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Health under capitalism: a global political economy of structural pathogenesis

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ABSTRACT

This introduction to the special issue aims to conceptualize the structural and super-structural relations between global capitalism and health, incorporating both historical and contemporary capitalism. Capitalism is an all-encompassing global phenomenon that interacts with health at multiple scales and via a range of 'vectors' that analysts must engage, examine and understand. We highlight some of the key structural and institutional conditions that shape global health outcomes. Deep and underlying structural effects of capitalism on health are evident at multiple scales and underpin new health challenges of the twenty-first century. At present, macro political economy – neoliberalism and market fundamentalism – profoundly shape governance of global health through regimes and institutions in areas such as trade and investment policy, austerity programs, pharmaceutical and food governance, and the rules that support globalized production and consumption. We develop an account of capitalism in which this overarching global system generates health outcomes like no other system, viewing it as structurally pathogenic with negative impacts on human health.

KEYWORDS capitalism; health; globalization; political-economy; pathogenic

Introduction

The past two decades have generated a rapid and cross-disciplinary evolution in the study of global health. Scholars and practitioners have invested substantial energy and resources to understand and address new health-security linkages around infectious disease, such as the existential threats posed by emerging and re-emerging conditions such as HIV, Zika, Ebola, severe acute respiratory syndrome (SARS) and avian flu (Elbe, 2010; Harman, 2014). Global health has also developed new research agendas around global health politics, health governance and diplomacy. The post-genomic life sciences are further reconfiguring the social relations of health, including relations between the state, firm and citizen, while raising profound questions about the very nature of the human body and the human subject, with individual human health and the body identified as new sites

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of capitalist accumulation (Birch & Tyfield, 2013; Peters & Venkatesan, 2010; Rajan, 2006).

The contributors to this special issue share the view that the political economies of these multiple intersections demand more robust theorization and investigation. We argue that capitalism is an all-encompassing global phenomenon that interacts with health at multiple scales and via a range of 'vectors' that must be engaged, examined and understood.

Political and international studies increasingly have paid attention to the political and policy dynamics of health, yet the global political economy of health remains piecemeal and largely underdeveloped. The deeper structural foundations of health governance and the basic drivers of global health outcomes are often obscured. Some health-related issues have received warranted attention from political economy approaches, including the following: the interactions of the global patent regime with access to medicines ('t Hoen, 2009); the economic dimensions of the new pandemic biosecurity apparatus of Western states (Elbe, 2010, 2011) and the operation of neoliberal policy templates in constructing specific global health policies (Harman, 2012; Labonté, Schrecker, Packer, & Runnels, 2009; Rushton & Williams, 2012; Schrecker, 2016b). Likewise, substantial interventions in critical areas such as health equity and income inequality (Marmot, 2004; Marmot et al., 2008; Pickett & Wilkinson, 2015; Wagstaff & Van Doorslaer, 2000); interdisciplinary approaches to trade and health (Friel et al., 2013) and the rich public health literature on the social determinants of health focusing on how inequality, marginalization and poverty shape outcomes (Farmer, Nizeye, Stulac, & Keshavjee, 2006) have all made important contributions.

This special issue seeks to begin to catalyze work on the wider global political economy of health and contribute to a general political economy of this pivotal area of global life. This special issue draws upon the previous interventions and expands from them to facilitate a new area of interdisciplinary engagement.

To conceptualize the direct relations between global capitalism and health, we first offer an historical perspective. Section "Capitalism: pathogenesis in global health" locates global health in the structures of contemporary global capitalism and highlights how they pose challenges for human health. Section "Capitalism, Ideology and Institutions" highlights how macro political economy and the material interests in contemporary health co-produce the global regimes, and rules and norms of governance that directly impact health. It illustrates how particular institutional and regulatory approaches to trade and investment generate negative health impacts. Examples of these include intellectual property protection, investor-state-dispute-settlement (ISDS) and austerity policies. The concluding section offers an overview of the contributions included in this special issue and the merits of interdisciplinary insights for apprehending and developing more comprehensive understanding and analysis of the global political economy of health.

(re-)conceptualizing capitalism's pathogenesis

Historical perspectives on the present

The association between capitalism and health found early purchase in political economy in the publication of Friedrich Engel's *Conditions of the English Working*

Class (Engels, 1993). Engels' observations of industrial capitalism were grounded in exactly the same time and social context as the landmark *Sanitary Report* compiled by Ethan Chadwick, itself marking the beginning of modern public health. Both the Chadwick report and Engel's analysis documented the precarious health conditions of urban and industrial England (Chadwick, 1842; Engels, 1993). Engels' historical observations provide a theoretical entry point into the contemporary health-capitalism nexus.

Based on his travels and two-year stay in Manchester (1842–1844), Engels noted with sharp distaste the effects of industrial capitalism on England's working class and urban poor. Their poverty, living and working conditions routinely exposed them to disease and industrial accidents. Engels viewed poverty and ill health as deliberate by-products of capitalism. Industrial capitalism was exploitative and the modes of production, involving attendant dangers and harms to the workers, and were a deliberate and necessary part of the emergent social relations of production. He provided accounts of diseases emerging from the desperate living conditions of the slums that had sprung up around the new factory and industrial towns. He described diphtheria, cholera, measles, whooping cough, smallpox, tuberculosis and other infectious diseases as rampant, with dietary-driven deformities ever-present in the streets, and airborne and water-borne pollution taking considerable tolls on health (Krieger & Birn, 1998). Alcohol abuse, lack of access to clean water and poor nutrition all added to catastrophic ill health and mortality. Chadwick's report also features Dantean hellscapes and vivid depictions of the sheer scale of ill health and disease (Chadwick, 1842; Krieger & Birn, 1998).

Poverty was a conscious and deliberate part of a structure of accumulation associated with industrial capitalism, creating for Engels a new system of wage slavery and inequality that had devastating impacts on health. Alongside the absence of sanitation in the new urban spaces, workplace accidents were all too common in the new looms, mines and furnaces, with huge labor surpluses driving down both pay and already perilous working conditions, even for child laborers. While the industrial revolution moved people from the poverty of the land, it placed them in the poverty of industrial capitalism. This population became removed from sources of clean air and water (Rosen, 2015) and was located in dense and disease-prone urban environments thrown up around the industrial locales often within a matter of a few short years. Health status was therefore not only a *product* of where and how people worked under new industrial capitalism, but also a *consequence* of the social relations of production resulting from structures of accumulation. This was a system in which to be poor was also to be damned to ill health and shortened life expectancy (Krieger & Birn, 1998; Rosen, 2015).

