploited by capitalists (Marx, 2007). Thus, workers are reduced to mere 'cogs in a machine', rendering them powerless, self-estranged, and socially isolated (Page, 1998).

Initial quantitative research on alienation and mental health was conducted by Seeman et al. (1959). Although Seeman drew from Marxist theory, he added a social psychological conceptualization to Marx's account: he defined alienation in terms of individuals' subjective experiences rather than in terms of the material class relations that structure capitalism (Seeman, 1959; Harvey et al., 1983). From this perspective, Seeman identified several dimensions of alienation relevant to mental health: (i) *powerlessness*—lacking belief that one's actions can produce the outcomes one wants; (ii) *meaninglessness*—when one's minimal standards for clarity in decision-making are not met, and one thus lacks confidence that one can predict the outcomes of one's actions; (iii) *normlessness*—or anomie, wherein the social norms regulating individual conduct have broken down, and there is thus a high expectation that socially unapproved behaviours are required to achieve given goals; (iv) *isolation*—lacking connection with one's fellow workers, community, or society, and their shared goals or beliefs; and (v) *self-estrangement*—lacking intrinsic meaning in one's work (Seeman, 1959, 1975).

In early research, Seeman and others operationalized these dimensions with indicators of feelings of poor job autonomy, external locus of control (believing one's life is controlled by factors outside one's influence), and incongruities between one's abilities and the contents of one's job. They found that these measures were associated with indicators of capitalist industrialization, such as the extensiveness of the division of labour, the degree of managerial hierarchy, and the intensity of mechanization and automation (Gecas, 1989). Although this research programme was not developed to analyse mental health directly, studies did relate alienation to mental illness and its deleterious sequelae. For example, Seeman and others found that greater alienation, usually operationalized as powerlessness, was associated with depression and anxiety (Gardell, 1976; Coburn, 1978, 1979), poor self-esteem and hopelessness (Gardell, 1976; Seeman & Seeman, 1983), binge drinking (Seeman & Seeman, 1983; Seeman & Anderson, 1983), and worse self-rated health (Coburn, 1978, 1979; Seeman & Seeman, 1983).

The findings of this era of alienation research aligned with later psychological and biomedical theories of psychopathology, including the diathesis–stress model, which hypothesizes that socially patterned (e.g. class-based) interactions between stressful life experiences (e.g. alienated labour) and predisposing conditions (e.g. family histories) contribute to psychiatric disorders (Monroe & Simons, 1991; Aneshensel, 1992). They also aligned with the psychoanalytic work of scholars like Fromm and Marcuse, who theorized that capitalism undermines workers' mental health by thwarting their satisfaction of innate desires, including for creative expression and social connection (Matthews, 2019). Finally, although the research rarely discussed alienation explicitly, the findings also aligned with later epidemiological research on job strain, which hypothesizes that jobs with high demands, like strenuous tasks, and low control, like poor autonomy, harm mental health (Muntaner & O'Campo, 1993).

In summary, early research on alienation found that a specific aspect of capitalist production—the alienation of workers from control over the processes and fruits of their labour—harmed workers' mental health. However, this line of inquiry was largely abandoned in the late twentieth century with the ascendancy of stratificationist research on the psychosocial work environment, which we describe in the next subsection.

Work organization and the psychosocial work environment

In the late 1970s, occupational and psychiatric epidemiologists developed models that drew on stratificationist and social psychological theories to explain the relationship between work organization, job characteristics, and health. Karasek's 'demand/control' or 'job strain' model was most prominent (Muntaner & O'Campo, 1993; Karasek, 1979). Karasek's model has two dimensions, *job demands* and *job control*, both of which are typically measured via self-report (Karasek, 1979). The job demands dimension covers the strenuousness of the work required to perform a job and the stress that arises from unexpected tasks and interpersonal conflicts. The job control dimension covers (i) decision authority (i.e. workers' abilities to influence workplace policy and make decisions about how to perform their jobs); and (ii) intellectual discretion (i.e. workers' opportunities for skill acquisition and creative expression) (Karasek, 1979).

The demand/control model predicts jobs with high demands and low control (i.e. high-strain jobs) will harm mental health relative to jobs with low demands and high control (i.e. low-strain jobs) (Karasek, 1979). Indeed, Karasek's foundational job strain study found that workers in high-strain jobs reported greater anxiety and depression than others (Karasek, 1979). Dozens of subsequent studies have supported the demand/control model, finding associations between high-strain jobs and greater psychological distress, exhaustion, anxiety, and depression, as well as stress-related outcomes like cardiovascular disease (Schnall et al., 1994; Van der Doef & Maes, 1999). Related psychosocial models, like Siegrist's effort–reward imbalance model—which predicts harms from jobs involving high efforts (i.e. demands) and low rewards (e.g. inadequate wages)—have also been corroborated (de Jonge et al., 2000; van Vegchel et al., 2005).

