

The critical (micro)political economy of health: A more-than-human approach

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Abstract

The critical political economy of health offers different explanations for the social causes of health and the social factors determining the distribution of these causes. However, the relational, post-anthropocentric and monist ontology of the new materialisms overcomes this complexity, while retaining a critical focus. In this perspective, the social, economic and political relations of capitalism act upon bodies and other matter in everyday events, rather than as ‘social structures’. Using a conceptual toolkit of ‘affect’, ‘assemblage’, ‘capacity’ and ‘micropolitics’, the paper asks the question: ‘what does capitalism do?’ The re-analysis of the social and economic relations of capitalism in terms of a production-assemblage and a market-assemblage reveals not only the workings of capitalist accumulation, but also how previously-unremarked more-than-human affects in these assemblages simultaneously produce uncertainty, waste and inequalities. This micropolitical economy of health is illustrated with examples from recent research, including a critical assessment of health inequalities during the Covid-19 pandemic.

Keywords

capitalism, health inequalities, micropolitics, new materialism, political economy

Introduction

The approach commonly termed the political economy of health (Doyal and Pennell, 1979; Harvey, 2021) offers differing explanations of the social *causes* of health/illness and the social factors that shape these determinants’ unequal *distribution* (Solar and Irwin, 2010: 5). Suggested social causes of health include material circumstances, psychosocial factors such as stress or social support, and health-related behaviour (Solar and Irwin, 2010: 6);

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postulated social determinants of the distribution of these causes include social divisions and stratifications such as social class, gender and race (Scambler, 2012: 133), the material and political consequences of capitalist social relations/social structures (Coburn, 2004) and the stress of living in an unequal society (Pickett and Wilkinson, 2015).

The new materialist approach (Coole and Frost, 2010; Fox and Alldred, 2017) to the political economy of health developed in this paper overcomes the need for differing explanations of cause and distribution. This is achieved by analysing capitalist social relations not as overarching structures posited in conventional political economic analysis (Scambler, 2007), but as ‘affects’ (capacities to affect or be affected) within the events and interactions of daily life: in work-places, markets and more generally (Connolly, 2013: 404; Massumi, 2015: 87–91).¹

This approach reveals previously-overlooked supply and demand affects that generate uncertainty, waste and inequalities beyond human intentionality. It is also a highly lucid account, accessible to policymakers, public health practitioners and lay audiences. While dispensing with concepts of social structure and rigid social class stratifications, it retains a critical edge: disclosing how the physical, social, political and economic forces associated with capitalist production and markets affect people’s lives. Social and health inequalities emerge directly from the everyday ‘affective’ interactions that people have with the socio-material world they inhabit.

The paper begins with a brief summary of structuralist, neo-Marxist and other ‘critical’ perspectives on health inequalities. It then introduces new materialist ontology, and uses this to establish a socio-material analysis of capitalism, re-working Marx’s theorising in *Capital* in terms of more-than-human assemblages and affects. This supplies the basis for a critical micropolitical economy approach capable of unpicking and critically appraising the social production of inequalities, including health inequalities, while also articulating possibilities for radical change.

To operationalise this perspective, the paper then applies a conceptual toolkit afforded by Deleuze’s (1988) ‘ethology’. This considers both matter and health relationally (Buchanan, 1997; DeLanda, 2006: 10–11), and acknowledges the wide range of human and non-human materialities that continuously produce and reproduce the social and natural world (Fox and Alldred, 2017: 23–26; Bennett, 2010; Coole and Frost, 2010). Following brief illustrations from recent empirical studies of how the relationality, post-anthropocentrism and monism can elucidate political economy, the paper demonstrates how a critical micropolitical economy of health may be used to make sense of both the causes and distribution of health inequalities during the Covid-19 pandemic.

Health inequalities, critical political economy and the new materialisms

Material factors such as income, quality of working and living conditions and access to health services have variously been acknowledged within political economy as social *causes* of ill/health (Marmot and Bell, 2012; Navarro, 1976; Pickett and Wilkinson, 2015: 317; Townsend and Davidson, 1982). Associations between social position and health – first documented by Engels (1993) in Victorian England continue to be observed

for mortality and a wide range of morbidities in contemporary scholarship (Bambra et al., 2020; Doyal and Pennell, 1979; Marmot and Bell, 2012; Scambler, 2012; Townsend and Davidson, 1982).

However, there are fundamental theoretical disagreements concerning the social factors that determine the *distribution* of these material causes. For epidemiologists, class has been considered as a proxy for income and education, with a mix of material deprivation, poor housing and nutrition and low levels of health and general education explaining the consequent social class distribution (Townsend and Davidson, 1982: 122). Scholars including Coburn (2004), Navarro (2009) and Scambler (2007) identified the inherent social inequalities associated with the ‘structures’ of capitalist production and the top-down exercise of state power as explanatory. These inequalities derive from state policies on wages, investments, and taxes (Lynch et al., 2000: 1201) and inequitable distribution of public resources such as education, health services, transportation (Lynch et al., 2000: 1202). Globalisation and neo-liberalisation of markets have reduced working class control of the labour process, decimated welfare systems, and increased wealth inequalities (Coburn, 2004; Navarro and Shi, 2001; Scambler, 2012: 143).