However, Engels' work did not (and could not) anticipate the development of public health that took place within industrial Europe, with sanitary measures and sanitary systems reducing some of the disease burden associated with urban filth. This was allied with the introduction of some workplace regulations (especially for children) in the latter half of the nineteenth Century (Weindling, 1985). Welfare and work-based health insurance schemes followed in the early twentieth (Rosen, 2015); liberal welfare states emerged after World War II. Some of the worst effects of industrial capitalism were progressively mitigated in Europe and elsewhere, albeit as a result of labor mobilization and the political realization that unchecked infectious disease would not stop at class boundaries (Weindling, 1985).

Yet the various twentieth century welfare experiments failed to prevent the spread of new and negative health outcomes such as industrial epidemics caused by the consumption of harmful products. While contemporary capitalism has dramatically reduced poverty in many countries, it also features rising inequality within almost all countries. With prosperity for some, non-communicable disease epidemics continue to spread among both the poor and those better off. Patterns of consumption and mass markets have globalized certain conditions, with global corporations aggressively marketing and promoting the consumption of harmful products. Welfare capitalism has done little to subdue market logic in global policy and human development, including access to health care services and essential medicines. Even in their European heartlands, systems of social insurance for health have undergone a now three-decade period of piecemeal liberalization and marketization, driven by neoliberal policy templates and periods of austerity. The gains made by global economic growth and welfare capitalism are real, but must not obscure global capitalism's impact on health at a historically new scale and intensity. It shapes and steers health outcomes for all.

Many elements of Engels' analysis are certainly applicable to health's relationship to global capitalism today, despite gains made for health as a result of the development of welfare, sanitation and the development of health technologies. Global capitalism has exported industrialization to other countries and has increasingly industrialized agriculture and the wider food system. Very little is immune from this institution, and it is now on a more intense scale and scope than in the nineteenth century. Many of the health problems at the heart of Engels' survey are now axiomatic of global capitalist development, to the social relations of production that characterize various modes of production and value chains, and to the globalized structures of accumulation and finance that are together intensifying inequalities and producing poverty.

Indeed, industrialization and the attendant problems of ill health have found new purchase in the industrializing heartlands of low- to middle-income countries, where regulation and public health measures are either absent or less burdensome on business (Islam & Hossain, 2015; Mogensen, 2015). Commodities such as alcohol and ultra-processed food exacerbate and cause poor health. Markets continue to exclude those living in poverty from adequate sanitation, medical treatment, clean air and water (Currell & Han, 2017; Mulligan, Dixon, Sinn, & Elliott, 2015; World Health Organization, 2015a, 2015b). Workplace accidents persist and reoccur, and both child and slave labor continue as quotidian parts of global production. We pollute ground water, the oceans and the planetary atmosphere on a scale that dwarfs the nineteenth century (Hansen, 2016). These externalities are ubiquitous. They are products of the following: particular social relations of production; modes of production that degrade the environment and the human subject; and arise from skewed accumulation and inequality (Farmer et al., 2006; Panayotou, 2016). The overarching global capitalist system and its attendant superstructural regulatory and ideological underpinnings largely produce and reproduce these externalities as sections following illustrate (Farmer, 2003; Kim, Millen, Irwin, & Gershman, 2000). Engels' analysis still therefore continues to offer critical insights into the political economy of global health that we now extend into the contemporary period.

Capitalism: pathogenesis in global health

What is new? How has the structure of capitalism changed since Engels' time in ways that exacerbate its effects on health? Contemporary capitalism has entered a recent phase of 'financialised capitalism' that exacerbates many of the aspects that Engels so carefully documented (Baranes, 2017; Chiapello, 2015; Engelen, 2008; Montgomerie & Williams, 2009; Van der Zwan, 2014). Today, 'profits accrue mainly through financial channels rather than through trade and commodity production' (Krippner, 2005, p. 174); capitalism features increased inequality and systemic volatility. As van der Zwan points out, 'from the collapse of the dot-com bubble in the early 2000s to the subprime mortgage crisis in 2008, scholars have come to realize that "something has radically changed in contemporary capitalism"' (Engelen, 2008, p. 118, quoted in Van der Zwan, 2014, p. 100).

The contemporary period is also marked by the expansion of vertically integrated global value chains that owners of intangible or fictitious commodities such as financial products and intellectual property rights control (De Medeiros & Trebat, 2017; Pagano, 2014; Schwartz, 2016, 2017). Owners of intangible commodities have been able to minimize their labor footprint (Schwartz, 2016, 2017, p. 201), and income inequality has dramatically increased. Financialized capitalism is clearly a redistributive project (Van der Zwan, 2014, p. 108). For example between 1995 and 2011, 'the value-added share of high-skilled workers, which includes managers and CEOs, increased in 92 percent of the chains, while the low-skilled labor share fell in an astounding 91 percent of the chains' (De Medeiros & Trebat, 2017, p. 406). Economic concentration and oligopoly power characterize the top of the value chain, while fierce competition for low-wage labor dominates the bottom (Fine & Saad-Filho, 2017, p. 693).

Economic concentration has facilitated increased income and social inequality. Financialized capitalism is awash in fictitious commodities including intellectual property and complex financial instruments, such as securities, derivatives and collateralized debt obligations, constructed to serve the market while posing grave dangers to society (Polanyi, 1944, p. 195). Indeed, some analysts wonder whether inequality has reached levels that 'may threaten the social conditions required for the existence of democratic societies' (Pagano, 2014, p. 1427). This system has fostered the growth and spread of transnational corporations globally. Contemporary capitalism features corporate oligopoly and monopsony power of a scale and reach far beyond 'robber baron' capitalism of the late nineteenth century. Like the nineteenth century, the twenty-first century features a high concentration of wealth, but the scope and scale, the extent of liberalization, global integration and the technologies of transnational corporations far surpass the older system. According to Hansen, 'corporate capitalism is committed to the relentless pursuit of growth, even if it ravages the planet and threatens human health' (2016).