While we have learned much from these frameworks, psychosocial models do not explicitly address class relations and other structural factors (Muntaner & O'Campo, 1993). For example, the demand–control model focuses on the individual-level relationships between work environments and health. It does not address how class relations and power dynamics structure job demands, complexity, and authority, and how societal forces, ranging from economic conditions to the balance of power between labour and capital or unions and management, influence the labour process (Prins et al., 2015; Muntaner & O'Campo, 1993). Nonetheless, the predictions of Karasek's and Siegrist's models do align with Marxist theory, despite avoiding engagement with it. For example, alienation models predict that workers' mental health will be harmed by their *lack of control* over the labour process (i.e. low control), particularly workers whose jobs are intensely surveilled by management and deskilled or accelerated by machinery (i.e. high demands) (Coburn, 1979). However, by eliding class relations, Karasek's and Siegrist's models fail to elucidate the structural mechanisms that produce psychosocial stressors. Marxist theories, in contrast, are more comprehensive and explanatory. They suggest that workplace-level *experiences* of job strain result from class relations that are fundamental to capitalism. That is, job strain is an *effect* of capitalist class relations rather than a fundamental cause of interclass health inequities (Prins et al., 2015; Muntaner & O'Campo, 1993).

Whether we contextualize concepts like job strain as primarily causes or effects is more than merely an academic point about preferred theoretical models: correctly identifying the aetiology of mental health inequities has real implications for the sorts of public health strategies we adopt. Insofar as capitalists profit from workers' unpaid labour and degraded working conditions (e.g. excessive working hours and intensified labour processes) (Marx, 1990), job strain, effort–reward imbalance, and their harmful mental health

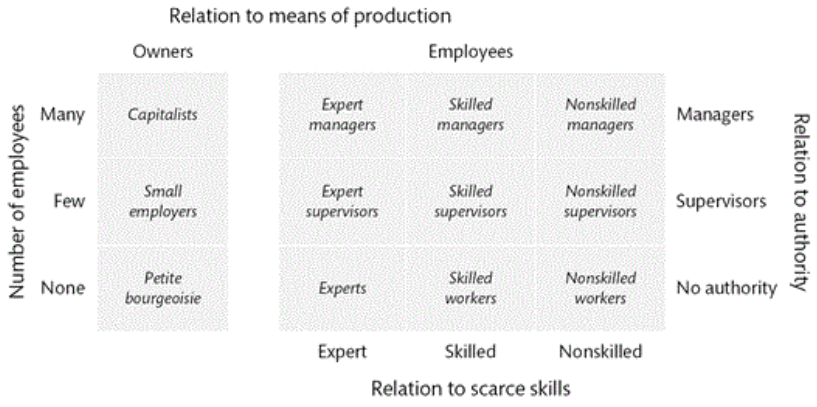
effects are *features* of capitalism, not aberrations remediable through individualized workplace, behavioural, or medical interventions.

As we describe in the next subsection, researchers using relational approaches have integrated insights from psychosocial models and applied them in analysing how job strain, effort–reward imbalance, and other psychosocial factors interact with broader workplace-level and societal-level class relations to affect mental health.

Neo-Marxist theory and contradictory class locations

In the 1990s, psychiatric epidemiologists began applying neo-Marxist theory to mental health research, building on the work of 1970s-era neo-Marxist sociologists, who developed survey instruments to measure social class in terms of power and control over capital and labor rather than in terms of individual attributes (Muntaner et al., 2015a). These measures helped researchers characterize the class dynamics that animated modern societies, which had grown more complex and heterogenous since Marx's original formulation (Wright, 1997). The most influential was Wright's conceptualization, which measures social class along three dimensions: (i) capital ownership; (ii) control and authority over labour and policy in the workplace; and (iii) skills and credentials (Muntaner et al., 2015a; Wright, 2009). Figure 22.1 displays how these dimensions map onto Wright's social class scheme, which consists of four primary classes: workers, managers, the petite bourgeoisie, and capitalists.

Figure 22.1



Relational social class diagram.

Adapted with permission from Wright, E.O. (1997). Class Counts: Comparative Studies in Class Analysis. New York: Cambridge University Press.

Building on Marx's work, Wright (2009) theorized that classes relate to one another through social mechanisms of exploitation and domination. For example, capitalists *exploit* workers by paying workers less than the value produced by their labour and *dominate* workers by controlling their labour processes (Wright, 2009). Under neo-Marxist theory, exploitation and domination produce mental health inequities (Eisenberg-Guyot & Prins, 2020). For example, as first documented by Engels (1950) and Marx (1992), exploitation directly harms workers' health by exposing them to hazardous working conditions and denying them necessities like housing, nutritious food, and health care (Eisenberg-Guyot & Prins, 2020). In contrast, capitalists amass salutary resources by increasing profits, which often requires debasing working conditions and wages (Eisenberg-Guyot & Prins, 2020). Moreover, while capitalists enjoy autonomy and security, domination harms workers' health by alienating them from control over their livelihoods, the labour process, and their labour's fruits (Eisenberg-Guyot & Prins, 2020). (While this discussion of

domination should be familiar given the discussion of alienation above, the shift in emphasis is important. Focusing on domination excavates a relational process: it identifies specific actors (bosses, managers) and objective practices (e.g. assembly lines) that may cause individuals to experience alienation. In other words, it clarifies who is doing what to whom. In contrast, a social psychological approach that begins and ends with alienation may place all attention on individual workers.)