By contrast, Wilkinson and Marmot (2003) and Pickett and Wilkinson (2015) have suggested that living in a structurally-unequal, hierarchical and authoritarian society reduces social cohesion and trust, with psychosocial consequences on health and well-being more significant than material factors (see also Szreter and Woolcock, 2004: 654–655). This association between societal income inequality and health disparities is supported by empirical data comparing a range of global North jurisdictions (Pickett and Wilkinson, 2015: 317).

These different explanations for the social *causes* of health and their unequal *distribution* have entailed complex and multi-factorial models to explain health inequalities (see, e.g. Scambler, 2012; Solar and Irwin, 2010: 6). This paper supplies an alternative: a materialist ontology that draws these two aspects of the social determination of health into a single explanatory yet critical framework, enhancing the accessibility of the political economy of health to practitioners and publics.

New materialism is a term applied to various ontological approaches that actively engage with materiality, and model power and resistance as fluxes within an emergent and heterogeneous social world (Braidotti, 2011: 137; Grosz, 1994; Saldanha, 2006).² Within the social sciences, new materialist ontology has been applied to a growing range of topics, from technology to sexualities to health, including social stratifications by gender (Lorraine, 2008) race (Colebrook, 2013; Saldanha, 2006) and latterly social class (Fox and Alldred, 2021b; Fox and Powell, 2021a; Mulcahy and Martinussen, 2022).

Despite their diversity, new materialist perspectives possess some features in common (italicised in the following summary). Primarily, these approaches focus on *matter* and bodies (Coole and Frost, 2010: 2), rather than social or textual practices. However, this material focus diverges radically from the historical materialism of Marx’s analysis of capitalism, in which matter is merely the backcloth for human social relations and practices (Lettow, 2017: 114). In this *post-anthropocentric* ontology, all matter is ‘lively’ (Bennett, 2010; Edwards and Fenwick, 2015: 1385) and ‘affective’ (having a capacity to affect or be affected) or agentic (Connolly, 2013: 400). Consequently, the material world does not comprise stable entities with fixed, essential attributes, but is

considered *relational* and uneven, emerging and ‘becoming’ in unpredictable ways as different human and non-human materialities interact (Potts, 2004: 19). This relational understanding problematises essentialist categories such as ‘human’, ‘woman’, ‘white’ or ‘healthy’ founded upon supposedly inherent attributes (Braidotti, 2011: 130; Colebrook, 2013: 36; Deleuze and Guattari, 1988: 275). In place of essentialist, constrained and reductive skeins of genders or ethnicities categorisations, new materialist scholars have posited ‘a thousand tiny sexes’ (Grosz, 1993) and ‘a thousand tiny races’ (Saldanha, 2006). Later in this paper I offer a similar relational re-formulation of social class stratifications.

Furthermore, the new materialisms cut across many dualisms within conventional social theory (Braidotti, 2011: 129), including the humanist distinctions between mind/matter, human/non-human and culture/nature (van der Tuin and Dolphijn, 2010: 155), and (significantly for this paper) micro/macro and structure/agency (Braidotti, 2013: 4–5; Coole and Frost, 2010: 26–27; van der Tuin and Dolphijn, 2010: 157). Dissolving these dichotomies in both everyday life and social theory establishes the *monism* of the new materialisms. However, this is not a move to universalism or a unitary perspective on materiality, but instead opens up a multiplicity and diversity that exceeds and overwhelms the dichotomies it replaces (Deleuze, 2001: 95).

To establish a critical micropolitical economy of health, the following section applies a specific new materialist ontology: the ‘ethology’ of Deleuze (1988: 125). This approach has been influential in new materialist social theory (Bennett, 2005; DeLanda, 2006, 2016; Grosz, 1993; Massumi, 2015) and supplies a toolkit of concepts – affect, assemblage, capacity and micropolitics – amenable to both social theoretical application and translation to empirical investigations (Fox and Alldred, 2017, 2021a).

Affects, assemblages and the micropolitical economy of health

Ethology is the study of *affects* – defined as ‘capacities for affecting and being affected’, and of how these affects diminish or strengthen a body’s or a thing’s power to act (Deleuze, 1988: 125–126). An affect may be physical, psychological, emotional, political or social. Such affects may be identified empirically, by investigating how and in what ways materialities (bodies, collectivities and things) interact. Matter – ‘human’ and ‘non-human’ – is consequently assessed not by form, substance or fixed attributes, but by its capacities to affect (Deleuze and Guattari, 1988: 257). These *capacities* emerge relationally when one body or thing interacts with other similarly contingent and ephemeral matter (DeLanda, 2016: 143–144; Deleuze, 1988: 123; Deleuze and Guattari, 1988: 261). In short, we need to ask not what a body is, but what does it do in a specific context?