Earlier work on the international political economy of global health conceptualized capitalism itself as a 'vector' that directs brute global outcomes, disease and ill health (Kay & Williams, 2009). We refine this conceptualization here, advancing analysis by viewing capitalism as an overarching and underlying historical and global structure that produces and co-produces these intervening 'vectors' (transmitters) of disease and ill health.

These vectors constitute juggernaut social relations and embedded institutional relationships in their own right. They include, for example, inequality, poverty, marginalization and patterns of production and consumption, credit and debt and the precarity of the international financial system. Many of the gross health outcomes or 'externalities' of capitalism in health are produced, reproduced and transmitted globally by means of these global vectors of disease (Kay & Williams, 2009). Underlying these, we discern capitalism's deeper going structural and pathogenic qualities. These vectors also clearly also interact with super-structural, institutional and ideational elements of global capitalism as captured in Section "Capitalism, iideology and iinstitutions" – particularly the institutions, rules, norms and regimes that directly and indirectly govern health. As Section "Capitalism, iideology and iinstitutions" details, global institutions should also be construed as super-structural vectors of ill health and disease, as is the case with the regimes governing intellectual property, investment rights and austerity. First, we present three of the most visible structural vectors: inequality and poverty; transnational capital, global markets and harmful products; and the conditions under which we work and produce.

Vector one: inequality and poverty

Global capitalism creates social stratification and poverty, with attendant risk behaviors, and deep divides in access to resources and life chances (Kim et al., 2000). As with the capitalism of nineteenth century England, pockets of prosperity and poverty stand cheek-by-jowl with huge discrepancies in life expectancy and life chances between the rural and urban, and adjacent boroughs of most cities across all continents (Adler & Ostrove, 1999; Becker, Philipson, & Soares, 2005). Our conditions and status within the capitalist system produce starkly different outcomes in health which, while persistent and clearly visible, are historically and structurally contingent.

Schrecker (2016a) has traced how social and patterned inequalities in health originate from stratification and structures of capitalist accumulation. Schrecker understands inequality in health as deliberate, and it impacts social determinants of health through multiple pathways (Schrecker, 2016a, 2016b; Schrecker & Bambra, 2015). Gross wage inequalities between and within nations, and the concentration of wealth in the top 1% are the most obvious manifestations of this dynamic (Piketty, 2015; Piketty & Saez, 2014). Income inequality between rich and poor countries is increasing (Pritchett, 1997). Jason Hickel highlights intensifying gaps in global income and finds that since 1960, 'the global inequality gap has roughly tripled in size' (2017).

Global inequality continues to explain divergence in headline health outcomes, particularly life expectancy (Hickel, 2017). The global distribution of incomes, wealth and access to key resources (including health care), with equally stratified influences on risk and health-seeking behaviors, lead to crystal clear differences in life chances (Adler & Ostrove, 1999). An estimated 800 women dying from pregnancy or childbirth-related complications around the world every day and almost all maternal deaths (99%) occur in developing countries, of which more than half occur in sub-Saharan Africa.... An estimated 6.3 million children under the age of 5 died in 2013 alone, and like maternal mortality, most of these deaths were preventable (Ruiz et al., 2015).

In most OECD countries, male life expectancy now hovers around the 77–80 year mark, in countries such as Gabon (52 years), Chad (50 years) and Guinea-Bissau

(51 years). Poverty will curtail your life by some 30 years (World Health Organization, 2015c).

Within countries income inequality is a pervasive and almost universal feature and this maps onto health outcomes (Atkinson, 2003; Piketty, 2014, 2015; Saez & Zucman, 2016; Therborn, 2006). In the USA, sharp divisions in both wealth and incomes have increased in the last few decades. In 1978, the wealthiest 10% of Americans held 33% of the country's total earnings, increasing to 50% in 2014 (Saez & Zucman, 2016). With adjustments for inflation, poor and middle-income earners have seen declining incomes since 2000. The Lancet *Health of Americans* issue found that in this time the poorest 5% of Americans experienced close to zero gains in survival (Bor, Cohen, & Galea, 2017). Yet middle-income and high-income Americans have gained over 2 years in life expectancy. More recently, overall American life expectancy declined in 2015 and 2016 for the first time (since the 1993 spike in HIV-related deaths) with increases in fatal overdoses, and the ratio of mortality in the poor of America versus the rich roughly doubling among 35–65 year olds by 2000 (Bor et al., 2017). By 2014, the spike in midlife 'deaths of despair' (drug overdoses and suicides) offset mortality gains for children and the elderly in the USA (Case & Deaton, 2017, p. 398). Case and Deaton ascribe this to cumulative disadvantage triggered by worsening labor opportunities for whites with low levels of education (2017). One analyst calculated the loss of life from income inequality in the United States as comparable to the combined loss of life from lung cancer, diabetes, motor vehicle crashes, HIV infection, suicide and homicide in 1995 (Lynch et al., 1998).

More generally and globally, evidence points to a strong causal connection between inequality and poor health. Inequality interacts with and reinforces behaviors associated with class and poverty, reducing life chances and access to health care. More diffusely, this also shapes the manner in which class 'imprints' itself on people throughout life and leads to worse health outcomes for the poor (Pickett & Wilkinson, 2014). The Greater London Authority recently commissioned a report that found substantial differences across the city in life expectancy, in different years living with morbidities, with rates of suicide, the disproportionate burden of disease borne by women and mass drug and alcohol dependency, all being determined by the wealth and incomes of those often living in adjacent post codes (GLA, 2017). Of course, when one considers average female life expectancy in one of that capital's worst-off boroughs, Tower Hamlets (55.6 years) with that one of its richest, Richmond-upon-Thames (70 years), a fifteen-year difference in average life expectancy in just 15 miles is both astounding yet perfectly explicable in terms of income and wealth inequalities in one of the world's richest cities. Health here is neither accidental nor the result of any post-code lottery; it is shaped by people's location in terms of generational wealth, poverty and income inequalities within a wider national and global structure of accumulation (Coburn, 2000). Health care and nutrition – out of reach for so many – have become unaffordable commodities under conditions of inequality and rising costs.

Vector two: transnational capital, global markets and harmful products

Both feudalism and capitalism featured negative effects of alcohol and poor diets. Life expectancy has increased with the expansion of capitalism, and infant mortality

is declining. Rates of mortality from infectious disease decline; however, diabetes, cardiovascular disease, obesity, cancer and high blood pressure are part of an exploding chronic disease burden. Globalization has expanded access to harmful products, such as fast and ultra-processed food, tobacco and alcohol that are sites of profits.

