The Specters of Three Victorian-Era Giants are Haunting Public Health: The Relevance of Chadwick, Virchow and Engels's Contributions to Public Health in the 21st Century.

Stella Medvedyuk

A Dissertation submitted to the Faculty of Graduate Studies
In Partial Fulfilment of the Requirements for
the Degree of Doctor of Philosophy

Graduate Program in Health
York University
Toronto, Ontario

November 2024

ABSTRACT

Three Victorian-era public health giants Edwin Chadwick, Rudolph Virchow, and Friedrich Engels, each in their own way, considered the social origins of health and illness and wrote about the social conditions that threaten or promote health; the conditions now referred to as the social determinants of health. Revisiting these Victorian-era thinkers through a critical materialist lens can assist our understanding of how the issues they identified over 170 years ago continue to haunt present day society. This dissertation considers the continuities between the different approaches of these three thinkers and present-day conceptualizations of health, social determinants of health, and means of promoting health. It raises questions about why their findings continue to be considered – for better or for worse – by both the mainstream public health community and those working within the critical social science tradition.

This dissertation consists of three parts. The first part examines these three Victorian-era thinkers' contributions to public health through an analysis of biographies and primary documents. The second part is a scoping review of contemporary literature that evoked these writers from 2000 to 2023 – a period of increased interest in their writings – in 12 influential academic health and health history journals to understand their relation to present day academic writings. The third part is a thematic analysis of 11 interviews with contemporary scholars that evoke these historical figures. These interviews identified why and how these historical figures and their ideas are seen as relevant to contemporary health equity discourses.

The study finds the ideas and works of these historical figures continue to influence contemporary discussion of health. Virchow's concern with public policy continues to be the most evoked in contemporary discourse, yet Engels's influence is increasing, and Chadwick's is waning. Chadwick's focus on government-led public health reform of sanitation, Virchow's advocacy for political reform, and Engels's critique of capitalism persist in modern public health discourses of settings and environments, public policy, and critical political economy respectively. While progressive political reforms are possible, it may be that health equity can best be achieved through reform or transformation of the economic system.

Dedications

In loving memory of

Dedushka Petya, Babushka Tamara, Babushka Yeva, Dedushka Pavlo

&

Jim, Tanya, Pearl

Acknowledgements

I would not be who I am today without the guidance of Dr. Dennis Raphael. You are my mentor, guide, and teacher. Words cannot express the gratitude I feel for having met you. If not for Andrew Watts, I may have never walked into your classroom – so thank you Watts!

Thank you to Dr. Geoffrey Reaume and Dr. Dennis Pilon for your support and guidance of this study, your expertise helped turn ideas into a dissertation. Thank you to Dr. Stephen Bezruchka and Dr. Raju Das for your feedback and for agreeing to serve on the committee.

This dissertation would not be possible without participation of key informants. I thank each and every one of you for your time & support of this research.

Thank you to Dr. Farah Ahmed for your guidance throughout the years. Thank you, Dr. Christo El Morr for helping me get into the program. Dr. Jessica Vorstermans, thank you for teaching me how to teach, your care and compassion will stay with me forever. Thank you to Dr. Marina Morrow, Dr. Claudia Chaufan, and Dr. Michelle Wyndham-West, you all taught me so much.

Thank you to my fellow MA and PhD peers - we celebrated, shared knowledge, and helped each other out when things got tough.

And a final and biggest thank you goes to my life-partner, parents and family. Without you there would be no way, thank you for helping me achieve my dream.

TABLE OF CONTENTS

SECTION 3: RESULTS

List of Tables

List of Figures

SECTION 1: OVERVIEW OF THIS WORK

CHAPTER 1.
INTRODUCTION AND OVERVIEW OF RESEARCH

1.1 Study Background

The three Victorian-era public health giants Edwin Chadwick, Rudolph Virchow and Friedrich Engels, each in their own ways, considered the social origins of health and illness. Each of the thinkers provided vivid descriptions of the effects of poverty among working-class populations, highlighting the urgent need for social reform to address widespread health inequalities. All three are often regarded as pioneers in the field of public health. Chadwick, Virchow, and Engels were shaped by the ideologies of their era and their personal ideological beliefs concerning the nature of society, the origins of illness and the solutions needed to solve health inequalities. Each of these thinkers wrote about the social conditions that threaten or promote health - the conditions to which we now refer to as the social determinants of health. While differences in context, time, and place are undeniable between then and now, the issues examined by Chadwick, Virchow and Engels are still present today in ongoing debates about health determinants, how societies shape the quality and distribution of the social determinants of health, and solutions to contemporary public health issues.

Revisiting these three giants of the Victorian-era through a critical materialist political economy lens can assist our understanding of how the issues they identified over 170 years ago continue to haunt present day society (Medvedyuk et al., 2021). A critical materialist political economy is concerned with understanding how society organizes production and modes of production consequently affecting class structure (Coburn, 2010). The critical aspect of this approach challenges taken for granted ideologies, perceptions, beliefs and ideas in order to create societal change (Coburn, 2010). This dissertation raises questions about why the findings of the three historical figures continue to be considered – for better or for worse – by both the mainstream public health community and those working within the critical social science tradition. These considerations direct new attention to the politics of health and the role ideology plays in identifying, understanding, and responding to public health issues. This dissertation considers the continuities between the different approaches taken by these three Victorian-era

writers and present-day conceptualizations of health, social determinants of health, and means of promoting health and preventing illness.

1.2 Study Purpose

This dissertation follows the tradition of critical social science with an aim to critically revisit the contributions of Chadwick, Virchow, and Engels to public health to assess the relevance of their ideas and solutions to contemporary public health challenges. I seek to understand the influence of their work on present day public health traditions as well as critically examine the strengths and limitations of their approaches. This research study employs triangulation of methods through a three-part analysis (Carter et al, 2014; Patton, 1999). It begins with an historical contextualization of the three thinkers' work, followed by a scoping literature review of the evocation of these writers by contemporary academics, and concluding with interviews with academics who have evoked the three thinkers in their contemporary academic work.

This analysis uses Jacque Derrida's concept of the spectre and trace to uncover ways in which the spectres of Chadwick, Virchow, and Engels are evoked in current public health discourse. The goal is to contribute to the body of historical work on the conceptualisation of public health by highlighting the ongoing relevance of these Victorian-era public health thinkers' writings on modern approaches to health, health determinants, and means of promoting health and preventing illness.

1.3 Research Questions

My research is guided by a set of interconnected research questions designed to help untangle the influence and impact of these three writers' contributions on present-day public health discourses.