Key insights came from Wright's 'contradictory class location' concept, which was the focus of early neo-Marxist research in psychiatric epidemiology (Muntaner et al., 2013, 2015a). Wright—and other theorists—developed the concept to address the fact that in many post-industrial economies, much of the population (especially the 'middle class') does not belong to the industrial proletariat, but rather occupies a 'contradictory' location between capital and labour (Wright, 1997). For example, managers and the petite bourgeoisie occupy contradictory locations by sharing features with both workers (a lack of productive property or managerial authority, respectively) and capitalists (managerial authority or productive property, respectively) (Wright, 1997).

Using the theory of contradictory class locations, psychiatric epidemiologists revealed non-linear patterns of mental illness across social classes that were difficult to detect or explain with stratificationist approaches (Muntaner et al., 2013, 2015a). For example, the theory of contradictory class locations predicted that low-level mangers (i.e. supervisors), who often enforce company policy but have little control over policy development, would be particularly vulnerable to mental illness because they were simultaneously dominated and exploited by capitalists *and* antagonized by subordinates (the 'contradictory class location hypothesis') (Muntaner et al., 2013). Indeed, in the late 1990s and early 2000s, researchers found that lower-level supervisors reported greater levels of depression, anxiety, and alcohol-use disorders than both higher-level managers *and* workers (Muntaner et al., 1998, 2003). These findings align with the predictions of the job-strain model because low-level supervisors often face considerable interpersonal conflict (i.e. high demands) and have only weak decision-making authority (i.e. low control) (Muntaner et al., 1998). Moreover, despite sharing many responsibilities with managers, supervisors may not receive manager-level wages, exacerbating effort–reward imbalance and its mental-health sequelae (Muntaner et al., 2003).

In summary, building on the relational approaches taken in early alienation research, neo-Marxist epidemiologists elucidated relational explanatory mechanisms—exploitation and domination—through which capitalism harms workers' mental health and produces mental health inequities. Although stratificationist approaches remain dominant, in the next section we describe the expansion of neo-Marxist research since the turn of the century.

Contemporary research on capitalism and mental health

Recently, epidemiologists have applied neo-Marxist theory beyond contradictory class locations and used it to objectively measure workplace social relations rather than rely on workers' subjective experiences.

Neo-Marxist social class and mental health inequities

New research involving novel samples, study designs, and quantitative methods has corroborated the contradictory class location hypothesis. For example, in a nationally representative cross-sectional survey of the US population, Prins et al. (2015) found those in contradictory locations (e.g. supervisors) had greater odds of depression and anxiety than others, particularly capitalists. Meanwhile, in a longitudinal study of US adults, Eisenberg-Guyot and Hajat (2020) found that the petite bourgeoisie had greater risks of serious mental illness than workers, managers, or capitalists. The findings corroborated the researchers' hypothesis that the health of the petite bourgeoisie would be compromised by their precarious position of owning productive property but lacking sufficient resources to compete with capitalists, causing proletarianization (i.e. descent into the working class), stress, and loss of salutary resources. Elevated illness risks among contradictory class locations have also been identified in South Korean and European samples, among others (Muntaner et al., 2010; Kong et al., 2017).

Meanwhile, epidemiologists investigating the broader relationships between neo-Marxist social class and health have identified inequities in the prevalence or risk of morbidities—including mental illnesses—across relational social classes, often finding that capitalists and managers report better health than workers and supervisors, in many cases regardless of income (Muntaner et al., 2015a; Eisenberg-Guyot & Prins, 2020; Eisenberg-Guyot & Hajat, 2020; Kong et al., 2017). Researchers hypothesize that mechanisms for the inequities include the exploitation and domination of workers and supervisors by capitalists and managers (Mutaner et al., 2015). Certain studies have also examined gender differences in the class–health relationship, often finding the relationship is strongest among men (Muntaner et al., 2015a), possibly because heterosexual couples' material well-being frequently depends most heavily on the man's class position, as the gendered division of labour often shoulders women primarily with domestic-labour responsibilities (Ferguson et al., 2019).

Objective measures of workplace organization

Traditional psychosocial work environment research, including research on job strain and effort–reward imbalance, typically relies upon worker self-reports of workplace demands (Prins et al., 2019). However, in addition to the reliability concerns raised by self-reported measures (e.g. from misreporting), the research's individual-level focus and methodology cannot capture the material and social relations that organize workplaces, or the structural factors that drive workplace organization, including capitalists' drive for profits (Prins et al., 2019). Consequently, researchers using self-reported measures often proffer dubious proposals to mitigate mental health inequities through individual-level interventions targeting workers' *perceptions* of job strain, ignoring that such interventions are unlikely to be effective and sustainable without addressing objective working conditions and confronting capitalism's profit-making imperatives (Eisenberg-Guyot & Prins, 2020).