Deleuze and Guattari (1988: 22) described the contextual arrangements of bodies and things as *assemblages*. Assemblages emerge in unpredictable ways around actions and events (Bennett, 2005: 445; Deleuze and Guattari, 1988: 88), ‘in a kind of chaotic network of habitual and non-habitual connections’ (Potts, 2004: 19), drawn together by their constituents’ capacities to affect or be affected (Deleuze, 1988: 124). The affective flows in assemblages are the sole determinants of what a body or other thing can do within a particular context (Deleuze, 1988: 124). This shifts the focus of attention in

empirical research from individual bodies to assemblages of human and non-human matter, the affects that assemble them, and the capacities these affects produce in these assembled materialities.

It follows that exploring the *micropolitics* of affects within assemblages, and the capacities these affects produce (Deleuze and Guattari, 1988: 216; Massumi, 2015: 79–80) is the key within ethology to unlocking how the world and everything in it is produced, from moment-by-moment, and also how it may become other. Although analysis of capitalist social relations has been foundational to some new materialist theory (DeLanda, 2006: 62–67; Deleuze and Guattari (1984, 1988); Massumi (2015): 83–91), this has not previously translated into a fully-fledged political economy approach. However, a route into a ‘critical micropolitical economy’ (CMPE) has emerged through an acknowledgement of the part that more-than-humans assemblages play in producing sociomaterial inequalities (Fox and Alldred, 2021b; Fox and Powell, 2021a, 2021b; Mulcahy and Martinussen, 2022). To establish the parameters for a CMPE, it is valuable to identify the challenges facing a new materialist ontology when engaging with the kinds of issues around capitalism and health inequality addressed in the predominantly structuralist and anthropocentric critical political economy of health literature.

First, the monism underpinning new materialist perspectives dispenses with any idea of a foundation or ‘other level’ or reality beyond the everyday (Fox and Alldred, 2018: 318; van der Tuin and Dolphijn, 2010: 155). This perspective leaves no space ontologically for some of the favoured concepts of critical political economy, including structures, systems or mechanisms; a top-down conception of power; and the ‘micro/macro’ distinction between interpersonal encounters and the legal and governance processes of ‘the State’ deemed to shape societies and economic systems. Indeed, the new materialisms have sometimes been criticised for their dispensation with dualisms such as agency/structure and micro/macro, claiming this constrains any possibility of political or critical analysis (see e.g. Edwards and Fenwick, 2015: 1386; Lettow, 2017: 109). One of the tasks of this paper is consequently to address this charge.

Second, a further issue concerns the association between ‘social class’ and health inequalities that has been central to critical political economy. As just discussed, the new materialisms regard body capacities as emergent and contingent rather than inherent and stable. This problematises aggregations of disparate human bodies into narrow classificatory bands such as ‘class’ that are based on stable individual attributes such as occupation, income or the more complex mixes of material and symbolic assets postulated by neo-Bourdiesian scholars (Savage et al., 2013: 223; Toft, 2019: 112). Instead, a new materialist perspective needs to acknowledge social position as relational rather than essentialist, and more complex and unstable than is presumed by limited discrete ‘classes’ (Fox and Alldred, 2021b). Later in the paper this will lead to a re-formulation of social class as a myriad ‘tiny dis/advantages’ produced during the everyday interactions that bodies have with other matter (Fox and Powell, 2021a).

Third, critical political economic models of health inequalities often postulate a cause/effect relationship between the social relations of capitalism and inequality (Scambler, 2007: 313). The new materialisms by contrast understand social production as a micropolitical and emergent process deriving from the affective flows in assemblages of matter (Bennett, 2010: 33). This latter understanding problematises the unidirectionality

of causal models, in favour of what Deleuze and Guattari (1988: 239) call ‘becoming’: a rhizomatic blossoming that is emergent and multi-directional (Bennett, 2010: 42). This acknowledges that a flow of affect requires both a capacity to affect and a capacity to be affected: in this relational perspective, it is no longer appropriate to designate one component of an assemblage as independent (cause) and another as dependent (outcome) variable (Massumi, 2015: 94–95). Later in the paper I note how this problematises the cause/effect model of ‘social determinants’ and ‘health’.

To confront head-on these challenges to a CPME founded in new materialist ontology, the next section uses ethology’s conceptual toolkit to supply the critical micropolitical alternative to what are commonly known in structuralist sociology as the ‘social relations of capitalism’. Asking the ethological question: what does capitalism actually *do*?, it establishes an analysis of capitalism that is monist and post-anthropocentric, and explores the more-than-human affects in the assemblages that constitute everyday interactions between bodies and non-human matter.