1. How are Chadwick, Virchow and Engels's ideas and thoughts around health and reform represented in contemporary public health discourse?
2. How did their understandings reflect their world views concerning the nature of society and its effects upon health? Do these differing world views manifest in contemporary discourse around public health and means of promoting it?

3. What are the implications of these differing world views for promoting public health in the contemporary era? Which are most useful for promoting the health of present-day Canadians?
4. If our goal is promoting health equity by improving the quality and equitable distribution of the social determinants of health through public policy, what does each thinker offer to assist in this task?

Related to how the research will answer these questions, a number of sensitising concepts were adopted. Sensitising concepts have been described as "points of departure" and "those ideas that inform the overall research problem" (Charmaz, 2003, p. 259). Gilgun (2002) argues that "Research usually begins with such concepts, whether researchers state this or not and whether they are aware of them or not" (p. 4).

The first sensitising concept that informs this study is: *At what level – individual, community, or societal – do these historical figures consider health and its determinants?* The second is: *How do these three figures see the nature of society shaped by social, political and economic factors?* Finally: *To what extent do we see the seeds of contemporary approaches for promoting health equity developed by Mantoura and Morrison (2016) of settings and environment, health promoting public policy, and political economy approaches in these earlier writings?* While these concepts lay the foundation for this study and serve as departing points, they do not preclude the identification of additional concepts over the course of the study (Bowen, 2006).

1.3.1 Brief introduction to theoretical and analytical frameworks. Various frameworks inform this inquiry, at the highest level it draws upon the critical materialism and political economy traditions to examine how health and illness and approaches to health inequalities are deeply intertwined with broader social, economic, and political structures (Armstrong, Armstrong & Coburn, 2001; Coburn, 2010; Raphael & Bryant, 2019; Medvedyuk & Raphael, 2023). In terms of the specific inquiry, it utilises critical historiography for its historical analysis to analyse and interpret historical events by looking at the sources and methodologies applied in constructing narratives that reflect social, political, and economic contexts of past and contemporary health discourse (Perdiguero et al., 2001; Tosh, 2015; Evans, 2020).

Within this historiography, this inquiry engages with the concept of trace as developed by Derrida (1994/2012) and more recently employed by Rainey and Hanson (2021). The concept of trace recognizes historical details as narratives that reveal stories of change such that in this research, it can help unveil how and why the ideas presented by Chadwick, Virchow and Engels, are being evoked in contemporary public health academic writings and discourses. Furthermore, the concept of spectre, also developed by Derrida (1994/2012), opens avenues for understanding the complexities of historical representation and the fluidity of meaning. The concept of spectre encourages us to critically engage with diverse historical narratives and explore how the influences from past figures shape modern health approaches and discussions. This general approach also informs phase two and three of the study, the scoping review of how these figures are evoked in contemporary academic literature and the reasons contemporary academics are evoking these figures in their academic work.

Overall, the theoretical considerations of this research underscore the importance of critically interrogating historical narratives, acknowledging the influence of power structures, and exploring how interpretations inherent in the legacies of Chadwick, Virchow, and Engels, influence contemporary health equity discourses. Employing these theoretical and analytical frameworks, the study navigates the intersections of history, philosophy, public health, and health equity, illuminating the continuing influence of these historical figures on contemporary perspectives and practices in public health and health promotion. The key concepts that inform these contemporary perspectives are defined in the following sections: health equity and health inequalities, social determinants and determination of health, liberal state and liberal democracy, and capitalism and neoliberalism. These are followed by an overview of how these concepts are subject to different interpretations that have their roots in the differing world views of Chadwick, Virchow, and Engels.

1.3.2 Brief introduction to methods. This research employs several analytical approaches and techniques to investigate the historical foundations and contemporary manifestations of public health ideologies articulated by Chadwick, Virchow, and Engels. The methodology – that is the package of methods employed – is informed by the research tradition of realism, the lens of critical materialist political economy, and concern with health equity. The specific methods I use triangulate research techniques: historical analysis, a scoping review of

literature, and in-depth interviews. Triangulation enhances the validity of a study by relying on various research techniques (Carter et al., 2014; Thurmond, 2001; Patton, 1999), as well as consolidating and examining information or data from various sources, thus providing a more comprehensive and reliable analysis of the influence these historical figures have on contemporary public health discourse.

Historical analysis

Drawing inspiration from prominent health historians such as George Siegrist (1960), Erwin Ackerknecht (2016), and George Rosen (1940), the first phase of this study is an in-depth historical investigation, drawing on three prominent works written by the three Victorian thinkers. A critical materialist political economy approach rooted in Marxist historiography, and further refined by Thompson (1978) is employed to gain a thorough understanding of how these three historical figures understood the relationship between social, economic, and political factors and health to create adverse health outcomes and the solutions they proposed to address these issues.

Scoping literature review

The second phase of the research involves a scoping review of contemporary literature that evoked these writers from 2000 to 2023, a period of increased interest in their writings. The goal is to understand the legacies of Chadwick, Virchow, and Engels, in relation to present day academic writings. Utilising Derrida's concepts of spectre and trace, the review aims to uncover how the ghostly presence of Chadwick, Virchow, and Engels emerges in contemporary academic health literature. The scoping review methodology, guided by Arksey and O'Malley's (2005) framework, searched 12 influential academic health and health history journals to identify mentions of these three figures. The identified literature was subjected to a qualitative content analysis to reveal the threads connecting their ideas to present-day perspectives on health.

In-depth interviews

Lastly, 11 semi-structured, in-depth interviews were conducted with contemporary academics who reference the three historical figures in their scholarly work. These interviews explore how and why these historical figures, and their ideas remain relevant today and are seen

as contributing to contemporary discourses in health. The interviews were transcribed and thematically analysed to identify key concepts and ideas presented by interviewees.

1.4 Key Concepts of Contemporary Public Health Discourses

This research is informed by several important concepts within the field of health studies. As such, clearly defining key terms for both the writer and the audience helps prevent confusion and ensures a common ground for analysis. The key concepts that inform this research are health equity, social determinants of health, the liberal state and its franchise liberal democracy, capitalism and its current form of neoliberalism, and major approaches to promoting health equity: settings and environment approach, public policy, and political economy (Mantoura & Morrison, 2016). These concepts inform the three phases of my research: historical analysis, scoping review of contemporary health equity academic literature, and interviews of academics evoking these three writers.