Contemporary neo-Marxist epidemiologists have addressed the limitations of psychosocial approaches by measuring workplace social relations objectively and more comprehensively. For example, Muntaner et al. (2015b) found that US nursing assistants exposed to greater organizational-level exploitation (measured by employers' for-profit/not-for-profit status) and managerial domination (measured by, among other things, employers' frequency of labour-relations violations) had greater odds of depression than others. Meanwhile, Prins et al. (2019, 2021) found that increases in 'unconcealed exploitation' (measured as the percentage of workers' labour income they were hypothetically not paid for productive hours) increased US workers' odds of moderate and serious mental illness (Prins et al., 2019, 2021). Prins et al. (2019) also found that workers subjected to greater automation—as measured by the US Department of Labor's Occupational Information Network—had greater odds of binge drinking, while workers with more authority and autonomy (i.e. less domination) had lower odds of mental illness and binge drinking.

Although preliminary, this research illuminates structural mechanisms linking class relations and mental illness, which may be better targets for sustainable and effective public health interventions than individual-level behavioural interventions (Prins et al., 2019). For example, reducing worker exploitation, domination, and their harmful health effects requires changing the structure of labour by challenging or overturning the private ownership and control of capital (or in the short term, increasing worker power through working-class organizations like unions, political parties, and worker cooperatives and councils); workplace wellness programmes that attempt to habituate workers to their conditions will not suffice (Prins et al., 2015; Ng & Muntaner, 2014).

Research gaps: the intersecting mental health effects of racism and sexism under capitalism

Psychiatric epidemiological research on capitalism has focused on the mental health effects of class relations and waged labour. Other independent, yet mutually constitutive, features of capitalism, including racism, imperialism, and patriarchy, have received less attention in epidemiological research on capitalism, although—as we described above—other fields have laid theoretical foundations for such research. Here, we briefly outline some issues raised by that work and suggest areas for future research.

Currently, people of colour—particularly black and indigenous women, and those in the Global South—are segregated into the most exploited and dominated classes, facing debased working conditions, such as lower wages and greater exposure to physical and chemical hazards, ecological devastation, and resource theft (Laster Pirtle, 2020; Foster et al., 2011; Bailey et al., 2017; McClure et al., 2020; Breilh, 2021). As the foregoing subsections suggest, these conditions may imperil their physical and mental health (Eisenberg-Guyot & Prins, 2020; Bailey et al., 2017; McClure et al., 2020). Indeed, one US-based study found that health among white people at the bottom of the class structure tends to be better than health among all people of colour except those at the very top of the class structure (Eisenberg-Guyot & Prins, 2020). Moreover, within the working class, racialized workers—especially racialized women—face intersecting burdens of racism and sexism, with psychosocial and material repercussions that harm mental health, including chronic stress, estrangement, 'double shifts' of labour, and residential and occupational segregation (Platt et al., 2016; Bailey et al., 2017; Gee & Ford, 2011). Such workers are also targeted by state violence and other forms of social control, including criminalization, policing, and hyper-incarceration (Gilmore, 2007), factors associated with mental illness and other morbidities (Sewell et al., 2016; Bor et al., 2018).

Scholars outside psychiatric epidemiology, including Du Bois (1996), Zetkin (Gaido and Frencia, 2018), Jones (Lynn, 2014), and Fanon (1988, 2008) have connected capitalism's systems of race and gender oppression to mental health. However, although many psychiatric epidemiological studies have estimated racial and gender disparities in rates of mental illness and identified structural racism as a cause (Bailey et al., 2017; Gee & Ford, 2011), few have explicitly connected the disparities to racial capitalism. Likewise, although many neo-Marxist studies have identified racialized and gendered distributions of class membership, few have explicitly tested how race, gender, class, and domestic labour interact to affect mental health and produce mental health inequities (Eisenberg-Guyot & Prins, 2020). Finally, although the mental health harms of criminalization, policing, war, and other forms of state violence have been well-documented (Bailey et al., 2017; Charlson et al., 2019), psychiatric epidemiological studies have rarely explored the issue in their racial capitalist context.

Future epidemiological research on capitalism and mental health should build on the groundwork laid by social epidemiological research on structural racism and sexism, as well on the work of racial capitalism scholars (Virdee, 2019; Robinson, 2000; Federici, 2004; Burden-Stelly, 2020; Laster Pirtle, 2020; Kelley, 2017; Sewell, 2016; Taylor, 2019), to quantify how capitalism's mental health effects are racialized and

gendered. Potential projects include assessing how racial and gender differences in the distribution of class membership and societal class power affect rates of mental illness and mental illness disparities; within the working class, how racialized and gendered differences in the manner and degree of exploitation and domination contribute to intra- and interclass inequities; and how capitalist imperialism—whether through war, resource extraction and accompanying environmental degradation, or super-exploitation—harms the mental health of those in the Global South and advantages the Global North's ruling classes.

