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# DEATHS OF DESPAIR AND THE SOCIAL GEOGRAPHIES OF HEALTH DENIAL

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**ABSTRACT:** The aim of this article is to articulate and translate the key points emerging from Case and Deaton's (2020) provocation on 'deaths of despair' in the United States, to an audience concerned with the social geography of health and health denial. According to the authors, the recent waning life expectancy in the United States is mostly due to an unprecedented increase in deaths among middle-aged Whites in rural areas, due to suicide, alcohol and especially drug overdoses, set within the larger context of gradual societal breakdown. While largely implicit in the book, I explicitly connect this phenomenon to debates in social geography around the role of place, violence and inequality in the systemic production of health denial, bringing out embedded political, geographical and sociological arguments. Finally, I propose a research agenda that takes into account other versions of deaths of despair that share the same underlying patterns of health denial.

**KEYWORDS:** deaths of despair; life expectancy; social geography; health

**BIOGRAPHY:** Geoffrey DeVerteuil is Reader of Social Geography at the School of Geography and Planning at Cardiff University, UK. His work focuses on the social geographies of the city and of health, including homelessness, mental health, and substance abuse, as well as the responses to them. These responses are framed using concepts such as poverty management, service hubs, and social/spatial resilience. His recent work underscores the important role of the voluntary sector, the commons, and social infrastructure in both managing extreme poverty and creating particular understandings of the vulnerable.

## 1. INTRODUCTION

The abrupt emergence of COVID-19 in 2020, and the enormous attention brought to bear on its social and spatial impacts (for an early view, see Andrews et al., 2021), threatens to obscure certain troubling pre-COVID-19 trends. Between 2014 and 2017, life expectancy dropped in the United States, the first sustained fall since the end of the First World War and the last major global pandemic (Woolf & Shoomaker, 2019; Case & Deaton, 2020; Roser, 2020). Between 2018 and 2020, a further decline, building on this previous drop but accelerated by the current pandemic, created an alarming five-year gap between the United States and some other Global North nations (Woolf et al., 2021). Before the pandemic, this drop was mostly explained by greater rates of suicide, drug overdose and alcoholic liver disease among a middle-aged, largely rural cohort. In their provocative study, Case and Deaton (2020, p. 40) spoke of the relentless rise in *deaths of despair* “among white men and women aged forty-five to fifty-five...(which) rose from thirty per one hundred thousand in 1990 to ninety-two per one hundred thousand in 2017”, with suicides and drug overdose mortality rising in *every* state during that time period, and alcoholic liver disease in all but two states. Shockingly, these deaths of despair in 2017 (158,000) vastly outnumbered homicides (19,510) or traffic fatalities (40,100) (Case & Deaton, 2020, p. 97). More than a human tragedy, a reversing life expectancy directly rebukes the legacy of the 20<sup>th</sup> century, which saw rates reliably climb with medical and public health breakthroughs.

Early estimates during the pandemic suggest that deaths of despair have continued unabated, despite less attention paid to their collateral impacts. The *New York Times* reported that there were more lethal overdoses in San Francisco over 2020 than COVID-19 deaths (Fuller, 2021). Of course the two trends are compounding (DeVerteuil, 2021; Horsley, 2021): the pandemic seriously disrupted employment and everyday life patterns for many precarious households, including those already addicted to drugs. For that population in particular, the inability to meet in-person for treatment led to increased social isolation. Drug-taking is itself social (DeVerteuil & Wilton, 2009; Proudfoot, 2017), and taking drugs alone greatly increases the threat of lethal overdoses, especially given the availability of drugs such as Fentanyl. Indeed, the Center for Disease Control estimated that drug overdoses between August 2019 and August 2020 had increased by 27% (CDC, 2021), capturing only the early onset of the pandemic. Full data for 2020 in fact showed a nearly 30% increase in drug overdoses on their own, to 93,000 (Katz & Katz, 2021), the most substantial increase ever recorded and far above peak years for HIV deaths, gun deaths or traffic fatalities.