1.4.1 Health equity and health inequalities. The concept of health equity is rooted in principles of social justice, human rights, and distributive justice (Braveman & Gruskin, 2002). It underscores the fundamental right that everyone should have fair opportunities to achieve their full health without disadvantage (Whitehead, 1992). Health equity, as Whitehead defines it, involves equal access to care, utilisation of health services based on need, and equal quality of care for all (Whitehead, 1992). It aims to reduce and eliminate avoidable, unfair, and unjust disparities in health and its determinants, particularly those rooted in systemic processes (Braveman, 2014). Health inequities are characterised as unfair health inequalities resulting from unjust systemic processes (Dahlgren & Whitehead, 1991) and contribute to negative health outcomes for specific population groups (Kawachi et al., 2002). While health inequalities refer to measurable differences among individuals or groups, health inequity specifically addresses disparities rooted in systemic injustice (Kawachi et al., 2002).

Kawachi and colleagues (2002) delineate two approaches for evaluating health inequalities. The first involves measuring social group differences, utilising rate ratios, rate differences, and absolute differences to quantify disparities among various socioeconomic groups (Braveman, 2006). The second approach assesses health status across individuals in a

population, considering overall differences between the sickest and healthiest members irrespective of socio-economic factors (Kawachi et al., 2002).

Notably, the understanding of health inequalities varies globally, with a predominant focus on socio-economic backgrounds in Europe and other regions, while in the USA, health disparities often emphasise racial/ethnic differences, potentially overlooking broader systemic processes (Braveman, 2006). Health equity and health inequalities research is critical for shaping policies that address systemic processes and promote just health outcomes.

1.4.2 The social determinants of health and social determination. The concept of the social determinants of health has deep historical roots (Medvedyuk & Raphael, 2025). Chadwick, Virchow, and Engels described how material living and working conditions significantly impact health over 170 years ago. More recently, The World Health Organization's (WHO) *Ottawa Charter for Health Promotion* emphasised the importance of social determinants such as shelter, peace, education, income, and equity in achieving health (Raphael, 2010). Link and Phelan's theory of fundamental causes further underscored the persistent association of socio-economic status with overall health, emphasising access to key resources such as money, power, social connections and access to care as fundamental causes affecting health (Phelan & Link, 1995, 2010).

The Commission on Social Determinants of Health, established by WHO in 2005, called for greater social justice and the reduction of health disparities globally (WHO, 2008). In Canada, social determinants of health encompass factors such as income, education, job security, housing, immigration status, indigeneity, disability, social exclusion, race, early childhood development, food insecurity, social safety net, access to health services among many others, as shaping the health of individuals and populations (Bryant et al., 2011; Raphael, Bryant, Mikkonen & Raphael, 2020). Despite acknowledging the importance of the social determinants, Canadian public health efforts often fall short in addressing the unequal distribution of the social determinants of health, which is in contrast to Nordic countries where these issues are more actively acted upon in public policy (Mackenbach & Bakker, 2002; Bryant, 2016; Côté & Raynault, 2015). Understanding and addressing the social determinants of health are key steps in promoting health equity and well-being.

Despite the central focus on equity within the social determinants of health framework, this concept has been critiqued for being reductionist (Rocha & David, 2015; Garbois et al., 2014), focusing on disparities or isolated "determinants" often associated with "classic risk factors and individual lifestyles" (Alames, Cebes, Cut, as quoted and translated from the Spanish by Spiegel et al., 2015, p.16), and reproducing positivist perspectives (Garbois et al., 2014) rather than identifying social structures of power and capital as creating ill health (Waitzkin, 2023) .

In Latin America, the concept of social determination of health was developed out of social medicine and collective health movement since the 1970s (Breilh, 2021; Waitzkin et al., 2021). Since then, it has influenced research in social medicine exemplified in the Movement for Brazilian Health, and One Health (Rocha & David, 2015; Baquero, 2021). The key features of the social determination framework see the health-illness as a dialectic process which requires:

> […] multilevel analysis of how social conditions, such as economic production, reproduction, marginalization and political oppression, affect a dynamic process of health-illness among different groups within a population, such as workers versus capitalists, poor versus rich, women versus men, and ethnic-racial minorities versus non-minorities. […] changes in policies and in societies emerge from social contradictions and the social movements and conflicts that arise from those contradictions. Hierarchies of determination, production, and reproduction at the societal level impact health-illness, as opposed to individual-level variables that measure risk. Such hierarchies involve power relations, accumulation of capital and discrimination (classism, racism, sexism) that create inequality, exploitation and chronic stress, and these conditions lead to illness and early death. (Waitzkin et al., 2021, p. 53)

Importantly, social determination requires societal transformation such as moving beyond reforms to replacing capitalism to improve poor health and early mortality (Waitzkin et al., 2021; Waitzkin, 2023). Numerous critical scholars working to improve the quality and equitable distribution of the social determinants of health are also advocating for a post-capitalist society (Borras 2021, 2023; Raphael et al., 2022; Raphael & Bryant, 2023).

1.4.3 The liberal state and liberal democracy. As a political ideology, liberalism has a complex history. It is both celebrated for its focus on individual freedoms and enterprise and criticised for justifying profoundly unjust societal arrangements (Ervin & Raphael, 2025). Macpherson (1977/2012) argues in his analysis of liberal democracy, the system common across just about all western nations, that the foundation of liberal democracy was free-market capitalism upon which concepts of democracy were later grafted. The key features of liberalism and its manifestation in liberal democracy are individual freedom and market economy with concepts of democratic participation, control and provision of economic and social security being rather secondary.

According to Macpherson (1964/1992), as a system, the liberal state was created and continues to serve the needs of a capitalist market society. The ethos of competition in both political, economic, and social spheres continue to shape liberal states (Townsend, 2019). Fundamentally, the liberal state system is designed to protect and promote a competitive free market where individuals are seen as self-owners who compete with each other to maximite economic, social and political gains and power (Townsend, 2019). This focus on individualism creates what Macpherson termed "possessive individualism" where everything from health to the environment is viewed as an individual's property instead of resources that would be managed responsibly for present and future generations (Cunningham, 2020).

In its early stages the liberal state was characterised by key principles such as constitutional guarantees, the rule of law, civil liberties, property rights, and representative government. These civil liberties and rights were achieved because the working class – produced by the capitalist market society – began to demand political representation and participation in the political process of the market economy (Townsend, 2019). "It is not simply that democracy came later. It is also that democracy in these societies was demanded, and was admitted, on competitive liberal grounds" (Macpherson, 1964/1992, p. 14). This demand for democratic representation and political participation led to the creation of a liberal democracy (Macpherson, 1964/1992; 1977/2012) realised through a newly established electoral and parliamentary systems, market liberalisation, rights to which were often limited to a select group of people (Macpherson, 1964/1992; 1977/2012).