Conclusion

In this chapter, we first defined capitalism: broadly, a socio-economic system characterized by the private ownership of the means of production (i.e. capital) and the exploitation and domination of wage labour for profit (Waitzkin, 1978; Marx, 1990). Next, we described early research on capitalism and mental health, focusing on Engels's and Marx's work, which demonstrated how nineteenth-century capitalist industrialization damaged workers' health and well-being (Engels, 1950; Marx, 1990). We then summarized empirical research on capitalism and mental health since the mid-twentieth century. Psychiatric epidemiologists have consistently documented that capitalism harms workers' mental health and produces mental health inequities. Possible mechanisms include (i) *alienation*—capitalism separates workers from control over the processes and products of their labour; (ii) *exploitation*—under capitalism, capitalists pay workers less than the value of workers' production, causing deprivation; (iii) *domination*—under capitalism, capitalists control workers' labour processes through hierarchy, surveillance, and sanctions; and (iv) *job strain* and *effort–reward imbalance*, the psychosocial sequelae of exploitation and domination. Finally, we discussed how racism and sexism under capitalism—and related factors like imperialism and colonialism—produce mental health inequities. We argue for more research on these topics (and on related systems of oppression like homophobia, transphobia, and ableism), which have received relatively little attention in epidemiological research on capitalism to date.

Although psychiatric–epidemiological research on capitalism and mental health remains underdeveloped, growth in epidemiological research on neo-Marxism (Muntaner et al., 2015a) and racial capitalism (Laster Pirtle, 2020; McClure et al., 2020; Nosrati et al., 2018) suggests research gaps may soon be filled. This research is essential, as global working-class movements demonstrate that struggles over labour and mental-health-promoting necessities will intensify in the coming decades (Gilmore et al., 2020; Sainato, 2019; Prashad, 2020). Psychiatric epidemiologists should heed the movements' call to action.

References

Amin, S. (2010) *The Law of Worldwide Value*. 2nd ed. New York: Monthly Review Press.
Google Scholar Google Preview WorldCat COPAC

Aneshensel, C.S. (1992) Social stress: theory and research. *Annu Rev Sociol* **18**, 15–38.
Google Scholar WorldCat

Bailey, Z.D., Krieger, N., Agénor, M., Graves, J., Linos, N. & Bassett, M.T. (2017) Structural racism and health inequities in the USA: evidence and interventions. *Lancet* **389**, 1453–63.
Google Scholar WorldCat

Bor, J., Venkataramani, A.S., Williams, D.R. & Tsai, A.C. (2018) Police killings and their spillover effects on the mental health of black Americans: a population-based, quasi-experimental study. *Lancet* **392**, 302–10.
Google Scholar WorldCat

Braverman, H. (1998) *Labor and Monopoly Capital*. 25th Anniversary. New York: Monthly Review Press.
Google Scholar Google Preview WorldCat COPAC

Breilh, J. (2021) Why critical epidemiology? Daring ethical science in an unhealthy civilization. In: J. Breilh (ed.). *Critical Epidemiology and the People's Health*. New York: Oxford University Press, pp. 47–132.
Google Scholar Google Preview WorldCat COPAC

Burden-Stelly, C. (2020) Modern U.S. racial capitalism. *Mon Rev* **72**, 8–20.
Google Scholar WorldCat

Charlson, F., van Ommeren, M., Flaxman, A., Cornett, J., Whiteford, H., & Saxena, S. (2019) New WHO prevalence estimates of mental disorders in conflict settings: a systematic review and meta-analysis. *Lancet* **394**, 240–8.
Google Scholar WorldCat

Coburn, D. (1978) Work and general psychological and physical well-being. *Int J Health Serv* **8**, 415–35.
Google Scholar WorldCat

Coburn, D. (1979) Job alienation and well-being. *Int J Health Serv* **9**, 41–59.
Google Scholar WorldCat

Crinson, I. & Yuill, C. (2008) What can alienation theory contribute to an understanding of social inequalities in health? *Int J Health Serv* **38**, 455–70.
Google Scholar WorldCat

de Jonge, J., Bosma, H., Peter, R. & Siegrist, J. (2000) Job strain, effort-reward imbalance and employee well-being: a large-scale cross-sectional study. *Soc Sci Med* **50**, 1317–27.
Google Scholar WorldCat

Du Bois, W.E.B. (1906) *Health and Physique of the Negro American*. Atlanta, GA: Atlanta University Press.
Google Scholar Google Preview WorldCat COPAC

Du Bois, W.E.B. (1996) *The Souls of Black Folk*. London: Penguin Classics.
Google Scholar Google Preview WorldCat COPAC

Eisenberg-Guyot, J. & Hajat, A. (2020) Under capital's thumb: longitudinal associations between relational social class and health. *J Epidemiol Community Health* **74**, 453–9.
Google Scholar WorldCat