The purpose of this paper is to cross boundaries, bringing the empirical realities of the ‘deaths of despair’ phenomenon into conversation with traditional concerns in the social geography of health, which concerns itself with how population and individual health are co-constituted between the social and the spatial. I thereby shed new light on each – of how the social geography of health can recast and sharpen our understandings of deaths of despair, but also how the phenomenon can nudge the social geography of health into new areas of research. While Case and Deaton’s 2020 book targets policy makers and the general public as much as it does academics, it remains a book on the relationship between economics and health rather than one of social and health geography. So once I have expanded on Case and Deaton’s (2020) key explanatory points in the next section, I wish to articulate and translate deaths of despair for a social geography of health audience, in three potentially useful ways: (1) geographically, as a symptom of deeply-embedded social and spatial inequalities rather

than individual flaws; (2) sociologically, raising very different urban and rural imaginaries; and (3) politically, as an outcome of structural violence and slow violence. All of these variables are implicit in the book, but I make them explicit. From there I ask, how can the realities of deaths of despair help to confirm, clarify and perhaps even expand insights into larger issues around the production of health denial and its political, social and spatial aspects? Finally, I propose a research agenda that builds on the phenomenon to inform a more globally-aware social geography of health, particularly on its potential applicability to other contexts of health denial that go beyond the highly-bounded context of (rural) America.

## 2. DEATHS OF DESPAIR EXPLAINED

Case and Deaton are highly-visible academics whose 2020 book *Deaths of Despair and the Future of Capitalism* identifies emerging social issues and normative solutions to them. As such, they frame their book as a public intervention into the case of dropping life expectancies in America. Yet the motivating question for their flagship publication is less about measuring this drop, and more about the reasons behind it. Their conclusion is that much of it was directly drawn from rising deaths among middle-aged Whites in the United States, especially involving suicides, drug overdoses, and alcoholic liver disease. The authors point to some key external forces that emerged from the 1990s onwards that may explain these deaths of despair that particularly touched a cohort of mostly men born between 1960 and 1980 in rural areas: lack of a higher education; less social mobility; less attachment to places, people and institutions; lack of status that is usually imparted by these social connections; and wage stagnation. This was undeniably accelerated by the easy availability of prescription opioids from the late 2000s onwards for a variety of physical ills, especially pain, which meshed with this abovementioned decline of working-class life. As the authors state on page 4, “our story is of deaths of despair: of pain; of addiction, alcoholism, and suicide; of worse jobs with lower wages; of declining marriage; and of declining religion is mostly a story of non-Hispanic white Americans without a four-year degree”. Theirs is a mostly economic explanation which avoids blaming the victim for moral weakness, a key pitfall in any discussion about rising levels of substance abuse. So while the immediate deaths may be self-inflicted, they must be set within a larger context of economic decline and the production of despair.

Yet the authors implicitly connect economic arguments to some social ones – that these deaths bind a lack of economic opportunities to physical deterioration and, most importantly, underlying despair and mental decline. The rise in these self-inflicted deaths underline notions of social breakdown, of Durkheimian *anomie* (Adler et al., 1995), in which social standards and common values necessary for regulating behaviour become unmoored. According to the authors, the drop in status among working-class Whites as employment dried up created a sense of estrangement and lack of purpose, and that this very same alienation had occurred to African-Americans in large manufacturing cities as jobs disappeared in the 1970s and 1980s. In this sense, the authors are implicitly suggesting the outlines of a *social geography of health denial* – that issues of life expectancy, for instance, cannot be understood without recourse to particular social relations within particular places, of the “connections between different peoples, places, practices and processes” (Jayne et al., 2008, p. 250) such as status, hope, and self-respect.

And so from my perspective, the book can be critiqued in that it leaves many underlying variables to the reader's imagination. These implicit variables map on to the next four subsections, where they are developed in greater detail: the spatial and the social; the rural-urban divide; and deaths of despair as a form of violence. Finally, I see potential in the final subsection of considering other forms of health denial in places beyond the parochial confines of the United States.