The government ensuring individual liberties and political representation in the liberal democracy was put "into the hands of men who were made subject to periodic elections at which

there was a choice of candidates and parties. The electorate did not need to be a democratic one, and as a general rule was not; all that was needed was an electorate consisting of the men of substance, so that the government would be responsive to their choices." (Macpherson, 1964/1992, p. 12). Leading to an enactment of government officials who support the interests of the capitalist class.

In the liberal democratic state, power is maintained through power relations where those who control capital and the market also control the labour, and consequently have power over others. Macpherson (1964/1992) states:

> Democracy as a system of government is, then, a system by which power is exerted by the state over individuals and groups within it. But more than that, a democratic government, like any other, exists to uphold and enforce a certain kind of society, a certain set of relations between individuals, a certain set of rights and claims that people have on each other both directly, and indirectly through their rights to property. These relations themselves are relations of power — they give different people, in different capacities, power over others. (p. 5)

Thus, practising true democracy led by the common people – as it was initially intended – becomes a Sisyphean task because of the inherent power dynamics and unequal distribution of power and capital among the people. Macpherson (1964/1992) states:

> By admitting the mass of the people into the competitive party system, the liberal state did not abandon its fundamental nature; it simply opened the competitive political system to all the individuals who had been created by the competitive market society. The liberal state fulfilled its own logic. In so doing, it neither destroyed nor weakened itself; it strengthened both itself and the market society. It liberalised democracy while democratising liberalism. (p. 16)

Even though Macpherson's words were written over 40 years ago they remain cogent especially in the light of resurgent neoliberalism.

Freeden (2015) offers a useful framework for understanding the complexities of liberal ideology and outlines five layers of liberalism which describe its historical phrases and ideological shifts. These layers manifest differently depending on the time and context of the social, political and economic structures. The first layer is one of the most persistent in liberalism due to its focus on individual liberty and protection from tyranny. This layer emphases natural rights, constitutionalism and the rule of law. The second layer focuses on economic freedoms and free market economy. It stresses economic self-determination and economic liberalism where property rights become essential to freedom. The third layer centres on human development and individual expressions, such as supporting personal growth through education, freedom of speech, and personal development. The fourth layer focuses on removing social barriers that may hinder human development. The fifth and last layer moves beyond individual rights to focus on the rights of groups belonging to specific social groups based on gender, religion, sexuality or ethnicity, among others. The fifth layer produces tensions between group rights and individual rights by focusing on identities rather than class-based politics (Ervin & Raphael, 2025). Freeden (2015) argues that these five layers are in a constant and dynamic state of flux, rearrangement, and interaction. At times one of the layers may conflict or dominate another layer or overlap and coexist together depending on the needs and ideologies of the specific period and context.

1.4.4 Capitalism and neoliberalism. Capitalism, the dominant contemporary economic system, has undergone phases characterised as competitive, monopoly, and global, all of which have defined distinct class structures and dynamics with implications for health equity (Coburn, 2010; Ross & Trachte, 1990). The competitive phase of the 19th century saw small firms and a weak working class, while monopoly capitalism allowed for worker organisation leading to wage increases which improved income across the social class spectrum (Coburn, 2000). More recently, global capitalism has been marked by mobile capital and technological advances, diminished state autonomy, weakened labour organisation, and unity of the capitalist class, resulting in ongoing attacks on the welfare state (Coburn, 2000).

Neoliberalism has served as the rationale and justifying ideology for these recent shifts. It is seen as a response to the gains of the working class during the post-World War II era and emerged to combat unionisation, rising social services expenditure, and progressive taxation

(Teeple, 2000). These therefore align with capitalist interests of enhancing capital accumulation and legitimises these shifts (Freudenberg, 2021; Harvey, 2021; Navarro, 2020a, b). Neoliberal policies, emphasising individualism and reducing state control over the economy has led to growing income inequality, de- and re- regulation of business practices, privatisation of many previously public institutions, and reduced state expenditures on social and health services (Bryant & Raphael, 2020; Freudenberg 2021; Navarro, 2020a, b; Labonte & Ruckert, 2015).

Historically, improvement in health indicators such as life expectancy and infant mortality appeared under global capitalism but even these indicators are either stagnating or declining in nations identified as liberal welfare states such as Canada (Dangerfield, 2023), the USA (Arias et al., 2022; Bezruchka, 2022) and UK (Raleigh, 2022).

In the developing world, the "bottom billion" face extreme poverty and health issues, exposing the system's negative effects (Hendricks & Powell, 2009). Global capitalism, interconnected economically and politically, promotes austerity policies through institutions like the International Monetary Fund and World Bank, further contributing to the erosion of welfare states and social safety nets (Hendricks & Powell, 2009).

Neoliberalism even further exacerbates inequality globally, concentrating wealth among a few while excluding many from education, power, and control - the fundamental causes of health inequalities as outlined by Link and Phelan (1995) (Coburn, 2010; Hendricks & Powell, 2009). The neoliberal shift diminishes state sovereignty and elevates transnational corporations' power, thus limiting the autonomy of nation-states in creating their own economic, political and social structures (Hendricks & Powell, 2009; Navarro, 2007).

1.4.5 Major contemporary approaches to health. Mantoura and Morrison (2016) provide a concise overview of three major health policy approaches for addressing health inequalities and the social determinants of health: 1) settings and environments; 2) public policy; and 3) critical political economy. Medvedyuk and Raphael (2025) place these approaches within the frameworks established by pioneering Victorian-era figures, Chadwick, Virchow, and Engels.

Settings and environments models. These approaches focus on physical planning, local initiatives, and promoting healthy behaviours. For instance, Canada's Chief Health Officer's 2017 report *Designing Healthy Living* emphasised neighbourhood design to encourage physical

activity and access to fresh produce (Tam, 2017). However, by concentrating on lifestyle and behavioural aspects, these models shift focus away from the broader societal structures that create and distribute social determinants of health. Instead, they tend to highlight what Nettleton (1997) refers to as the "holy trinity" of lifestyle risks: exercise, smoking, and diet. The depoliticized nature of these models makes them attractive to politicians and policy makers (Medvedyuk & Raphael, 2025).