Eisenberg-Guyot, J. & Prins, S.J. (2020) Relational social class, self-rated health, and mortality in the United States. *Int J Health Serv* **50**, 7–20.
Google Scholar WorldCat

Engels, F. (1950) *The Condition of the Working Class in England*. London: G. Allen and Unwin.
Google Scholar Google Preview WorldCat COPAC

Fanon, F. (1988) The 'North African Syndrome'. In: F. Fanon (ed.) *Toward the African Revolution*. New York: Grove Press, pp. 3–16.
Google Scholar Google Preview WorldCat COPAC

Fanon, F. (2008) *Black Skin, White Masks*. New York: Grove.
Google Scholar Google Preview WorldCat COPAC

Federici, S. (2004) *Caliban and the Witch: Women, the Body and Primitive Accumulation*. New York: Autonomedia.
Google Scholar Google Preview WorldCat COPAC

Ferguson, A., Hennessy, R., & Nagel, M. (2019) Feminist perspectives on class and work. *Stanford Encyclopedia of Philosophy*. Available at: https://plato.stanford.edu/entries/feminism-class/ (accessed 17 December 2021).
WorldCat

Foster, J.B. & Clark, B. (2018) The robbery of nature: capitalism and the metabolic rift. *Mon Rev* **70**, 1–20.
Google Scholar WorldCat

Foster, J.B., McChesney, R.W. & Jonna R.J. (2011) The global reserve army and the new imperialism. *Mon Rev* **63**, 1–15.
Google Scholar WorldCat

Gaido, D. & Frencia, C. (2018) 'A clean break': Clara Zetkin, the socialist women's movement, and feminism. *Int Crit Thought* **8**, 277–303.
Google Scholar WorldCat

Gardell, B. (1976) Alienation and mental health. Summary of a social psychological study of technology and the worker. *Acta Sociol* **19**, 83–93.
Google Scholar WorldCat

Gecas, V. (1989) The social psychology of self-efficacy. *Annu Rev Sociol* **15**, 91–316.
Google Scholar WorldCat

Gee, G.C. & Ford, C.L. (2011) Structural racism and health inequities: old issues, new directions. *Bois Rev Soc Sci Res Race* **8**, 115–32.
Google Scholar WorldCat

Ghosh, J. (2012) Women, labor, and capital accumulation in Asia. *Mon Rev* **63**, 1–13.
Google Scholar WorldCat

Gilabert, P. & O'Neill, M. (2019) Socialism. *Stanford Encyclopedia of Philosophy*. Available at: https://plato.stanford.edu/entries/socialism/ (accessed 17 December 2021).
WorldCat

Gilmore, R.W. (2007) *Golden Gulag: Prisons, Surplus, Crisis, and Opposition in Globalizing California*. 1st ed. Stanford, CA: University of California Press.
Google Scholar Google Preview WorldCat COPAC

Gilmore, R.W., Kumanyika, C. & Scahill, J. (2020) Ruth Wilson Gilmore makes the case for abolition. Available at: https://theintercept.com/2020/06/10/ruth-wilson-gilmore-makes-the-case-for-abolition/ (accessed 17 December 2021).
WorldCat

Harvey, D.L., Warner, L.G., Smith, L. & Harvey, E.S. (1983) Critical analysis of Seeman's concept of alienation. *Humboldt J Soc Relat* **11**, 16–52.
Google Scholar WorldCat

Jones, C. (1949) *An End to the Neglect of the Problems of the Negro Woman!* New York: National Women's Commission.
Google Scholar Google Preview WorldCat COPAC

Karasek, R.A. (1979) Job demands, job decision latitude, and mental strain: implications for job redesign. *Admin Sci Q* **24**, 285.
Google Scholar WorldCat

Kelley, R.D.G. (2017) What did Cedric Robinson mean by racial capitalism? *Boston Review*. Available at: https://bostonreview.net/articles/robin-d-g-kelley-introduction-race-capitalism-justice/ (accessed 17 December 2021).
WorldCat

Kong, K.A., Khang, Y.-.H, Cho, H.-J., Jang, S.-M. & Jung-Choi, K. (2017) Neo-Marxian social class inequalities in self-rated health among the employed in South Korea: the role of material, behavioral, psychosocial, and workplace environmental factors. *BMC Public Health* **17**, 345.
Google Scholar WorldCat

Krieger, N. (1994) Epidemiology and the web of causation: has anyone seen the spider? *Soc Sci Med* **39**, 887–903.
Google Scholar WorldCat

Krieger, N. (2011) Epidemiology emerges: early theories and debating determinants of disease—poison, filth, class, & race (1600–1900). In: N. Krieger (ed.). *Epidemiology and the People's Health*. New York: Oxford University Press, pp. 58–94.
Google Scholar Google Preview WorldCat COPAC

Laster Pirtle, W.N. (2020) Racial capitalism: a fundamental cause of novel coronavirus (COVID-19) pandemic inequities in the United States. *Health Educ Behav* **47**, 504–8.
Google Scholar WorldCat