### **3. THE GEOGRAPHIES OF DEATHS OF DESPAIR: EMBEDDED SOCIAL AND SPATIAL INEQUALITIES AND HEALTH DENIAL**

While Case and Deaton may not be geographers, they do not ignore the highly uneven spatiality of self-inflicted deaths across America. Indeed, place matters to them – they talk about moving beyond the biomedical to see how people live, and how their biographies intersect with what they call “unhappy places”. These places strongly overlap with “regions and states that have weathered steep job losses, population outflows, and a consequent hollowing out of local civic and social institutions. Many states that have suffered most had a less-educated workforce, and are not magnets for the influx of immigrants, whose arrival might compensate for population loss” (Popovich, 2016). The map of overdose deaths in particular intersect with precipitous drops in extractive and manufacturing industries, in states such as Ohio, Pennsylvania, Kentucky and West Virginia where the steel and coal industries had essentially collapsed. It is those places where the pillars of working class life – a stable job and home life, a community of peers – had eroded the most since the 1990s.

The authors are rather implicit about the role of embedded social inequalities, but I will make them explicit as a way to both confirm well-established comprehensions but also push them forward somewhat. Geographers of health have noted the importance of inequality above and beyond deprivation (Marmot & Wilkinson, 2005; Wilkinson & Pickett, 2009; Dorling, 2015). In other words, there are negative health outcomes when certain populations feel mistreated, ignored, or sense that it is almost impossible to have any kind of upward social mobility, turning instead to self-destructive behaviour. For instance, Marmot and Wilkinson (2005) underline that non-communicable diseases kill far more people than communicable ones, and that this happens via the social gradient that exists even with free access to health care (which the United States certainly does not have). Using Sen's personal capabilities approach, which posits health as human flourishing (Kass, 2001; Ruger, 2004), I can recast this embedded social inequality as a form of *health denial* that undermines “an individual's opportunity to achieve good health and thus be free from escapable morbidity and preventable mortality” (Ruger, 2004, p. 1076). So rather than just poverty and material deprivation per se, the presence of unequal trajectories and widening gaps between the educated and less educated, loss of status, loss of community, loss of family can all lead to self-inflicted mortality.

All of this is again rather implied in the book, but it does bolster a key insight of the social geography of health: that the social determinants of (ill-)health are about non-medical factors that impact health outcomes. They are not just about absolute deprivation but also pervasive inequality - despair can concentrate in left-behind places where self-destructive behaviour is perhaps more normalized, even accepted. The authors sum up these trends (2020, p. 166) by saying that “the simultaneous loss of a world of work, of the family life that

it created and supported, and at least the perception of a loss of racial privilege or even reverse discrimination is a toxic combination that is more powerful than a real but manageable decline in incomes”. Yet the book also delivers a message that adds insight to this social determinant argument, about the importance of emotional factors such as hope for the future and its impacts on well-being. A lack of hope for the future, combined with a lack of trust in social institutions, imposes a terrible burden on people’s mental health, which in turn can lead to pain and anguish (Vojnovic et al., 2019). These visceral reactions to feeling demoted without proper social attachments is an important, yet understudied, aspect of deaths of despair that re-invigorates the notion of anomie and social alienation brought up earlier.

#### **4. THE SOCIOLOGY OF DEATHS OF DESPAIR: URBAN AND RURAL IMAGINARIES**

Building on this notion that place matters in breeding despair, there is a clear urban/rural divide in the deaths of despair. There has been a marked rise in mortality rates in more rural areas of the United States (Case & Deaton, 2020, p. 34). This braids physical pain and social pain, of how the former is managed through prescriptions and how the latter is largely ignored. Social problems are usually less visible to policy-makers in rural areas – a function of low density and low attention paid - but more visible to friends and neighbors. But it is also an issue of imagination – rural problems do not seem to constitute existential threats to the stability of the American nation as much as urban ones, and do not provoke the same moral panics. The obscurity of many of the deaths of despair, in places few know of (Portsmouth Ohio, Yamhill Oregon – see Arnade, 2017 and Kristoff & WuDunn, 2020 respectively) means that they are perceived as less threatening to the urban-constructed nature of society (Evans & DeVerteuil, 2018; DeVerteuil et al., 2020). This lack of visibility is matched by the gradual nature of deaths of despair, whose slowness makes it difficult to capture as an immediate crisis in the political sense, and speaks to ‘slow violence’ that I will visit in the next section.