Public policy. These approaches highlight the significance of public policy and social reform to address structural determinants of health, and it is often associated with various forms of the welfare state and health outcomes research (Esping-Anderson, 1990). While this approach is successful in some states like the North European nations, in the three liberal welfare states of Canada, the UK, and the USA, the quality and equitable distribution of the social determinants of health through policy reform continues to decline (Bezruchka, 2012, 2022; Bryant et al., 2011). Despite hopes that the Covid-19 pandemic would illuminate the importance of the social determinants of health and prompt progressive public policy reform, such changes have not occurred in fact the gap between the have and have nots has been increasing since the pandemic (Medvedyuk & Raphael, 2025). The failures within liberal welfare states have shifted attention towards the political economy approach, which situates many of the forces threatening health within the context of the neoliberal capitalist economic system.

Political economy. Political economy models explicitly consider the political and economic structures of the state and their influence on health and health inequities. Doyal and Pennell's (1979) work was the contemporary trailblazer in this area and has since been advanced by academics such as Vicente Navarro (2009) in global health research, Howard Waitzkin (2018) in USA and Latin America context, and in Canada by Toba Bryant and Dennis Raphael (2022) and Ronald Labonte and Arne Ruckert (2015). In the UK, Clare Bambra and Ted Schrecker (2015) among many others, have greatly contributed to our understanding. These researchers fall within the political economy approaches to health inequities and highlight the importance of the economic system in creating social, political and economic environments that either support or threaten health. Political economy models provide a holistic understanding of the societal structures and processes shaping social determinants within the context of capitalist economic systems.

More recently, the resurgence of Engels's work on political economy of health inequalities has been identified, particularly his concept of social murder under the capitalist economic system which first makes the working class ill and then leads them to an untimely death (Medvedyuk et al., 2021; Govender et al., 2023).

1.5 Study Importance

By examining the historical perspectives of public health pioneers Chadwick, Virchow, and Engels, this study fills a critical gap in current knowledge by offering an understanding of the ideological roots of contemporary public health discourses. These three thinkers, whose ideas continue to influence modern health approaches, can be seen as spectres whose writings provide a lens through which we can critically examine the evolution of public health thought. This research not only contributes to the scholarly discourse on the history of public health but also provides valuable insights for contemporary health researchers, advocates, policymakers, and practitioners concerned with health promotion, social determinants and determination of health, and health equity.

The study explores the often-uncontested nature of historical accounts, challenging the dominance of perspectives aligned with ruling class ideologies. It examines how the suppression of certain histories has impacted academia, public policy, and the resurgence of specific ideological spectres at particular moments in time. By acknowledging history as a tool used by various actors to either sustain or create change aligned with particular ideologies, this research highlights the importance of studying the influence of historical narratives on contemporary discourses.

As societies grapple with increasing health inequities, the findings of this study have the potential to reshape public health narratives. For instance, by understanding Virchow's emphasis on progressive reform, we might reinvigorate efforts to address systemic inequalities in current health policies. By considering Engels's views on how capitalism sickens and then kills many, we can consider transformation of the economic system. Finally, by considering Chadwick's views we can identify some of the limitations of contemporary public health discourse and practice. This research can guide the development of interventions that are not only historically informed but also contextually relevant.

1.6 Potential Contribution to Knowledge

The study employs a critical materialist lens, critical historiography, and philosophical concepts developed by Jacques Derrida to create a novel methodological approach for examining historical narratives and their influence on contemporary health approaches and discourses. By utilising the concepts of trace and spectre this research introduces a new perspective on health and social determinants of health research, offering potential avenues for further methodological development in the fields of history of health, public health, and philosophy.

In a world where health inequities persist and inequitable distributions of social determinants continue to shape health, the findings of this study may offer actionable insights for policymakers, practitioners, and public health advocates seeking a more comprehensive and historically grounded understanding of the forces that shape health discourses, policies, and outcomes. Through this analysis, the study takes an important step towards constructing a more equitable and historically aware framework for contemporary public health strategies and approaches.

1.7 Reflexive Statement

I recognize that my personal beliefs and perspectives influence the way I approach and conduct research. Patton (2015) states that reflexivity "entered the qualitative lexicon as a way of emphasising the importance of self-awareness, political/cultural consciousness, and ownership of one's perspective" (p. 381). Potter's (1996) three step process for reflexivity includes: 1) examining how the researcher' decision making process influences study setting, data collection, and rapport; 2) unpacking the choice of methods including data recording and interpretations; and lastly 3) examining the researcher's biases and perspectives. Furthermore, Mauthner and Doucet (2003) suggest that reflexivity should also include academic and personal perspectives (such as ontological, epistemological and other assumptions) and institutional context within which research takes place.

I begin with the third step by examining my ontological and epistemological orientations. My worldview has been shaped by my upbringing in the former Soviet Union, now war-torn Ukraine. The stories of displacement, absolute poverty, starvation and imprisonment from one side of my family are in juxtaposition with stories of great academic and professional success from the other side. These stories and experiences inform my understanding of what it is like to

live under communism and the effects when an economic and political system come to an abrupt end.

My parents are working-class people who have had to struggle their entire lives both in Ukraine and in Canada, like many others in both communist and neoliberal capitalist states. My focus on health inequities therefore stems from personal observations of how working-class people both get ill and succumb at earlier ages than the richest members of any society. My undergraduate studies in sociology and graduate studies in health policy and equity at York University introduced me to critical thought and provided a framework from which to understand how political, economic, social systems generate inequality and inequity.

Thus, my epistemological views lie within a critical realism paradigm and critical materialist political economy. I have benefited from critical scholars who work within a university that not only tolerate such thought but celebrate it. In the interview stage of the study a number of academics stated these approaches would not be accepted nor supported in all institutions.

My choice of study setting and data collection stems from some of my recent publications on Engels's concept of social murder which looked at historical writings of Engels to understand how and why health inequities persist in specific economic and political systems. This research led me to Chadwick and Virchow, who often are seen as standing in opposition to Engels's political economy approach. As for the choice in methodologies, my experience in conducting several literature reviews contributed to my learning about and carrying out an historical analysis. In summary then, my desire to understand the roots of contemporary health discourses, and approaches stem from my critical orientation rooted in historical materialism and political economy. I hope that this statement will assist in understanding how my academic background, personal experiences and institutional settings in which I studied influence this work.

1.8 Chapter Summary

This introductory chapter presents a study that examines the contributions of Victorian-era public health pioneers Edwin Chadwick, Rudolph Virchow, and Friedrich Engels with the goal of assessing the relevance of their ideas to contemporary public health challenges. The study employs a triangulation of three methods, historical analysis, a scoping literature review, and analysis of in-depth interviews, informed by concepts of critical materialism, political

economy, and Derrida's concepts of trace and spectre. The study explores how these thinkers' ideas are represented in contemporary discourse and their implications for modern public health strategies. The chapter defines key concepts such as health equity, social determinants and social determination of health, the liberal state and liberal democracy, capitalism and neoliberalism, and major approaches to health (settings and environments, public policy, and political economy). This study seeks to contribute to a more historically grounded and equitable framework for contemporary approaches in public health, emphasising the importance of critically examining historical narratives and their influence on current health discourses. The aim is to offer new insights and a critical perspective on health and how the spectral figures of the past continue to haunt the present.