What does capitalism do?

To answer this question, it is instructive to assess capitalism in parallel with Marx’s own analysis. In Volume 1 of *Capital*, Marx (2011, [1906]: 185–186) suggested that what capitalism does is transform human labour-power (capacity to labour) into surplus value, via a production transaction that adds (use-)value to matter (Marx, 2011, [1906]: 186–187) and a market transaction that exchanges this added-value product for money or other material resources, thereby also supplying the producer with ‘surplus value’ or ‘profit’ (Marx, 2011, [1906]: 168). Marx’s analysis of the ‘social relations’ in these transactions may be re-cast in terms of the concepts defined in the previous section: assemblages, affects and capacities. But rather than treating capitalism as an abstraction or a structural social relation (Scambler, 2007: 299), it can be analysed by exploring concrete manifestations of these production and market affects in action such as a factory and a market-place (DeLanda, 2006: 17–18). Thus, factory production can be summarised as an assemblage that comprises at least (and in no particular order):

worker; raw materials; means of production (buildings, tools, technology, knowledge); wages; other workers; managers; owner or shareholders

This production assemblage rallies a number of human and non-human affects to achieve its objective of transforming raw materials into a finished product with new capacities, including those capacities that Marx (2011, [1906]: 42–43) summarised using the anthropocentric term ‘use-value’. For instance, to turn refined steel into materials with enhanced capacities (use-values) such as construction steel joists, cutlery or weapons, requires the affective capacities of:

- a. the raw materials and the finished products (for instance: tensile strength, resistance to corrosion);
- b. workers’ and managers’ labour;
- c. the means of production (tools, technologies, premises etc.) to process steel;

- d. shareholders and investors to fund the costs of raw materials, means of production and workers' wages.

At its simplest, a market-event may be summarised as an assemblage comprising at least (and in no particular order):

commodity; trader A; customer B; competitor traders; competitor customers; money/material resources; market environment

To achieve its objective of exchanging goods for money or other resources, a market assembles non-human and human matter with a range of affects within a specific place and time, ranging from a town marketplace to a commodities trading floor in a financial institution. For example, to successfully transact cutlery for money in an open-air market requires the affective capacities of:

- a. the commodity to perform the tasks required of it (its 'use-value');
- b. producers to supply this commodity;
- c. customers to pay for the commodity;
- d. the market premises to bring commodity, traders and customers together.

The affects in these two more-than-human events of production and markets capture the fundamental arrangements of bodies and non-human matter in the micropolitics of what sociologists, economists and others summarise as 'capitalism'. However, not only do these assemblages typically comprise other materialities (including trade unions, accountants and book-keepers, the infrastructure of shopping centres and trading estates, financial institutions, credit cards and so forth), but this post-anthropocentric approach also enables the identification of further affects in production and market assemblages that generate further features of this micropolitics. These are associated with what in classical economics are called the 'laws of supply and demand' (Moore, 1925). According to these 'laws', as the price a commodity realises in a marketplace increases, supply of a commodity will also increase, while demand for that commodity will reduce. Over time, supply and demand establish equilibrium in both prices and quantity sold.

Within a monist ontology, these 'laws' instead are revealed as more-than-human exchange affects between money, commodities and consumers within market assemblages, beyond the intentionality and immediate control of human actors (DeLanda, 2006: 36). These more-than-human affects not only provide the 'glue' that sustains the assemblages of capitalism over time, by determining the flows of commodities through production and market assemblages, but also establish three further aspects of the micropolitics of capitalism: uncertainty, waste and inequalities.

Uncertainty

Non-human supply and demand affects in the capitalism assemblage create great uncertainty for producers. Prices that their commodities can command in the market will depend upon supply of rival commodities and the amount of money available to purchase them at

a given price. Producers are faced with unattractive options: either to sustain prices and lose market share to competing goods – leading to possibly terminal business failure, or attempt to sustain market share while also sustaining income by lowering prices and increasing production (Wrenn, 2016: 63). The latter path of course further exacerbates excess supply. This non-human affect explains the inherent drive to growth observed in capitalist economies (Gordon and Rosenthal, 2003).

Waste

As producers increase production to sustain market share in the face of over-supply, without increased demand more and more unsold products will be wasted, along with wasted labour that generates less and less surplus value (Horton, 1997: 128–129). Alternatively, if producers attempt to sustain their prices and accept loss of market share, this too will result in unsold products, and may over time lead to business unviability and demise, with further waste of means of production.

Inequalities

Non-human supply and demand affects are also responsible for fixing commodity market prices independently of consumers' ability to pay, thus contributing to inequalities between higher and lower paid workers, and between high and low wage economies. The uncertainty created by these non-human affects may lead producers to attempt to assure business continuity by reducing production costs by hiring lower-cost labour such as migrants or ethnic minorities; limiting the size and quality of built environment and minimising costs of work infrastructure such as washing facilities and workers' leisure spaces.