The fact that deaths of despair are more rural than urban has policy implications for drug control and drug treatment. It has dictated a radically different response to when death rates spiked among urban African-Americans (e.g. violence, drug overdoses) in the 1980s and 1990s. Urban African-Americans had already suffered economic dislocation well before rural Whites, a foreshadowing of job loss and social disintegration leading to raised mortality. While deaths of despair in rural areas has engendered a vaguely benign response, the urban crisis engendered a punitive ‘War on Drugs’ and mass incarceration from the 1990s onwards (Netherland & Hansen, 2016). And so the geographical imaginaries behind health crises have material impacts on health and social policy – crises deemed non-threatening receive limited and perhaps kindly attention, while those deemed threatening engender unnecessarily harsh responses amounting to overkill. These divergent place-based imaginaries, between a non-threatening rurality and a threatening urbanity, have deep roots in American understandings around the concentration of contagious diseases as well as the ‘moral’ diseases of addiction and mental illness in cities (Vojnovic et al., 2019). While deaths of despair have shifted the locus of dangerous drug-taking from the urban to the rural, it has not shifted the imaginaries behind current anti-drug policies.

## 5. THE POLITICS OF DEATHS OF DESPAIR: STRUCTURAL VIOLENCE AND SLOW VIOLENCE

One way to articulate the authors' implicit focus on larger, political forces at play is through the idea of violence, particularly the structural and slow kinds. Violence can be defined as harm that inhibits self-development and self-expression (DeVerteuil, 2015). Yet it is not always physical – it can also be social, linked to collective structures. These powerful yet invisible forces of exclusion Zizek (2008, p. 1) called “systemic violence”, the “often catastrophic consequences of the smooth functioning of our economic and political systems”. Building on Johan Galtung, Banerjee et al. (2012, p. 390) deemed structural violence “the role that institutions and social practices play in preventing people from meeting their basic needs or realizing their potential”. Within health geography, structural violence remains a rather marginal concept, despite its obvious influence on people's health and how it indirectly prevents people from meeting their basic needs and leads to preventable, premature death. Farmer (1996, pp.279-280) is a key proponent for the utility of structural violence for understanding the *denial* of health:

The capacity to suffer is, clearly, part of being human. But not all suffering is equal...It is possible to speak of extreme human suffering, and an inordinate share of this sort of pain is currently endured by those living in poverty. Take, for example, illness and premature death, in many places in the world the leading cause of extreme suffering. In a striking departure from previous, staid reports, the World Health Organization now acknowledges that poverty is the world's greatest killer: ‘Poverty wields its destructive influence at every stage of human life, from the moment of conception to the grave. It conspires with the most deadly and painful diseases to bring a wretched existence to all those who suffer from it’.

Case and Deaton (2020: 189) do not directly use the concept, but they do allude to it in the form of slow disintegration of groups neglected badly enough and long enough, making them “susceptible to suffering social breakdown of one kind or another...it is not absurd to imagine the distress moving up to more highly educated groups next”. Poverty is but one form of neglect – as previously mentioned, the loss of status and purpose can also be seen as structural violence, of disregard for particular people and places.

Crucially, deaths of despair emerged slowly – a slow unravelling of people and places over more than 25 years. This bonds structural violence to ‘slow violence’ (Nixon, 2011; Davies, 2018), a quiet yet steady accumulation of harm below the radar. To Nixon (2011:2), slow violence is “a violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all”. Armed with this view of slow violence, deaths of despair make visible the lagging effects of deindustrialization, the destruction of working-class life, and the loss of social infrastructure and reference points. This is compounded by a denial of counter-measures that would soften the blow. As the authors state (2020: 188),

our argument is that the deaths among Whites would not have happened, or would have not been so severe, without the destruction of the White working class, which, in turn, would not have happened without the failure of the healthcare system and other problems of the capitalism we have today – particularly persistent upward redistribution through manipulation of markets.