The recent push to frame diseases of consumption as the commercial determinants of health, itself a simple rebranding of the precursor 'industrial epidemics', reflects this relationship (Buse, Tanaka, & Hawkes, 2017). Both terms capture a basic causal dynamic. 'Industrial epidemics' – health harms associated with tobacco, alcohol and the processed food and drink industries – are spread not by biological agents but rather by transnational corporations and mass markets; and 'these corporate disease vectors implement sophisticated campaigns to undermine public health interventions' (Moodie et al., 2013, p. 671). Economic concentration and the dominance of a small number of large multinational agribusiness corporations with global reach and an economic orientation toward feeding mass populations rather than local communities have had devastating effects on health (Fox et al., 2018, p. 123).

Fast food is a textbook example of how diseases of consumption are linked to profits and market expansion, with aggressive advertising, franchising and pricing promoting global demand, with a core oligopoly of food retail companies having progressively opened up world markets. The sugar, salt and fat content of these foods makes them addictive. Energy density provides a means by which the less well-off can consume calories and feel full, instead of consuming more nutritious and sustainably produced food.

In some places, such as Ghana, fast food is fetishized as a prestige good – emblematic of a modern lifestyle and wealth (Searcy & Richtel, 2017). Franchises tout their high standards of sanitation; their brightly lit and colorful venues become attractive meeting spots. In India, fast food sales rose 113.6% between 2011 and 2016 (Searcy & Richtel, 2017). As Fox et al suggest, this system has transformed 'the means of satisfying a physical need for food into a market activity populated by food consumers' (2018, p. 123).

In China, the world's most populous nation, rates of obesity – a condition almost unknown in that country before the 1980s – is reaching epidemic proportions, including among children. The figures are staggering with obesity and overweight rates reaching 32% in richer coastal cities, with one third of all adults in China now being overweight or obese, the rate rising to 50% in Shanghai and Beijing (Ji, Chen, & Working Group on Obesity in China, 2013). In 2010, 30.43 million Chinese school age children were obese and nearly double that number was overweight.

The causes of the problems are complex but the rise of processed and fast food in the country and the market penetration by foreign firms is significant (Zhang, van der Lans, & Dagevos, 2012). With greater prosperity and/or greater exposure to fast food, there has been a shift from traditional regional diets toward Western (and Chinese equivalents of) fast food. Over the rising rates of obesity can be plotted aggressive market expansion by fast food retail on a massive scale and at a rate unparalleled even in the obesogenic post-war Western heartlands.

> [The] FF [fast food] industry in China is large, with over two million FF facilities. Its total revenue (in million US$) increased from 10,464 in 1999 to 94,218 in 2013, and by 13%

> annually since 2008 … .Western FF restaurants in China are predominately from the United States (U.S). … In the U.S., the Kentucky Fried Chicken (KFC) chain amassed 4618 locations in 61 years, but in China, KFC spreads across 4260 locations in less than 30 years. At present, "Yum! China", the parent company of KFC, Taco Bell, and Pizza Hut, has approximately 4800 KFCs and 1300 Pizza Huts, with a plan to open 20,000 restaurants in China. McDonald′s is expanding in China at a rate of approximately 10 new restaurants each week. (Wang, Wang, Xue, & Qu, 2016)

Regulatory capture has empowered this sector. Food processors have acted to block pro-health regulation, with critical work noting regulatory chill in food advertising, standards and nutritional labeling. For many decades, large firms and their huge campaign donations have dominated US policymaking around food production and manufacturing. The interests of Big Sugar, Big Beverages, Big Meat, Big Dairy and Big Processors all exert notable influence on Congress, the United States Department of Agriculture (USDA) and food regulation. One can see the latest example in the much-diluted 2015–2020 Dietary Guidelines for Americans; the meat industry softened the language about reducing consumption of red and processed meat out of step with the latest science (Heid, 2016). Many countries have settled for industry self-regulation and often opaque nutritional labeling to counter the onslaught of corporate strategy in structuring demand for unhealthy nutrition in a steadily commodified global food system (Hawkes, Friel, Lobstein, & Lang, 2012; Lang & Heasman, 2015; Monteiro, Moubarac, Cannon, Ng, & Popkin, 2013; Stuckler, McKee, Ebrahim, & Basu, 2012).

Huge profits and vested interests have therefore contributed to obesity, diabetes and smoking-related disease epidemics in both developed and middle-income countries. Diseases once associated with over-consumption and prosperity are now affecting the poor, whose tastes and demand for high-fat, sugar- and salt-laden foods are being structured by companies, with food choices being circumscribed by income, market structures and ignorance (Moodie et al., 2013). Families strapped for time and money are buying cheap and filling ultra-processed food, and the addictive quality of fast and ultra-processed food is deliberate. Agricultural subsidies for producers of fast food and junk food inputs such as high-fructose corn syrup help to keep prices low. Economic concentration and political power go hand-in-hand; in 2012 in the USA, 75% of all corn and soybean subsidies went to just 3.8% of US farmers (Pianin, 2012). In other impoverished areas of the world, the lack of access to nutrition continues to produce childhood stunting and poor health, yet malnutrition is now only one unfortunate part of a double (or even treble) disease burden which sees obesity coexisting with under-nutrition and malnutrition from micro-nutrient deficiencies (Gillespie & Haddad, 2003).

Vector three: where we work and how we produce

The global workplace features equally destructive economic ideologies shaping health outcomes. The resolute attachment to economic growth via unfettered industrial capitalism pollutes our oceans and freshwater systems, drives climate change and airborne pollution, and continues to produce poor and harmful working conditions. These externalities are in the form of human health, with high rates of mental illness in the Maquiladoras of Mexico (Hovell et al., 1988) and the iPhone production lines of China (Chan, 2013). Multilateral and national policies

committed to relentless growth pose challenges to both human and planetary health.