This analysis of the more-than-human affects in capitalist assemblages also suggests how the concrete transactions/affective movements entailed in production and markets endure and proliferate, without recourse to external 'explanations' such as structural social relations or top-down imposition of coercive power by a capitalist state apparatus. Rather, it is the intended and unintended capacities generated by more-than-human production and market assemblages that establish a micropolitics within capitalist assemblages. For example, the affect by which workers sell their labour-power for a wage ties them into dependency, precluding alternative means to subsist such as self-employment or communal working, and offering prospects of increasing prosperity through skills development and consequent promotion.

Meanwhile, the affects in the market assemblage offer a seemingly-attractive opportunity for new businesses with novel products to swiftly generate surplus value. Over time, markets have established monetary exchange-values for a growing range of commodities, including physical goods, public services and most recently care and education – the phenomenon sometimes described as 'neoliberalisation' (Mudge, 2008: 704; Tyler, 2015: 505). However, once in the market, as has been seen, more-than-human supply and demand affects proliferate competitor commodities, prices are driven down and businesses have no alternative but to compete in the market, and either lose market share or trim margins. Capitalism becomes a black hole, from which neither worker nor shareholder can

escape, as the assemblages of production and markets progressively incorporate more and more economic activity into their ambit.

Before concluding this section, this is an appropriate juncture at which to clarify how ‘power’ needs to be understood within a monist micropolitical economy. Without ‘another level’ to the social world, power is neither ‘top-down’ nor extraneous to everyday interactions. Instead, it is integral to the assemblages that produce events in daily life (Barad, 2001: 94), and comprises nothing more nor less than the affective capacities of assembled relations (Braidotti, 2013; Fox and Alldred, 2018; 188–189; Patton, 2000: 52). Power and resistance are both outcomes of these micropolitical material forces and intensities within events. Regularities or continuities in power (for instance, management authority over workers) depend upon repeated assertions of specific affect-economies. But while these micropolitical patternings in time and space may have provided a semblance of overarching social structures or systems (for instance, ‘patriarchy’ or ‘capitalism’), this regularity is illusory: power can have continuity only so long as it is replicated in the next event, and the one after that. This supplies a critical edge to a micropolitical economy perspective: altering the affects in production or market assemblages and becomes the means by which to disrupt or transform social, economic and political continuities.

Dynamics of a micropolitical economy of health: From ontology to methodology

With this post-anthropocentric and monist analysis of capitalism established, I turn now to explore in greater detail what the relationality, monism and post-anthropocentrism of new materialism means for a CMPE analysis of health and health inequalities. These features are illustrated with examples from recent work that applied the ethological toolkit of affect, assemblage, capacity and micropolitics, demonstrating how this toolkit translates into a practical methodology to study health inequalities.

Relationally, the CMPE replaces essentialist understandings of bodies, technologies and commodities as entities possessing pre-defined attributes with an ontology that acknowledges that what these materialities can do is context-specific and open-ended (DeLanda, 2016: 2). As discussed earlier, such capacities emerge when the affects (capacities to affect or be affected) between a body or thing and other matter draw them into assemblage (Massumi, 2015: 94). The flows of affect in a particular assemblage consequently establish the micropolitics of what the bodies and other matter in an assemblage can do, and supplies a means to understand how social contexts affect bodies differentially. Changes to the composition of an assemblage will lead to alterations in capacities (including the physical and mental capacities that are conventionally described as health and well-being), opening up or closing down possibilities for action. These latter may in turn establish relative advantages or disadvantages (henceforth, ‘dis/advantages’).

A study (Fox, 2017) of health technologies ranging from the *Fitbit* fitness monitor to implantable medical devices used a relational analysis to assess the micropolitics of PHT/body assemblages. The affects within these assemblages included not only established the capacities of the devices to monitor vital signs or physiologically intervene (for instance, delivering a shot of insulin or defibrillating electric shocks), but also

assembled bodies variously with the commercial interests behind devices, the privatisation of health care, biomedicine and public health surveillance (Fox, 2017: 143–146). These latter affects established in/capacities in users' bodies that translated into specific physical, psychological or social dis/advantage (for instance, dependence on health professionals or a loss of corporeal autonomy). However, such health technologies can also be re-purposed, replacing constraining affects with those facilitating users' capacities to take control of their health socially, politically and economically (Fox, 2017: 146–147).

The CMPE's *monism* acknowledges everyday events as the sole arena wherein social, economic and political forces are deployed to produce and reproduce social divisions and inequalities, in contrast with the top-down structural or systemic forces posited in conventional political economy (Edwards, 2010: 283; Latour, 2005: 130–131). Within these everyday events, sociomaterial assemblages cut across conventional 'micro/macro' dualism. Interactions that assemble bodies with matter in the immediate environment also establish affects with the broader social, economic and political environment. For example, a factory worker using a machine to process raw materials also assembles human bodies with commercial enterprises, financial institutions, legislative bodies addressing employment law and health and safety at work. Similarly, an interaction at a supermarket till draws shopper and assistant into a market-assemblage caught up with commerce, international trade and suppliers of commodities. Micropolitical analysis of these assemblages reveals how forces (commonly regarded as 'macro') directly affect daily interactions.