CHAPTER 2:
THEORETICAL CONSIDERATIONS AND METHODOLOGIES

> *The weapon of criticism cannot, of course, replace criticism of the weapon, material force must be overthrown by material force; but theory also becomes a material force as soon as it has gripped the masses. Theory is capable of gripping the masses as soon as it demonstrates ad hominem, and it demonstrates ad hominem as soon as it becomes radical. To be radical is to grasp the root of the matter. But, for man, the root is man himself.* (Marx, 1843-1844)

2.1 Introduction

Drawing on Marx's perspective, we see theory, much like a material force, becomes powerful when it resonates with and mobilises the public. Marx argues that a theory must be radical and address the root of the matter – humanity itself – to truly influence people. In the context of research, this underscores the significance of selecting and applying theoretical frameworks that not only align with research questions but also address the fundamental issues at hand. Theories, when carefully chosen and rigorously applied, can transform the research process, guiding it in a way that makes the findings not only credible but also impactful.

We know that many people experience adverse health outcomes, many of which Whitehead (1992) identifies as avoidable, unjust, and unfair. Even though we are aware of these injustices, just as Chadwick, Virchow, and Engels were in the mid-nineteenth century – and many others before and after them – in Canada, there is a lack of civil and political will to change the social structures that cause these avoidable, unjust, and unfair health inequities. But why? The answer is not clear-cut. One thing we can observe clearly is that power relations, ideology, economic and political arrangements, along with other social structures, play a major role in how we think about health, how people experience health, and how authorities act to protect, promote, or threaten it.

This chapter begins with an overview of three contrasting knowledge paradigms that shape the way health and its determinants are researched: positivism, idealism, and realism. These paradigms are critical as they influence the selection of theoretical frameworks, which in turn guide the entire research process, from the formulation of research questions to the

interpretation of data. The discussion then transitions to the main theoretical lens used in this study, critical materialist political economy. This lens, particularly relevant due to its focus on the interplay between economic structures and health, aligns with the study's aim to explore the root causes of health inequities.

The second half of the chapter provides an overview of the triangulation of three qualitative methods: historical analysis of literature, scoping review of contemporary literature, and interviews. Following this, the chapter discusses qualitative content and thematic analysis techniques used to analyse the results of the scoping literature review and interviews respectively. These methods were selected for their ability to uncover patterns and themes that might not be immediately evident, ensuring a deeper understanding of the data. The chapter concludes with an examination of the ethical considerations relevant to this study, as well as a discussion of its limitations.

2.2 Theoretical Considerations

The importance of theoretical considerations in research lies in their role as guiding frameworks that shape the entire research process, from the formulation of research questions to the study design and the interpretation of data. Similar to how knowledge paradigms, as described by Wilson (1983), influence the creation, justification, and comprehension of knowledge, theories offer conceptual frameworks that help in understanding and explaining specific phenomena. The following subsections provide an overview of major knowledge paradigms, offering insights into how each paradigm shapes research approaches, and interpretation of findings.

2.2.1 Positivism, idealism, realism.

Positivist, realism and idealism are three main knowledge paradigms that can inform one's ways of understanding the nature of reality, the relationship between the inquirer and what is known, and ways that knowledge can be acquired. In health research, the researchers' ontological, epistemological and methodological orientation translates into different ways that the researcher with varying perceptions of reality, and knowledge influence a research study (Wilson, 1983). Though over 40 years old, Wilson's delineation of these three research traditions remains profoundly cogent to this day. Updates and

applications of these traditions in the health equity literature are available (Breihl, 2021; Bowleg, 2017; Costa & Magalhães, 2020; Golden & Wendel, 2020; Scambler & Scambler, 2015).

Positivism, one of the dominant metatheories in the social sciences, states that the only legitimate knowledge is objectively arrived at scientific knowledge (Wilson, 1983). Measurement, observation, and identification of causal relations are key aspects of the tradition. Positivists believe that science is value free and emphasise the need for reliability and validity. Positivist knowledge paradigms are most often applied through quantitative research. In health, biomedical positivism is primarily concerned with identification and treatment of disease within the body (Blaxter, 2010). The biomedical model of health has had the most influence on contemporary health, illness, and health determinants research and perspectives (Labonte, 1993; Bryant, 2016).

A more progressive branch of positivists, known as social positivists, while emphasising the importance of biological factors accept that environmental factors play an important role in health and its determinants (Aggleton, 1990). They remain committed to traditional quantitative research methods and measurement of observables. Social positivists assert that life-style factors, cultural influences, and environmental factors all play a role in how people experience health. However, socio-positivist explanations tend to contribute to individualistic notions of health and its determinants, with environments seen as shaping behaviours and lifestyles (Labonte, 1993). The focus on individual behaviour and lifestyle has been criticised for promoting victim-blaming, as well as individualistic approaches to illness prevention and treatment which dominate contemporary health and health policy discourses (Aggleton, 1990). Examples of this approach can be seen in Alderson (2021) and Bayoumi and Guta (2012).

Idealism, also referred to as the interpretive paradigm, examines how people understand themselves and the world through shared systems of meaning (Wilson, 1983). Idealism seeks to identify multiple existing realities, where the individual is the active creator of meaning generated through interactions with others and social structures (Wilson, 1983). Because idealism emphasises the importance of people's lived experiences and meaning-making, other salient schools of thought such as symbolic interactionism, ethnography, and participant observation emerged from this paradigm (Bryant, 2016).

Several prominent sociologists made significant contributions to idealism, for example, Charles Cooley and his concept of the 'looking-glass self' used in mental health and psychology

research (Kondrat & Teater, 2012; Shaffer, 2005). George Herbert Mead and his concept of 'role-taking' has been utilised in behavioural research (Meltzer, 1994; Stryker, 2013). Erving Goffman's concept of 'dramaturgy' used in care research, and 'spoiled identity' which help researchers unpack how disease contributes to people's perception of being ill and their role within society (Kvæl et al., 2020; Fraser & Treloar, 2006; Millen & Walker, 2001; Wilkinson & Wilkinson, 2020). And Talcott Parsons concepts of the 'sick role' as a socially unacceptable and undesirable state of being (Schipke, 2021; Shilling, 2002; Varul, 2010).