The pervasive and state-sanctioned introduction of highly addictive (and lethal) opioids during the early 2010s turbo-charged deaths to new heights.

Alongside structural and slow violence, deaths of despair compel social geographers of health to confront the ‘less-than-human’ aspects of the social, rather than turning to trusted notions of well-being (Philo, 2017). This necropolitical, ‘less-than-human’ perspective invites us to think about “what subtracts from the human in the picture, what disenchants, repels, repulses – what takes away, chips away, physically and psychologically, to leave the rags-and-bones (and quite literally broken hearts, minds, souls, spirits) of ‘bare life’” (Philo 2017: 258). The slow-moving forces that strip people and places of hope need to be researched, not just as a way to rebalance the overly-positive nature of health geography (DeVerteuil, 2015), but also as a way to better frame deaths of despair as a grounded, everyday outcome of health denial. This denial brings up the issues of gender (particularly the crisis of masculinity), race (of how the dominant race can still be vulnerable to downward drift) and disability (the meshing of mental illness, despair and addiction, and pain – Lix et al., 2007). Case and Deaton provide a ‘big picture’ of what is going on, an impersonal context of contexts. The ‘less-than-human’ framework suggests an avenue into more ‘on-the-ground’ research into deaths of despair as distinctly spatial and social phenomena, that could also apply to the question of whether deaths of despair are applicable in non-American contexts, as the research agenda below outlines.

## **6. RESEARCH AGENDA: TRAVELING BEYOND THE UNITED STATES?**

To make the conversation more two-sided, how can an appreciation of the deaths of despair phenomenon move social geographies of health into new territories, forging new research agendas? One trajectory worth considering is the extent to which the same *social geography of health denial* can emerge in different places with different health contexts. In this regard, Case and Deaton (2020: ix) took great pains in saying that deaths of despair have much to do with the “unique failure” of America, particularly around the peculiarities of the American healthcare system, the overly-powerful status of pharmaceutical companies, and a lack of compensating structures and welfare safety nets. So much so that deaths of despair cannot be seen to apply to other nations; it is uniquely American, particularly “the opioid epidemic [that] did not happen in other countries both because they had not destroyed their working class and because their pharmaceutical companies are better controlled and their governments less easily influenced by corporations seeking profits” (2020: 126).

A cursory glance at conditions in other Global North nations largely confirms the lack of a parallel decline in life expectancy, and little to suggest a full-blown opioid epidemic (Woolf et al., 2021). This builds on studies that point to a persistent lack of ‘transatlantic convergence’ of American-style social conditions in Europe, or even Australia and Canada. For instance, Wacquant (2008) warned against transatlantic convergence in terms of the ghettoization of certain marginalized populations – namely that African-Americans in Chicago are more segregated and suffer under a more penal state than their counterparts in Parisian *banlieues*. And yet, there is some evidence that the phenomenon could be occurring (or has occurred) elsewhere, though not framed as such. It is interesting to note that the two next highest opioid death rates at the turn of the decade are in Canada and the UK (Roser, 2020), suggesting the need for further investigation. For Canada, the scandalously low life



expectancies (and high overdose and suicide rates) of Indigenous populations can be partially framed by the deaths of despair concept – as it can in other settler societies such as Australia and New Zealand. In the UK, alcohol-related liver disease among 45–54-year-olds in England continued to increase between 1993 and 2017 (Public Health England, 2018; ONS, 2019), while drug overdoses in Scotland have continued to rise within the same generation since the 1990s (NRS Scotland, 2018). There can be no doubt that the last ten years of austerity has squeezed living standards in many poorer parts of the nation, curtailing essential services around housing, health and employment at a time when they were most needed. Reframing these persistent and increasing health denials as deaths of despair can shed new light on the lived experience of health denial across different national contexts, with the proviso that important differences will always remain given strong tendencies towards unevenness.