In a study of the micropolitics of obesity and weight-loss (Fox et al., 2018), interview data revealed that assemblages surrounding overweight and obese bodies cut across micro/macro distinctions, to include food, fat, physical environments, food producers and processing industries, supermarkets and other food retailers and outlets, diet regimens and weight loss clubs, and wider social, cultural and economic formations such as global food trade, the market economy and food standards policy and regulation (Fox et al., 2018: 111). For respondents attempting to lose weight, their desires and efforts were pitted against powerful supply and demand affects within the everyday activities that constitute agri-business, food processing, delivery and retail industries. These industries dominate food consumption and maximise profits by promoting processed and high-fat foods, outpricing less fattening foodstuffs (Fox et al., 2018: 122–123). The authors concluded that a shift away from a neoliberal food industry and the strengthening of food sovereignty was a necessary complement to public health obesity initiatives (Fox et al., 2018: 123–124).

Finally, the *post-anthropocentrism* of the CMPE requires recognition of the affective capacities of *all* matter in the events that produce social and natural worlds, in contrast with contemporary political economy approaches that focus on human practices to the exclusion of non-human matter's affectivity. As indicated in the earlier analysis of capitalism, critical micropolitics needs to acknowledge that inequalities emerge from the affectivity of both human and non-human matter within assemblages (Barad, 2007: 226–230; Lynch et al., 2000: 1202–1203).

The significance of such non-human material interactions for the production of social advantage or disadvantage has been revealed in research (Fox and Gavrilyuk, 2021) that gathered data on daily interactions with bodies and non-human matter in the workplaces of professionals, senior managers, shoppe workers and entry-level office workers. This research disclosed great material disparities between the daily work of

these different workers. So, for example, a teacher or a senior manager spent their working hours in spacious, high-quality, well-regulated and amenable work spaces. Offices were well-equipped with comfortable furnishings, information and communication technology, and other resources needed for them to work productively and creatively. Manual workers' interactions with their work environment were very different. Their work was physically demanding, while their encounters with the raw materials and machinery of production and the weather could make workplaces inefficient, uncomfortable and occasionally debilitating. In place of the roomy offices and executive dining rooms there were cramped meeting places, canteens, and utilitarian sanitation facilities. In place of a senior manager's company car, commuting to and from work might entail crowded and unreliable public transport. Such material affects directly produced advantages and disadvantages in workers' bodies, and in some cases lasting inequalities.

These three features of a new materialist approach establish the methodological framework to apply a critical micropolitical economy of health. Recalling the intention set out earlier to enable a unitary explanation of both social causes of health and the distribution of these causes, the following section offers a more extended and explicit demonstration of how a CMPE can achieve this objective.

Micropolitical economy, capitalism and the pandemic-assemblage

The last of the previous three illustrations disclosed how myriad affective interactions between materialities produce relational and context-specific opportunities and constraints upon what bodies can do at work. Some of these opportunities or constraints may be trivial, producing only transitory 'tiny dis/advantages' (Fox and Alldred, 2021a, 2021b). However, if this disruption is repeated, the drip feed of myriad opportunities and constraints generated by daily events can – over a month, a year or a lifetime – establish enduring material disadvantage, with physical, psychological or social sequelae, including those associated with health and well-being (Fox and Powell, 2021b).

However, before slipping into a casual acceptance of a cause/effect relationship between 'social determinants' and 'health', it is necessary to acknowledge that – within a new materialist ontology that replaces inherent attributes with context-specific capacities – 'health' itself must be understood relationally rather than essentially. Scholars of this perspective have described health as the 'actual measurable capacity to form new relations' (Buchanan, 1997: 82); 'a process of becoming, of rallying capacities' (Fox, 2011; 370); and a 'quantum of a body's power of acting' (Duff, 2014: 75). Findings from recent mixed-method research that explored the interactions between health status and bodily capacities support this perspective on health (Fox and Powell, 2021a). This research found that – on a range of indicators – those in good health had notably and statistically significantly higher levels of positive capacities and lower levels of negative capacities than poor-health respondents. Analysis of qualitative data also indicated how health or ill-health may enhance or diminish a body's capacities to engage with the social world, while sociomaterial advantage or disadvantage may respectively establish or constrain physical and mental well-being.