Importantly, idealism is accepting of all views denying that "misunderstandings" can lead to false consciousness, a process in which ideological, material, and institutional mechanisms deceive individuals from, for example, lower socio-economic statuses. This deception prevents them from recognizing the oppression, inequality, and exploitation inherent in class-based societies (Bryant, Raphael, & Rioux, 2019). By focusing on micro-processes, idealists may fail to account for larger social structures that contribute to people's experiences of health (Blaxter, 2010; Bryant, 2016). For example, public health campaigns that focus on healthy diets suggest that if everyone eats nutritious foods by making better food choices, people would experience less illnesses such as obesity and diabetes. However, this approach does not account for economic barriers such as food cost and lack of time to cook or shop for healthy foods due to having more than one minimum wage job, and social inequalities such as food desserts in lower income neighbourhoods, or lack of public policies supporting low-income individuals in accessing healthy food options (Medvedyuk et al., 2018). So, while focusing on individual choices (micro-processes) is important, it ignores the larger social structures (macro-processes) – like economic inequality or social inequalities – that significantly impact people's ability to make those choices in the first place. Thus, individuals from low socio-economic status groups are misled into believing that it is their choice to not eat healthy foods that contributes to an overrepresentation of obesity and diabetes in low-income groups.

Realism is grounded in the idea that the world and its phenomena exist independently of individual perceptions and function according to discoverable laws and structures (Wilson, 1983). It emphasises that individuals' realities are shaped by larger social structures and societal forces, which not only influence how people live but also the environments and events they experience (Wilson, 1983). In this view, reality exists external to the individual's mind, with specific structures and properties that remain constant regardless of personal beliefs or

perceptions. However, realism also acknowledges the individual's role as an active creator of reality, adding complexity to this paradigm (Wilson, 1983).

Building on this foundation, realism seeks to uncover the unseen aspects of reality by illuminating how societal structures shape events and lived experiences (Wilson, 1983). It strives to identify how economic and political environments shape class relations, status groups, and associations within society. By unpacking the interactions between these structures, realism aims to reveal how differences in the distribution of societal resources influence health, illness, and mortality (Bryant, 2016).

Realism is consistent with several important approaches in health research such as political economy, the human rights approach, and the social determinants of health framework (Bryant, 2016). These theoretical frameworks employ realist paradigm principles by examining overarching societal structures (political, economic, and social processes and environments) that shape health, peoples' experiences of disease, and health care services as well as our understandings of these issues (Bryant et al., 2019). These approaches also seek to identify structural pathways for change (Bryant et a., 2019) as Marx's (1883) statement inscribed on his gravestone insists "The philosophers have only interpreted the world, in various ways. The point, however, is to change it."

Albeit with different philosophical origins from realism, *structuralism* is an intellectual movement that focuses on the underlying structures that shape and organise human culture, language, and understanding of reality (Piaget, 1970; Rendtorff, 2014). In health studies, structuralists emphasise that health is shaped and patterned by the underlying structures of society, highlighting the relationship between "health outcomes and social structures" (Aggleton, 1990, p. 70). Structuralist analysis of health inequalities by Doyal and Pennell (1979) for example, examined how economic and political determinants of health directly and indirectly influence health outcomes (Aggleton, 1990). Importantly, structuralism is not only concerned with health inequalities, but also how these inequalities change over time and place (Aggleton, 1990). Post-structuralist thought often associated with Michel Foucault's work on power and knowledge (Blaxter, 2010) has been adopted in other fields such as feminism, gender studies, race studies, and critical economics among others (Berggren, 2014; Cassidy et al., 2016; Chadderton, 2013; Morrow, 2003; Ollivier et al., 2020; Springer, 2012).

My theoretical framework is grounded in both the realism knowledge paradigm and structuralism, which align well with the two key approaches employed in this study: critical materialist political economy and critical historiography. These perspectives provide a robust foundation for analysing the intersections of social structures, power dynamics, and historical context in shaping health outcomes and public health discourse.

2.2.2 Critical materialist political economy. The critical materialist political economy approach emphasises the role of economic, political, and social forces in promoting or threatening health (Bryant, 2015 a, b; Bryant, 2016). This perspective highlights how dominant class power and ideology, as manifested in political, economic, and social arenas, shape the distribution of resources that determine health outcomes (Bambra et al., 2011; Coburn, 2010; Fox, 2024; Fuchs, 2024). Additionally, it sheds light on the influence of neoliberal economic systems, market dynamics, as well as the roles of labour and civil society in shaping public health policies and approaches to health promotion (Bryant, 2016; Bryant & Raphael, 2020).

By focusing on identifying meaningful pathways for change, the critical materialist political economy approach is also useful in understanding how political and economic barriers to health equity can be addressed and overcome (Bryant et al., 2019; Coburn, 2010). It considers health to be intertwined with economic, political, and social forces and examines how power imbalances impact the creation and distribution of societal resources through public policy, ultimately affecting health outcomes and contributing to health inequalities within a society (Armstrong et al., 2001; Coburn, 2010; Raphael, 2015).

In this study, a critical materialist political economy methodological approach is used to analyse the perspectives of the three Victorian-era thinkers and to explore how their influence on contemporary health discourses exposes the underlying political and economic structures that either threaten or promote health.

2.3 Specific Methodologies to be Employed

This dissertation considers the continuities and discontinuities between different approaches taken by three Victorian-era thinkers and their influence on present-day conceptualizations of health, determinants of health, and means of promoting health and preventing illness. As such, I employ research methods compatible with historical analysis where

the researcher looks at the past in order to understand the present and inform the future. This reflective approach is often achieved through what are termed qualitative methods which themselves are situated in theoretical approaches such as hermeneutics, phenomenological, ethnographic, and narrative approaches. Historical research is also carried out by use of qualitative methods that allow for exploration of the ideas and understandings held by those in the past may be mirrored in the present.

It first identifies the ideas and understanding of earlier writers and attempts to make sense of them as reflections of the life and times of these individuals. Despite Chadwick, Virchow, and Engels all writing about the same time, they take very different approaches which are reflections of their own ideologies and values. It then considers why contemporary scholars are using these ideas in contemporary discourse.