It thus makes sense to recast deaths of despair as a *lagging indicator*, occurring sometimes decades after major economic and social disjunctures, as in the case of post-socialist nations. Case and Deaton discuss the parallels with Russia during and especially after Communism, for those middle-aged and older cohorts who had benefited from the system. Indeed, life expectancy dropped sharply during the 1990s and 2000s as those used to a very regimented, Soviet-style life where everyone had a job and everything was provided, albeit without much choice, faced a free-for-all where a few became very rich while most fell into poverty and chaos, particularly in more rural backwaters (see Scheiring et al, 2019). And so alienation and social trauma in particular places, and the lagging emergence of deaths of despair as a form of slow violence, invites further research beyond the United States. This suggests that ‘deaths of despair’, rather than being uniquely focused on rural Whites in the United States, have been at least partly experienced by other populations left behind (indigenous, African-Americans, post-socialist) by post-colonial forces, discrimination and new economies respectively. In other words, these populations have faced common patterns of health denial, even if they do not reflect exactly the same trajectories. Finally, while I hope that this review article expands the receptiveness to the deaths of despair framework in understanding health denial among social geographers of health, it cannot hope to explain every health crisis – the key is to apply it judiciously and carefully, aware of its particular historical and geographical roots but open to its possible appearance elsewhere in similar and different forms.

## REFERENCES

- Adler, F., Laufer, W. and Merton, R. (1995) *The Legacy of Anomie Theory*. New York: Routledge.
- Andrews, G., Crooks, V., Pearce, J., & Messina, J. (2021). *COVID-19 and similar futures: Pandemic Geographies*. Heidelberg: Springer Technical Press.
- Arnade, C. (2017). 'The pill mill of America': where drugs mean there are no good choices, only less awful ones. *The Guardian* <https://www.theguardian.com/society/2017/may/17/drugs-opioid-addiction-epidemic-portsmouth-ohio>. Accessed 17 April, 2020.
- Banerjee, A., Daly, T., Armstrong, P., Szebehely, M., Armstrong, H. & Lafrance, S. (2012). *Structural violence in long-term, residential care for older people*. *Social Science & Medicine* 74, 390-398.
- Case, A. & Deaton, A. (2020). *Deaths of despair and the future of capitalism*. Princeton, NJ: Princeton University Press.
- Centers for Disease Control (CDC) (2021). National Center for Health Statistics. *Provisional drug overdose death counts*. <https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm>. Accessed April 2, 2021
- Davies, T. (2018) Toxic space and time: Slow violence, necropolitics, and petrochemical pollution. *Annals of the American Association of Geographers* 108(6), 1537-1553.
- DeVerteuil, G. (2015). Conceptualizing violence for health and medical geography. *Social Science and Medicine* (special issue of the 2013 IMGS) 133: 216-222.
- DeVerteuil, G. (2021). Contradictory and Compounding: The Social Implications of COVID-19. In *COVID-19 and Similar Futures*, editors Andrews, G., Crooks, V., Pearce, J., and J. Messina. Heidelberg: Springer Technical Press. 179-183. DOI: [https://doi.org/10.1007/978-3-030-70179-6\\_23](https://doi.org/10.1007/978-3-030-70179-6_23)
- DeVerteuil, G. & Wilton, R. (2009). The geographies of intoxicants: From production and consumption to regulation, treatment and prevention. *Geography Compass* 3: 478-494.
- DeVerteuil, G., Power, A. & Trudeau, D. (2020). The relational geographies of the voluntary sector: Disentangling the ballast of strangers. *Progress in Human Geography* 44(5): 919-937.
- Dorling, D. (2015). *Injustice: Why social inequality still persists*. Bristol: Policy Press.
- Evans, J. & DeVerteuil, G. (2018). 'The political spaces of urban poverty management', in *The Routledge Handbook on Spaces of Urban Politics*, 307-319.
- Farmer, P. (1996). On suffering and structural violence: a view from below. *Daedalus* 125 (1), 261-283.