This suggests that health disparities and the differential production of sociomaterial dis/advantage are part of the same phenomenon: the unending production of positive and negative capacities as bodies interact with both human and non-human matter (Fox and Powell, 2021a). This relational ontology of health and dis/advantage has been floridly revealed in the socioeconomic and ethnic disparities in morbidity and mortality that emerged during the SARs-Cov-2 (Covid-19) pandemic (Fox, 2022). Public health studies have documented wide divergences/inequalities in infection prevalence and death rates from the virus (Office for National Statistics, 2020, 2021). Most notably, age-adjusted death rates of those living in the most deprived areas were more than twice those of those in the least deprived areas (Blundell et al., 2020: 19–20), while black Britons' death rates from Covid-19 were almost three times those of white men (Office for National Statistics, 2020).

Occupational differences in Covid-19 death rates are also striking: in the first year of the pandemic, working-age men in manual (semi- or unskilled), caring and leisure occupations had a death rate over three times that of professional and technical workers (Office for National Statistics, 2021). Throughout the pandemic, coronavirus 'hot spots' emerged. For example, meat processing plants in Australia, UK, US and elsewhere were sources of localised community outbreaks of Covid-19 (Dyal et al., 2020). In their review of cases, Middleton et al. (2020) suggest that these plants were sources of widespread transmission because of the physical and socio-economic circumstances of this work. The cool, humid conditions in these plants sustain live viruses for longer on hard surfaces; the work produces dense aerosols of animal debris that may transmit virus between staff; noisy working conditions require workers to speak loudly or shout; crowded workplaces limit potential for social distancing. Other risky working environments such as food packaging and 'sweat-shop' garment manufacturers have also been implicated as Covid hot-spots (Middleton et al., 2020: 1; O'Connor, 2020).

The earlier new materialist analysis of capitalism explored how more-than- affects constitute 'production' and 'market' assemblages. Alongside these affects, SARs-Cov-2 possesses its own biologically affective capacities: a capacity to introduce RNA into a host cell, the capacity of this RNA to high-jack the host cell's genetic mechanisms to replicate copies of the virus, and a capacity to remain viable in aerosols and droplets and on hard and soft surfaces (Fehr and Perlman, 2015). During the Covid-19 pandemic, these viral affects enabled the infection and spread of SARs-Cov-2 among workers and consumers. While production and market assemblages continued to transform raw materials into outputs and surplus value, they were simultaneously hijacked by the coronavirus to its own ends: to pass from human body to body. At the same time, the pervasive more-than-human affects of the production and market assemblages high-jacked the virus, determining how it spread through the population globally from its original point of incidence. In effect, the assemblages of capitalism became a *pandemic-assemblage*, whose micropolitics has enabled dissemination of the virus to almost every corner of the Earth (Fox, 2022).

The CMPE perspective based on this analysis of capitalist affects explains how the micropolitics of this pandemic-assemblage were both the social *causes* of the Covid-19 infection and a *distributional* patterning shaped by supply and demand affects beyond human intentionality. For example, a demand for cheap food and a global market in meat products has driven down profit margins, with manufacturers dependent upon low paid

and precarious labour (often supplied disproportionately by people of colour) and poor working conditions. Hygiene facilities may be poor; while workers in some plants are housed in crowded and poor-quality accommodation (Dyal et al., 2020; Middleton et al., 2020: 1). All these tiny disadvantages (Fox and Alldred, 2021b) increased SARs-Cov-2 incidence within such environments. More broadly, workers in lower-paid manual and public-facing jobs have been most affected by SARs-Cov-2s affects in the pandemic-assemblage. By contrast, many workers in non-manual and professional jobs had working conditions that did not carry the same exposure, and were often able to avoid transmission hazards by working from home.

During the pandemic, public health responses to these disparities focussed on voluntary and mandatory measures to alter individuals' Covid-risky behaviours. By contrast, a CMPE analysis acknowledges that the pandemic was directly mediated by the micropolitics of capitalist and globalised production and market assemblages, of which the virus is now (and will remain) inextricably a part. The affect-economies of these everyday events shaped the demographic profile of coronavirus incidence, while the relative health status and prevalence of underlying medical conditions of different socioeconomic and ethnic groups further specified severity and rates of death from the infection.

Discussion

This paper has outlined how the relational, monist and post-anthropocentric perspective of the new materialisms can be used to establish a *critical* political economy approach to health. New materialist ontology has sometimes been criticised for apparently undercutting a capacity for a 'political' analysis of events, and in particular denying opportunities to assert the negative consequences of the structures or systems reified by terms such as 'capitalism', 'patriarchy' and 'neo-liberalism' (Rekret, 2018: 55). By contrast, the contention here is that an ethological ontology of assemblage, affect/capacity and micropolitics does indeed sustain a critical response, although its monism requires a substantive shift in how these conventional terms are understood. To reiterate: in this ontology, the 'social relations' of 'capitalism' are re-thought as emergent: produced by affects (capacities to affect or be affected) within the fluctuating assemblages of human and non-human matter that constitute the events of the everyday. The micropolitics of these events/assemblages produce opportunities and constraints on what constituent bodies and things can do. These in turn generate tiny advantages and disadvantages that may accrete to establish more lasting patterns of inequality.