Workplace accidents have reached a gargantuan scale befitting the intensity of industrialized manufacturing and agriculture in which health and safety regulation is absent or poorly enforced in many countries. The seemingly random nature of 'accidents' masks what are often just the simple side effects of regulatory races to the bottom and global competition to produce at the lowest price irrespective of the human costs. In Karachi in 2012, 289 garment workers died in a factory fire, followed two months later by another fire in a fashion factory in Dhaka with 112 deaths. The collapse of the Rana Plaza buildings in 2015 then resulted in over 1100 worker deaths, with the 5 unsafe garment factories all connected to global 'fast fashion' labels such as Benneton, Primark, Joe Fresh and so on.

Within the globalized food system, monopsony and oligopoly and power have had a devastating impact on agricultural workers and health. Farmers, in particular, are caught in a vice between monopsony and oligopoly power. On the demand side, large food retailers, such as Walmart and Woolworths, enforce downward cost pressures on farmers due to these food giants' monopsony buying power. Farmers competing to supply these food giants are under constant pressure to offer cheaper prices for their goods. These downward cost pressures have been coupled with the aggressive drive to industrialize agriculture emerging from seed and agrochemical oligopolies (Hawkes et al., 2012; Lang & Heasman, 2015) and to increase farmers' dependence on their inputs for industrial food production. On the supply side, oligopolists such as Monsanto can charge super-rents for inputs such as seed, chemicals and fertilizer. On top of these processes, there are endemic uncertainties in the sector with respect to the climate and commodity price fluctuations, all intensifying with climate change and changing investment patterns in the food system following the 2008 financial crisis.

Debt and soil degradation, plus diminishing returns from the food system for small farmers, make farming a sector increasingly associated with suicide. A 2016 US Centre for Disease Control study found that the suicide rate for agricultural workers in 17 states was 5 times higher than the general population, with fears that rates might be much higher as farmers disguised suicide as accidents for insurance purposes (Weingarten, 2017). At the same time, net US farm income was declining 50% since 2013, and median farm income for 2017 was projected to be negative $1,325 (Weingarten, 2017). After many controversial claims surrounding suicides among GM cotton farmers, the National Crime Record Bureau of India conservatively estimates11,458 farmer suicides in 2016 and in 2015 stated that, '58 percent of the 12,602 farmer suicides in 2015 were driven by bankruptcy, indebtedness and other farming-related issues. [Most] were marginal cultivators or small farm holders with less than 5 acres of land' (Daigle, 2017). These tragedies play out among farmers in the UK (Hounsome, Edwards, Hounsome, & Edwards-Jones, 2012), France and a great many countries where such statistics have been increasingly emerging.

Writing in 2010, Lee Liu compiled a list of some 459 cancer villages appearing with greater frequency across China with extraordinary high rates of cancer in farming villages surrounding industrial zones polluting soil and water courses, largely unfettered by regulations (Liu, 2010). As richer provinces develop, polluting industries have been shunted into China's poorer Western region, concentrating

pollution and its effects on the rural poor. Cancer rates have surged in mainland China since the 1990s to become the nation's biggest killer, with pollution related to rare earth mining and processing (creating acidic wastewater, toxic gases and radioactive 'tailings' containing thorium, fluorine and ammonia), run-off from garment manufacturing and waste from electronics production, all among the key drivers (Liu, 2010). China also tops the WHO list of the deadliest countries to live in for air pollution, with 1 million people dying from dirty air in 2012. China is closely followed by industrializing India with 600,000 such deaths in the same year (The Guardian, 2016).

In terms of the health effects of how we produce under capitalism, probably the most significant and ubiquitous health challenge facing humanity is arising from climate change (IPCC, 2018). Climate change is a direct product of two-and-a-half centuries of industrial capitalism as a mass globally polluting carbon-driven economy. As a vector, the Anthropocene and climate change may prove unparalleled as a multiplier of disease and poor health outcomes (McMichael, 2013). For example, we see more frequent extreme heat events prematurely killing the vulnerable and elderly; the mass undermining of food systems and food security in many regions because of rising temperatures and changing rainfall patterns; new patters of zoonotic and insect (vector)-borne diseases and with shifting disease epidemiology and geographies (McMichael & Lindgren, 2011); we see a rising toll of mental health and trauma in the climate-affected Pacific from frequent and destructive weather disasters, and lack of access to clean water influencing the rates of water-borne and sanitary diseases.

All of these impacts on health will increase the financial burden on health systems and people. Addressing many of these harmful effects is dependent not only on short-term mitigations but on longer-term system-level changes and actions, adjustments to capitalism and social systems that threaten the very fabric and underlying means of production of the global capitalist system. We can neither afford to subordinate global environmental health to profit, nor can we bank on technological solutions to climate change alone. Climate change suggests that capitalism has affected not only human health through harmful production and the chronic short-termism, but that it is also eroding planetary health upon which we as species ultimately depend on for long-term future well-being.

Our vectors of disease and health arise from the structural and historical centrality of capitalism. This system has progressively changed the scale of the relations, transmitting effects globally. But the material manifestations of capitalism in terms of the production or consumption of goods, exposure to pollution or an ability to access resources are mirrored, and often determined, in some way by their interaction with the ideational and institutional components of the capitalist system and with the direct impact of these super-structural facets of global capitalism with health.

Thus far, we have in some part addressed capitalism as a deep structure underpinning poor health outcomes. In the following section, we briefly examine features that are closer to the surface. These ideologies and policy areas are nested within the larger structure yet have structuring effects themselves. Super-structural factors and forces – such as economic and market ideologies and regimes and rules – not only interact with the vectors described above, but themselves also determine health outcomes and life chances. In terms of the super-structural drivers, therefore

we begin with the ideological imperatives of advanced capitalism before progressing to some of its more deleterious global regimes.

Capitalism, ideology and institutions

Capitalism and ideology

Capitalism shapes health outcomes on a scale and scope way beyond that of the nineteenth century with multiple vectors spanning mass markets, pollution, commodification of the food chain and health products, accumulation and modes of production. Material interests run deep and are backed by an ideological and super-structural (institutional) complex that perpetuates and intensifies the negative externalities of capitalism on human health.

Market ideologies and neoliberalism – *market fundamentalism* (Sparke, 2009) – in health often command primacy in shaping the global governance and global political economy of health (Navarro, 2007; Rowden, 2013; Sparke, 2009). The primacy of neoliberal conceptions of health colonizes and delimits ideological alternatives, and is itself a political and ideological manifestation of the deeper structural conditions and interests in the global political economy (Rushton & Williams, 2012).