Fuller, T. (2021). San Francisco Contends With a Different Sort of Epidemic: Drug Deaths - The New York Times (nytimes.com). April 23.

Horsley, S. (2021). 'How the pandemic may be fuelling 'deaths of despair'', National Public Radio (USA).

Jayne, M., Holloway, S. & Valentine, G. (2008) Geographies of alcohol, drinking and drunkenness: a review of progress. *Progress in Human Geography* 32: 247–263.

Kass, N. (2001). An ethics framework for public health. *American Journal of Public Health* 91(11): 1776-1782.

Katz, J. & Sanger-Katz, M. (2021). 'It's Huge, It's Historic, It's Unheard-of': Drug Overdose Deaths Spike. *New York Times* July 14.

Kristoff, N. & WuDunn, S. (2020). Who killed the Knapp family? *The New York Times* <https://www.nytimes.com/2020/01/09/opinion/sunday/deaths-despair-poverty.html>

Lix, L., DeVerteuil, G., Walker, J.R., Robinson, J.R., Hinds, A. & Roos, L. (2007). Residential mobility of individuals with diagnosed schizophrenia. *Social Psychiatry and Psychiatric Epidemiology* 42 (3), 221-228.

Marmot, M. & Wilkinson, K. (2005). *Social Determinants of Health*. Oxford: Oxford University Press.

NRS Scotland (2018). <https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/deaths/drug-related-deaths-in-scotland/2018>

Netherland, J. & Hansen, H. (2016). White opioids: Pharmaceutical race and the war on drugs that wasn't. *BioSocieties* 1-22.

Office of National Statistics (2019). *Deaths related to drug poisoning in England and Wales: 2018 registrations*. <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/deathsrelatedtodrugpoisoninginenglandandwales/2018registrations>

Ormond, M. & Kaspar, H. (2019). Medical travel/tourism and the city. *Handbook of Global Urban Health*, editors Vojnovic, I. et al.. New York: Routledge, 182-200.

Popovich, N. (2016). A deadly crisis: Mapping the spread of America's drug overdoses epidemic. *The Guardian* <https://www.theguardian.com/society/ng-interactive/2016/may/25/opioid-epidemic-overdose-deaths-map>

Proudfoot, J. (2017) Drugs, addiction, and the social bond. *Geography Compass* 11 (7), 12320.

Public Health England (2018) *Liver disease profiles: short statistical commentary, November 2018*. <https://www.gov.uk/government/publications/liver-disease-profiles-november-2018-update/liver-disease-profiles-short-statistical-commentary-november-2018>

Ruger, J. (2004). Health and social justice. *Lancet* 364: 1075-1080.

Scheiring, G., Irdam, D. & King, L. (2019) Cross-country evidence on the social determinants of the post-socialist mortality crisis in Europe: a review and performance-based hierarchy of variables. *Sociology of Health and Illness* 41(4), 673-691.

Vojnovic, I., Pearson, A., Asiki, G., DeVerteuil, G. & Allen, A. (2019). *Handbook of Global Urban Health*. London: Routledge.

Woolf, S. & Shoomaker, H. (2019). Life expectancy and mortality rates in the United States, 1959-2017. *Journal of the American Medical Association*, 322 (20), 1996-2016

Woolf, S., Masters, R. & Aron, L. (2021). Effect of the COVID-19 pandemic in 2020 on life expectancy across populations in the USA and other high income countries: simulations of provisional mortality data *British Medical Journal* 21; 373 doi: <https://doi.org/10.1136/bmj.n1343>

Wacquant, L. (2008). *Urban outcasts: A comparative sociology of advanced marginality*. Cambridge UK: Polity Press.

Wilkinson, R. & Pickett, K. (2010). *The spirit level: Why equality is better for everyone*. London: Penguin.

Zizek, S. (2008). *Violence: Six sideways reflections*. London: Profile Books.