What then are the opportunities and advantages that this critical micropolitical economy (CMPE) offers, in comparison to a political economy founded in structuralist approaches? First, an ethological ontology has the benefit of simplicity. Three concepts (capacity to affect, assemblage, micropolitics) establish the framework for the CMPE, while its monism removes a requirement to explain how underlying – but only indirectly discernible – social structures or mechanisms affect social interactions. In relation to health, a CMPE overcomes the need for different explanations and complex models of the social causes of ill-health and how social structures affect their distribution (Solar and Irwin, 2010: 6). In the pandemic example, it is the affects in the capitalist pandemic-assemblage that are both the social *causes* of health/illness and the social factors shaping

their unequal *distribution*. Similar analyses can reveal the critical micropolitical economic production of the many other health inequalities that have been shown to possess a social aetiology (Marmot et al., 2008: 1661).

Second, the CMPE is empirically oriented with a focus upon everyday events, such as those analysed in the example of the pandemic-assemblage. The affects in events cut across micro/macro distinctions, acknowledging that supposedly ‘macro’ processes such as governance, law and policies affect bodies directly within everyday interactions, rather than somehow permeating structurally from government and economic systems. Hence, all the affects and micropolitics that together produce events may be studied via a mix of established social research methods of data collection, including observation, interviews, quantitative surveys and documentary analysis (Fox and Alldred, 2015, 2021a).

Third, it enables – and indeed requires – assessment of the affective capacities of the breadth of matter, cutting across the culture/nature dualism that has previously privileged human agency in critical political economy (Lettow, 2017: 114). The post-anthropocentrism of the CMPE acknowledges that matter is central to production and market assemblages, not just as an inert substrate, but affecting human bodies in multiple ways. Furthermore, it reveals the more-than-human affects associated with supply and demand that fail to be fully acknowledged in critical political economy approaches that focus upon human social practices. The illustration of the interactions between capitalist production and market assemblages and the SARs-Cov-2 particle offers new insights into the way non-human matter affects human activities within locations such as workplaces.

Finally, while sharing with critical political economic approaches a recognition that addressing health inequalities requires more than public health efforts to improve living and working conditions, child health and social support (Coburn, 2004: 53; Scambler, 2007: 313), a monist perspective on political economy diverges in terms of propositions for change. The CMPE analysis has disclosed capitalism not simply as a social relation that enables amoral capitalists to exploit workers, but as a pernicious more-than-human assemblage that serves neither the interests of workers *nor* business, creating uncertainty, waste and inequalities. With no structural forces to neutralise, attention shifts to the day-to-day activities that produce and sustain dis/advantage. Human and non-human affects in capitalist production and market assemblages are the sites where dis/advantage and health inequalities are generated, and where they may be countered. Alongside public health interventions to address poverty and social support, tackling health inequalities requires a wider social/political/economic strategy incorporating both policy change and activism: to undermine materially and ideologically the supply and demand affects that are driving a market economy and the otherwise-inexorable neo-liberalisation and globalisation of production and consumption.³

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Notes

1. New materialist scholars have argued that ‘social structures’ are inadequate ‘explanations’ of power and social divisions (Latour, 2005: 130–131) – founded in ideology (Massumi, 2015: 84–88) or even conspiracy theories (Latour, 2005) that reveal a ‘truth’ only accessible to sociologists (see e.g. Scambler, 2007: 298).
2. These include actor-network theory, posthuman feminism, non-representational theory, bi-philosophy, onto-epistemology, affect theories and assemblage approaches. The principal theorists associated with this movement include Karen Barad, Jane Bennett, Rosi Bradiotti, William Connolly, Manuel DeLanda, Gilles Deleuze and Félix Guattari, Bruno Latour, Brian Massumi, Nigel Thrift. The ‘newness’ of new materialism is relative only to Western/Eurocentric ontology: its recognition of continuities between natural and social worlds recapitulates aspects of indigenous and First Nation ontologies (Rosiek et al., 2020; Sundberg, 2014). Braidotti (2022: 108) suggests ‘renewed materialism’ as a more apt nomenclature terminology). For critical assessments of the new materialisms, see Lettow (2017) and Rekrut (2018).
3. Measures to disrupt supply and demand affects include subsidies, retail price maintenance, import tariffs/quotas and other market-regulation tools; while entire sectors such as health, education, transport and energy may be removed from the marketplace and funded from taxation. An economy applying these mechanisms can be supported by fiscal interventions such as a universal basic income, progressive taxation regimes and sales taxes that encourage sustainable, local or not-for-profit production and social enterprises, barter, repair and upcycling. These also can be foci for grass-roots and activist campaigns, for instance in relation to steep rise in the cost-of-living and to climate change.

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