Lovell, A.M. & Susser, E. (2014) What might be a history of psychiatric epidemiology? Towards a social history and conceptual account. *Int J Epidemiol* **43**, i1–5.
Google Scholar WorldCat

Lynn, D. (2014) Socialist feminism and triple oppression: Claudia Jones and African American women in American communism. *J Study Radicalism* **8**, 1.
Google Scholar WorldCat

McClure, E.S., Vasudevan, P., Bailey, Z., Patel, S. & Robinson, W.R. (2020) Racial capitalism within public health: how occupational settings drive COVID-19 disparities. *Am J Epidemiol* **189**, 1244–53.
Google Scholar WorldCat

Marx, K. (1990) *Capital Volume I*. London: Penguin Classics.
Google Scholar Google Preview WorldCat COPAC

Marx, K. (1991) *Capital Volume III*. London: Penguin Classics.
Google Scholar Google Preview WorldCat COPAC

Marx, K. (2007) Estranged labour. In: K. Marx (ed.). *Economic and Philosophic Manuscripts of 1844*. Mineola, NY: Dover Publications, pp. 67–83.
Google Scholar Google Preview WorldCat COPAC

Matthews, D. (2019) Capitalism and mental health. *Mon Rev* **70**, 49–62.
Google Scholar WorldCat

Monroe, S.M. & Simons, A.D. (1991) Diathesis-stress theories in the context of life stress research: implications for the depressive disorders. *Psychol Bull* **110**, 406–25.
Google Scholar WorldCat

Muntaner, C. & O'Campo, P.J. (1993) A critical appraisal of the demand/control model of the psychosocial work environment: epistemological, social, behavioral and class considerations. *Soc Sci Med* **36**, 1509–17.
Google Scholar WorldCat

Muntaner, C., Eaton, W.W., Diala, C., Kessler, R.C. & Sorlie, P.D. (1998) Social class, assets, organizational control and the prevalence of common groups of psychiatric disorders. *Soc Sci Med* **47**, 2043–53.
Google Scholar WorldCat

Muntaner, C., Borrell, C., Benach, J., Pasarín, M.I. & Fernandez, E. (2003) The associations of social class and social stratification with patterns of general and mental health in a Spanish population. *Int J Epidemiol* **32**, 950–8.
Google Scholar WorldCat

Muntaner, C., Borrell, C., Vanroelen, C., Chung, H., Benach, J., Kim, I.H. & Ng, E. (2010) Employment relations, social class and health: a review and analysis of conceptual and measurement alternatives. *Soc Sci Med* **71**, 2130–40.
Google Scholar WorldCat

Muntaner, C., Ng, E., Vanroelen, C., Christ, S. & Eaton, W.W. (2013) Social stratification, social closure, and social class as determinants of mental health disparities. In: C.S. Aneshensel, J.C. Phelan & A. Bierman (eds.). *Handbook of the Sociology of Mental Health*. Dordrecht: Springer Netherlands, pp. 205–27.
Google Scholar Google Preview WorldCat COPAC

Muntaner, C., Ng, E., Chung, H. & Prins, S.J. (2015a) Two decades of neo-Marxist class analysis and health inequalities: a critical reconstruction. *Soc Theory Health* **13**, 267–87.
Google Scholar WorldCat

Muntaner, C., Ng, E., Prins, S.J., Bones-Rocha, K., Espelt, A. & Chung, H. (2015b) Social class and mental health: testing exploitation as a relational determinant of depression. *Int J Health Serv* **45**, 265–84.
Google Scholar WorldCat

Ng, E. & Muntaner, C. (2014) A critical approach to macrosocial determinants of population health: engaging scientific realism and incorporating social conflict. *Curr Epidemiol Rep* **1**, 27–37.
Google Scholar WorldCat

Nosrati, E., Ash, M., Marmot, M., McKee, M. & King, L.P. (2018) The association between income and life expectancy revisited: deindustrialization, incarceration and the widening health gap. *Int J Epidemiol* **47**, 720–30.
Google Scholar WorldCat

Page, L.J. (1998) The crisis in mental health theory. *Int J Ment Health* **27**, 33–61.
Google Scholar WorldCat

Patel, V., Saxena, S., Lund, C., Thornicroft, G., Baingana, F., Bolton, P., et al. (2018) The *Lancet* Commission on global mental health and sustainable development. *Lancet* **392**,1553–98.