The economic ideology of neoliberalism foregrounds an individual choice-centric narrative to combat a robust regulatory response (but see Reubi, 2016). Hard-fought battles over taxing sugary beverages are a case in point, replete with disparaging references to 'the nanny state'. The libertarian canon emphasizes agency, voluntarism and choice. The choice-centric market ideology constructs the state and regulation in health as intrusive on individual liberty. The ideology puts a premium upon consumption above all else (Fine & Saad-Filho, 2017, p. 697). Market fundamentalism is so deep-rooted and taken for granted that it is not always readily observed. For example, the language of consumer choice that dominates discussions of regulations like taxing sugary beverages does not necessarily shout out 'market fundamentalism' the way that other policies, such as austerity, do. This powerful ideology constructs and delimits what is normal and permissible in health policy, undermining prospects for collective agency (Fine & Saad-Filho, 2017, p. 697).

Economic growth is routinely constructed as an *a priori* social and policy goal that facilitates the production of better health. The construction of better health via the trickle-down effect and general appeals to Lorenz curves, with some 100 years of health improvement grounded in capitalist development in Western countries to call upon, still resonates powerfully with policymakers and the public.

At times policymakers have publicly intervened to reverse the causal arrow from economic growth to health by prioritizing health investments in infectious disease, sanitation and services to give populations in developing countries a foot up on the ladder of development. The recent *Lancet-University of Oslo Commission on Global Governance for Health* sharply criticized the 'growth for better health' mantras, inverting the relation with powerful economic rationales for the better health for growth and development approach (Ottersen, Frenk, & Horton, 2011; World Health Organization, 2002). Yet deeply embedded beliefs in the primacy of economic growth over health and development persist and gain even more purchase in times of economic crises, as we have witnessed in many national health systems since 2008.

Despite this faith in growth and markets, increasingly the multiple interactions between the market and health exemplify market failure (Williams, 2012). The market fails to deliver access to basic necessities such as medicines, clean water and essential services, where populations are underserved by the private sector and governments. Water- and soil-borne and tropical diseases fail to attract pharmaceutical R&D investment simply because the people and regions afflicted are mostly the world's poorest; the populations affected by many diseases are simply too poor to constitute effective market demand that would supply a pull mechanism for their health needs to be met (Fisk & Atun, 2008; Resnik, 2004).

At least on the multilateral level, some emergent and ongoing initiatives to intervene in the market to deliver better outcomes in the areas of drug development and supply of essential medicines show promise (Kaplan, Wirtz, Mantel, & Béatrice, 2013). Ironically, the funders of these initiatives often are the very governments that routinely bolster pharmaceutical manufacturers' interests in progressively stronger IPR protections in various post-TRIPS trade and investment agreements.

Institutions: health under global regimes in trade and investment

Health is at the center of a range of pivotal global economic sectors, such as pharmaceuticals and insurance, acting to focus interests on new mechanisms for controlling regulations and institutions that arbitrate health policy. There is long-standing policy pressure to market-*ize* and liberalize health and to treat it as a private and tradable commodity (Labonté et al., 2009). These dynamics are readily discernible across multiple and expanding regimes and spaces of global governance. Private actors working with policymakers in trade and investment regimes have substantially reconfigured health as a transnationally tradable commodity with strong claims of private ownership and investor rights that can be enforced globally (Kay & Williams, 2009).

Earlier the paper identified low-hanging regulatory fruit such as skewed agricultural subsidies and taxing sugary beverages. However, political and economic power can make obvious fixes impossible. The institutional and regulatory arrangements that underpin global capitalism often act as multipliers for other vectors such as poverty, further entrenching disadvantage or adverse structural conditions that determine health outcomes. For example, regimes governing intellectual property exacerbate and reinforce the inability of poor people to afford commodified health technologies by locking in legal monopolies over drugs as private goods. The patent regime also cements a system of production of health technologies rooted in private rights and market-driven access to health, with key determinants of health outcomes for all essentials supplied by transnational corporations across nominally politically segmented global markets. If we are lucky, our access to them is arbitrated by social insurance or state interventions in the market, but that is unavailable to almost half the world's population.

The deep structures of financialized capitalism map on to the more obvious policy choices that may be more susceptible to actor agency or more feasible targets for change. We can readily see how capitalism and health sit within what IPE scholars refer to as the 'second image' of national policies and the interactions between them. This perspective may afford more scope for agency and change to

the system and its worst effects on health. This section focuses on the scope for agency at a multilateral level and/or a national level in which social mobilization is already activated and engaged. These policy areas are trade, intellectual property protection, investor-state-dispute-settlement and austerity.

Trade

The expanded deregulation of markets in trade and investment has had multiple health consequences, connecting producers and consumers in ways that produce both positive and negative health outcomes. While market expansion has increased consumer choice, choice per se may not always be optimal. For instance, in trade policy, we have witnessed the creation of new commodities by regulatory fiat, including physical commodities – and the commodification of objects not previously consumed. We have also seen the inability of certain states to reject commodities, such as turkey tails and mutton flaps that the exporters themselves would never consume. For example, the aggressive export of US turkey tails to the Pacific Islands (e.g. Micronesia, Samoa and Tonga) illustrates the dynamics of economic concentration, trade liberalization, trade institutions and power asymmetries. All of these have contributed to an epidemic of obesity and diabetes in the Pacific Islands (Singer, 2014, p. 445). Turkey tails are fatty stumps at the end of turkeys' spines. They have virtually no nutritional value and have been dumped on Pacific Island countries first as 'foreign aid' and now as trade commodities. Turkey production, like so many other sectors, has become highly concentrated in industrial farms. As Singer points out, 'giant agribusiness processors largely control the industry' (2014, p. 441), the logic of capital accumulation has driven increasing concentration of wealth among a smaller number of producers in this sector.

Heavily marketed and aggressively exported, turkey tails (along with other low-quality foodstuffs) have transformed consumption and exacerbated a spike in diet-related non-communicable diseases in recipient countries. In response to health concerns, in 2007 the government of Samoa 'formally banned the import of turkey tails (unless they were attached to whole birds)' (Singer, 2014, p. 447). The Samoan government raised the issue at the World Health Organization, where US delegates rejected a trade-based regulatory approach to curbing the exports and emphasized the choice-centric approach encouraging 'citizens to take responsibility for their own health' (Gale, 2011, quoted in Singer, 2014, p. 447). The concept of 'consumer sovereignty' deflects responsibility away from producers of harmful products.

The World Trade Organization (WTO) supported the US position. As the Samoan government negotiated its accession to the WTO, the WTO informed the government that its ban on turkey tails violated WTO rules against targeting specific products. Samoa had to drop its ban. Similarly, Tonga was forced to give up its plans to restrict the import of unhealthy mutton flaps from New Zealand as it gained entry into the WTO. Trade liberalization and the creation of new physical (unhealthy) commodities have had a negative impact on public health by prioritizing economic liberalization over regulation to reduce consumption of such commodities. Thus, capitalism is trumping health priorities.

Intellectual property

Capitalism and private economic activity have produced new health technologies and medicines over time, while at the same time binding these welcome developments in health to supply via the global market. This has skewed the provision of health care toward an increasingly biomedical and reductive model at the expense of more holistic approaches including social determinants of health (Tseris, 2017). Privileged approaches that focus on biomedicine and silver bullets crowd out population-level health policies that address more comprehensive components of health. Governance constructs these outcomes and is co-produced by the interests in regulation and its capture (Glasgow & Schrecker, 2016).

The global trade regime has generated deeper and wider bilateral, regional and plurilateral free trade agreements that confer stronger intellectual property rights (IPRs) on medicines, facilitate the liberalization of health services and protect foreign investments from public health-inspired state measures. The United States Trade Representative (USTR) has been very supportive of the agenda of 'Big Pharma', as has the EU, in trade negotiations (Wogart, 2006). For instance, WTO-mandated IPRs determine (in TRIPS) the price and conditions of production of patented health technologies and medicines reflecting texts authored by representatives of pharmaceutical firms (Tyfield, 2008; Wogart, 2006).

The 1994 Agreement on Trade-Related Intellectual Property (TRIPs) in the WTO ushered in a new era for health by mandating that states adopt patent protection for pharmaceutical products. This meant that countries, such as India, that had refused to offer such protection to contain costs and facilitate generic drug production would now have to offer a 20-year period of exclusive rights to non-generic pharmaceutical drug producers. This has contributed to the high costs of medicines; the stakes cannot be overstated. High prices reduce access to essential health technologies and medicines (Sell, 2003; 't Hoen, 2009).

The intellectual property-health nexus has become so contested that the strongest advocates of ever-stronger protections have taken their initiatives to non-transparent, non-multilateral forums, knowing that they could not obtain support from them in open multilateral deliberations. Bilateral, regional and plurilateral intellectual property, trade and investment agreements contain extended protections for private intellectual property rights and reduced policy space for exercising TRIPs flexibilities for public health (such as compulsory licensing and parallel importation of cheaper patented drugs) (Drahos & Braithwaite, 2002, p. 107; Shadlen, 2005; Singh, 2017, p. 146–148). The distributional implications of IP policy are profound (Benvenisti & Downs, 2004, p. 48).

Social mobilization during the HIV/AIDS pandemic in the late 1990s and early 2000s resulted in the World Trade Organization's Doha Declaration on TRIPs and Access to Medicines to prioritize health over patent rights. Various national governments, such as Thailand, have pursued compulsory licensing strategies for heart and cancer drugs to produce affordable generics. While policy space has been reduced with TRIPs, and especially TRIPs-Plus provisions, there is still notable scope for agency in this policy space, with continued mobilization and pressure for reform at least offering a means to try to improve currently regressive regulatory architectures.

Investment

In terms of international investment and health, Investor State Dispute Settlement (ISDS) agreements permit private investors to initiate cases against host states outside of those states' domestic courts – avoiding them altogether or appealing domestic court decisions (Diependaele et al., 2017b, p. 5). It is no coincidence that since 1990 with the acceleration of globalization, the number of bilateral investment treaties soared from 463 in 1990 to 3,304 in 2015 (Cutler & Lark, 2017, p. 173; Lencucha, 2017, p. 289). Since 2000 over 600 ISDS cases have been initiated, as compared to only 50 between 1950 and 2000 (Diependaele et al., 2017a, p. 301 at n.117).

In recent years, intellectual property (IP) has been redefined as an investment asset under investment agreements that include ISDS provisions (Correa & Vinuales, 2016; Dreyfuss & Frankel, 2015; Ruse-Khan, 2016). Rights holders continue to seek higher and broader levels of IP protection and stricter enforcement by resorting to 'investment arbitration to litigate international IP issues' (Gagliani, 2017, p. 346). This allows private IP rights holders to sue governments for not adequately protecting their 'investments'.

Three recent cases have demonstrated the threat that ISDS provisions involving IP as an investment asset may pose to the domestic regulation of public health. The first two cases, the 'plain packaging' tobacco disputes with Australia and Uruguay, invoked the intellectual property of trademark as the relevant investment. The third was a patent dispute that Eli Lilly brought against the Canadian government under the ISDS provisions of the North American Free Trade Agreement. These IP cases directly challenged health regulations.

In each of the three cases, the private rights holders, Philip Morris in the trademark cases and Eli Lilly in the patent case, did not prevail. Yet the narrowness of the rulings did not constitute a robust deterrent to prevent IP rights holders from continuing down the ISDS route to challenge domestic public health regulations (Diependaele et al., 2017a, p. 304; Dreyfuss & Frankel, 2018, p. 1). In this sense, we may consider ISDS in IP and public health as 'the camel's nose inside the tent' for rights holders to pursue new avenues to extend their rights and challenge domestic regulations that they do not like.

High-profile cases can cast a pall over specific types of regulation. Defending one's regulations in ISDS cases is costly; analysts estimated that the Eli Lilly cases cost the Canadian taxpayers 1.2 million USD, even though Canada 'won' (PUBLICCITIZEN, 2017). As Lencucha notes, the procedural cost of ISDS cases is more than five times more than a state-to-state dispute within the WTO (Lencucha, 2017, p. 290). The prospect of costly litigation may persuade other states to drop plans to regulate in cases such as the plain packaging dispute. New Zealand dropped its plain packaging plans in the midst of the Australian-Philip Morris lawsuit.[1]

The very countries that designed the ISDS system and whose investors benefited from it for many decades are now having second thoughts as it threatens to curb their freedom to regulate for health, labor and environmental purposes (Diependaele et al. 2017a; Bonnitcha, Poulsen, & Waibel 2017, p. 13). The EU, Canada and the USA are now concerned about the trends in ISDS and are engaged in extensive discussions to reform a system that was designed for one purpose and has morphed into a different system altogether. To the extent that firms use ISDS

as a strategic tool to challenge or dissuade regulation that would reduce their profits, it threatens state regulatory measures to deliver improved health outcomes.