Phillips, J.A. & Hempstead, K. (2017) Differences in U.S. suicide rates by educational attainment, 2000–2014. *Am J Prev Med* **53**, e123–30.
Google Scholar WorldCat

Platt, J.M., Prins, S.J., Bates, L.M., & Keyes, K.M. (2016) Unequal depression for equal work? How the wage gap explains gendered disparities in mood disorders. *Soc Sci Med* **149**, 1–8.
Google Scholar WorldCat

Prashad V. (2020) We are grass. We grow on everything: the forty-ninth newsletter. *Mon Rev Online*. Available at: https://mronline.org/2020/12/04/we-are-grass-we-grow-on-everything/ (accessed 17 December 2021).
WorldCat

Prins, S.J., Bates, L.M., Keyes, K.M. & Muntaner, C. (2015) Anxious? Depressed? You might be suffering from capitalism: contradictory class locations and the prevalence of depression and anxiety in the USA. *Sociol Health Illn* **37**, 1352–72.
Google Scholar WorldCat

Prins, S.J., McKetta, S., Platt, J., Muntaner, C., Keyes, K.M. & Bates, L.M. (2019) Mental illness, drinking, and the social division and structure of labor in the United States: 2003–2015. *Am J Ind Med* **62**, 131–44.
Google Scholar WorldCat

Prins, S.J., McKetta, S., Platt, J., Muntaner, C., Keyes, K.M. & Bates, L.M. (2021) 'The serpent of their agonies': exploitation as structural determinant of mental illness. *Epidemiology* **32**, 303–9.
Google Scholar WorldCat

Robinson, C.J. (2000) *Black Marxism: The Making of the Black Radical Tradition*. Chapel Hill, NC: University of North Carolina Press.
Google Scholar Google Preview WorldCat COPAC

Sainato, M. (2019) US teacher strikes generated victories. So why are they ready to strike again? *Guardian*. Available at: https://www.theguardian.com/education/2019/aug/29/us-teacher-strikes-generated-victories-so-why-are-they-ready-to-strike-again (accessed 17 December 2021).
WorldCat

Schnall, P.L., Landsbergis, P.A. & Baker, D. (1999) Job strain and cardiovascular disease. *Annu Rev Public Health* **15**, 381–411.
Google Scholar WorldCat

Seeman, M. (1959) On the meaning of alienation. *Am Sociol Rev* **24**, 783.
Google Scholar WorldCat

Seeman, M. (1975) Alienation studies. *Annu Rev Sociol* **1**, 91–123.
Google Scholar WorldCat

Seeman, M. & Anderson, C.S. (1983) Alienation and alcohol: the role of work, mastery, and community in drinking behavior. *Am Sociol Rev* **48**, 60–77.
Google Scholar WorldCat

Seeman, M. & Seeman, T.E. (1983) Health behavior and personal autonomy: a longitudinal study of the sense of control in illness. *J Health Soc Behav* **24**, 144–60.
Google Scholar WorldCat

Sewell, A.A. (2016) The racism-race reification process: a mesolevel political economic framework for understanding racial health disparities. *Sociol Race Ethn* **2**, 402–32.
Google Scholar WorldCat

Sewell, A.A., Jefferson, K.A. & Lee, H. (2016) Living under surveillance: gender, psychological distress, and stop-question-and-frisk policing in New York City. *Soc Sci Med* **159**, 1–13.
Google Scholar WorldCat

Shiels, M.S., Tatalovich, Z., Chen, Y., Haozous, E.A., Hartge, P., Nápoles, A.M., *et al*. (2020) Trends in mortality from drug poisonings, suicide, and alcohol-induced deaths in the United States from 2000 to 2017. *JAMA Netw Open* **3**, e2016217.
Google Scholar WorldCat

Taylor. K.-Y. (2019) *Race for Profit: How Banks and the Real Estate Industry Undermined Black Homeownership*. Chapel Hill, NC:

University of North Carolina Press.
Google Scholar Google Preview WorldCat COPAC

Van der Doef, M. & Maes, S. (1999) The job demand-control (-support) model and psychological well-being: a review of 20 years of empirical research. *Work Stress* **13**, 87–114.
Google Scholar WorldCat

van Vegchel, N., de Jonge, J., Bosma, H. & Schaufeli, W. (2005) Reviewing the effort–reward imbalance model: drawing up the balance of 45 empirical studies. *Soc Sci Med* **60**, 1117–31.
Google Scholar WorldCat

Virdee, S. (2019) Racialized capitalism: an account of its contested origins and consolidation. *Sociol Rev* **67**, 3–27.
Google Scholar WorldCat

Waitzkin, H. (1978) A Marxist view of medical care. *Ann Intern Med* **89**, 264–78.
Google Scholar WorldCat

Wood, E.M. (2002) The agrarian origin of capitalism. In: E.M. Wood (ed.). *The Origin of Capitalism: A Longer View*. New York: Verso, pp. 95–121.
Google Scholar Google Preview WorldCat COPAC

Woolf, S.H., Chapman, D.A., Buchanich, J.M., Bobby, K.J., Zimmerman, E.B. & Blackburn, S.M. (2018) Changes in midlife death rates across racial and ethnic groups in the United States: systematic analysis of vital statistics. *BMJ* **362**, k3096.
Google Scholar WorldCat

Wright, E.O. (1997) *Class Counts: Comparative Studies in Class Analysis*. New York: Cambridge University Press.
Google Scholar Google Preview WorldCat COPAC

Wright, E.O. (2009) Understanding class: towards an integrated analytical approach. *New Left Rev* **60**, 101–16.
Google Scholar WorldCat