Financial governance, austerity and health

More recently, economic crises have (re-)inspired neoliberal governance responses to health and rejuvenated the authority of the International Monetary Fund (IMF) (De Vogli, Marmot, & Stuckler, 2013; De Vogli & Birbeck, 2005; Farmer, 2003; Rowden, 2013; Schrecker, 2016a; Stuckler & Basu, 2013) The IMF has acted with revitalized authority to force sharp reductions in spending on health services and salaries in new debtor states, with decisions often backed and facilitated by the EU (Kentikelenis, 2017). In Greece, in the face of the euro crisis, hospital budgets were cut by 40% with 26,000 public health workers' jobs at risk (Kentikelenis et al., 2011, p. 1457).

While mixed national health systems are common in many countries, the state often remains as a stubborn presence and health care provider. Yet governments and multilateral organizations repeatedly emphasize the appeal of private insurers and the private sector as health care providers.

Neoliberalism and its implications for health governance are evident in structural adjustment and austerity policies adopted in the wake of debt and financial crises when health budgets are starved to make banks whole (Clark & Heath, 2014; Mooney, 2012; Stuckler & Basu, 2013). Austerity measures in the wake of financial crises in Latin America and South East Asia, and the global financial crisis of 2008 put pressure on publicly funded national health systems. States have responded, either willingly or not, with divestment in health and the opening up the sector to market forces. In some cases, such as the UK, the resultant phases of health service privatization and rolling back of social insurance systems proceed in a piecemeal fashion from non-core services to the heart of the public system, and with attacks on publicly supported financial risk pooling or progressive tax transfers to those in need of health assistance (Pieper, 2018).

Policymakers tout the market as a more efficient means of allocating scarce resources for health. There are substantial profits to be made both out of the public purse in collaborative financial and investment relations with the state for health projects, as is the case with the often highly subsidized Public Private Partnerships and Public Private Investment deals in many European countries (Lanas, 2016; Roehrich, Barlow, & Wright, 2014). Multiple economic interests are at play in privatization and state rollbacks; the market for health is substantial, and health-related economic sectors are often hugely profitable. In developing countries, health service firms and private insurers are penetrating burgeoning middle class markets and cherry picking which health services are provided privately (Jasso-Aguilar, Waitzkin, & Landwehr, 2005)).

Finally, many of the orthodoxies associated with neoliberalism continue to shape and constrain health policy and regulation, with spending on public health and services attenuated in many countries since the 2008 global financial crisis (Brumby & Verhoeven, 2010). Despite contestation and the presence of welcome alternative policy pathways, we risk neglecting structural and political economic drivers, including economic ideologies, as powerful and often dominant logics operating in and influencing that governance system.

Overview of the special issue

The contributors to this special issue have informed much of our own analysis. Our authors reflect the different levels of analysis, and the scale and breadth of the multiple interactions between capitalism and health, with political economies of the everyday and the global politics of health complimenting juggernaut contemporary issues such as austerity and the rise of economic and political investment in health security issues.

Schrecker builds on his recent advancement of the concept of 'neoliberal epidemics'. The article shows how neoliberalism acts as a powerful vector by producing inequality and determining the scope for social policy or interventions in markets to engender better health. These phenomena underscore that neoliberalism is organized around a hard core of propositions and policy directions that is remarkably consistent and durable across contexts.

In a similar conceptual vein, Sparke's powerful genealogy of neoliberalism and global financial governance links financialized risk management with structural violence and health outcomes over two historical phases. The 1980s–1990s and a second and ongoing phase of neoliberal financialized governance has shaped the evolution of global health and the construction and management of health policy and risk.

From financial governance, we turn to the impact of trade-related global governance on access to health and health technologies. Shadlen, Sampat, Bhaven and Kapczynski trace the spread of intellectual property in trade agreements. They explain how the integration of intellectual property with international trade rules led to the globalization of pharmaceutical patenting, and how additional provisions related to pharmaceutical products have been introduced by regional and bilateral trade agreements.

We then proceed to two new interventions on the political economy of health security. Hester and Williams reflect on how the normalization of the health security agenda has involved a focus on the impact of security on human health and of the practical, conceptual and theoretical implications of securitization for certain diseases. The authors suggest that the health and security debate must grapple with the role of capitalism and economic sectors in exploiting the post-genomic shift in health and life sciences, and the move to commodification and accumulation based on biological information and surveillance. Elbe and Long ask whether the political economy of security is shaped by deeper changes in our underlying conceptions of life. Their lens on these momentous changes lie in recent efforts of the US government to secure its population against an array of biological dangers via the development of new pharmaceutical defences – or 'medical countermeasures'. Their paper explores these relations via the new pathways – regulatory and institutional – through which the USA is developing medical countermeasures.

Nunes offers not only forwards a compelling account of the political economy of health vulnerabilities in Brazil and looks to the politics of the everyday in health. His contribution combines a focus on macro-level dynamics and neoliberalism in health agenda setting that lead to neglect with attention toward the everyday practices through which this neglect is reproduced. Nunes makes the case for an everyday political economy of global health with a critical purpose, one that draws from critical theoretical approaches to identify immanent potential for emancipatory change.

Finally, the special issue is closed by two luminaries of IPE and Global Public Health, respectively. Stephen Gill and Solomon Benatar return to the core themes of this introduction. They outline the state of health in the world today with wide disparities in wealth, health and access to the social, economic and medical determinants of health are, *inter alia*, the legacy of centuries of imperialism and colonialism, and of ideological and political agendas that have long been recognized as flawed and exploitative. The authors doubt that global health can be improved through existing structures and processes of multilateralism that are premised on the continued reproduction of the hegemonic and socially unsustainable market civilization model of capitalist development. In contrast, they propose an eco-centric perspective on life and health associated with a profound and socially just restructuring of global power.

Note

1. Yet after Australia prevailed in the Philip Morris lawsuit New Zealand went ahead with its plain packaging policy (Bonnitcha, Poulsen, & Waibel 2017).

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