The qualitative research approach is useful as it "honours an inductive style, a focus on individual meaning, and the importance of rendering the complexity of a situation." (Creswell, 2009, p. 4), thereby allowing for deeper insights into how historical figures and their work influences contemporary discourses and people's experiences with them. Additionally, "Qualitative research is multimethod in focus, involving an interpretive, naturalistic approach to its subject matter" (Denzin & Lincoln, 2011, p.2). The multimethod approach in qualitative research fits well with the objective to study phenomenon through triangulation of three qualitative approaches. Quality and credibility of qualitative analysis is key in producing valid and robust research findings. As such rigorous techniques and methods must be employed in order to ensure research validity, reliability, and trustworthiness (Patton, 1999). Lastly, chosen theoretical orientations must be carefully examined so that methods match research questions (Patton, 1999).

Importantly, unlike quantitative research methods, qualitative methods seek to understand the process and reasons behind the formation and interpretation of a specific phenomenon, focusing on the 'how' and 'why' questions to a much greater extent than traditional quantitatively oriented research. In this study I use triangulation of three qualitative techniques: historical analysis, content analyses of the content of the scoping literature review, and thematic analysis of interviews with key contemporary academics who are evoking Chadwick, Virchow and Engels in their work.

2.3.1 Triangulation. In this study, I employ triangulation by incorporating findings from three qualitative methods: historical analysis, a scoping review of literature, and interviews. "Triangulation refers to the use of multiple methods or data sources in qualitative research to develop a comprehensive understanding of phenomena" (Carter et al., 2014; Patton, 1999). Triangulation assists in enhancing the robustness and comprehensiveness of study findings (Carter et al., 2014) as well as helps to strengthen the study validity and reliability (Patton, 1999). There are five forms of triangulation: data, investigator, triangulation, methodological and environmental (Denzin, 1970). This study utilises method and data triangulation by relying on multiple sources to obtain a comprehensive yet diverse understanding (Kimchi et al., 1991; Denzin & Lincoln, 2011) of the relevance of three Victorian-era thinkers. By integrating multiple approaches, sources of data and perspectives, researchers can cross-validate study findings to reduce limitations of a single method or approach (Denzin & Lincoln, 2011).

The first method of this study involves a historical analysis of Victorian-era thinkers Chadwick, Virchow, and Engels's writing and life. The second method employs a scoping literature review of contemporary academic literature in health and history from 2000 to 2023, examining academic writings that evoke these historical figures. The third part includes semi-structured in-depth interviews with scholars who evoke these three historical thinkers in their academic writing. By integrating historical analysis with existing literature, and key academic perspectives this study allows for a more robust understanding of the impact these historical figures and their works have on modern day health discourses. This approach enhances the quality and credibility of the study (Patton, 1999), providing a comprehensive understanding of the intersection of historical legacies and present-day public health discussions and approaches to health, health equity, and health promotion.

2.3.2 Historical analysis. In general terms, the historical method includes techniques and guidelines that historians employ to research and document past events (Garraghan et al., 1946). Historians can utilise various sources in their analysis such as secondary sources, primary sources, and material evidence to construct an accurate and reliable picture of past events and context (Garraghan et al., 1946; Gottschalk, 1969). In historical analysis it is important to identify reliable sources, assessing their relative authority to build a picture of past events, places, and social environments. When analysing and constructing my understanding of the three

historical figures and their contributions to public health, I utilise a narrative construction approach (Munslow, 2018) to develop a coherent historical narrative based on the available evidence. This approach helps create a comprehensive understanding of historical narrative based on available sources (Munslow, 2018).

The first part of this study examines who Chadwick, Virchow, and Engels were and how they continue to contribute to public health, and health promotion and equity. I built a comprehensive portrait of the three historical figures by drawing upon previously written biographies, such as Finer's (2016) biography of Chadwick, Ackerknecht's (1953) biography of Virchow, and Hunt's (2010) biography of Engels. I supplemented my exploration of these three historical figures by examining primary documents written by the Victorian thinkers, specifically Chadwick's *Report of The Sanitary Condition of Labouring Population of Great Britain* (1842), Virchow's *Report on the Typhus Epidemic in Upper Silesia* (1848) and Engels's *The Condition of the Working Class in England* (1845) as well as well as other pieces of their writing selected on the basis of their relevance to public health, social and economic factors influencing health and approaches to public health reform.

In summary, historical analysis identifies salient concepts, ideas, and public health strategies held by these writers through their biographies and written works. The goal of this historical analysis is to look at the three thinkers' works through a 2024 critical materialist lens to identify the relevance of these three giants' ideas to contemporary times.

2.3.3 Scoping review. The second part of this dissertation consists of scoping literature review of academic publications that evokes Chadwick, Virchow, and Engels or their works between January 2000 – June 2023. Scoping reviews are comprehensive means of mapping of key concepts, forms of evidence, and their sources from existing literature (Pham et al., 2001). I applied Arksey and O'Malley's (2005) five stages of a scoping review which consist of: 1) specifying the research question; 2) identifying relevant studies; 3) selecting from these studies; 4) charting the data; and lastly 5) collating, summarising and reporting the results. Arksey and O'Malley's (2005) framework provides a rigorous and transparent method for conducting scoping reviews in an accessible and replicable format. Stages four and five of the Arksey and O'Malley's framework were supplemented with qualitative content analysis techniques

described by Pollock and colleagues (2023) and Elo and Kyngäs (2008) of which details are provided below.

Using each Victorian-era thinker's name along with the keyword "health" I searched for academic literature from January 2000 to June 2023 in 5-year increments in two rounds in 12 reputable academic journals that focus on health, public health, and health history (see Table 1 for a full list of journals). These journals were chosen as being top field-specific journals with highly regarded global reputation and impact factor. Their focus on social science perspectives in public health was also highly relevant to research questions.

All 12 journals publish articles in English. To assure comprehensiveness, I looked at "all relevant literature regardless of study design" (Arksey & O'Malley, 2005, p. 22). During the review process, first, I reviewed returned publication titles and abstracts to identify all articles related to health, public health, health determinants (including social, political, economic, and biological determinants), health promotion, health history, or medical history *and* one or more of the historical figures. Following the inductive analysis method described by Elo and Kyngäs (2008), the articles were first examined, and initial thoughts recorded, after a coding framework was developed based on authors' use of the concepts created by each thinker and the domains or categories to which the ideas of the historical figure were applied. The relevant information was organised and categorised. In cases of ambiguity, I sought advice from my supervisor.

Table 1: List of academic journals included in the scoping review

1. American Journal of Public Health
2. Annual Reviews of Public Health
3. BMC Public Health
4. Bulletin of the History of Medicine
5. Canadian Journal of Public Health
6. Health: An Interdisciplinary Journal
7. Health Promotion International
8. International Journal of the Social Determinants of Health and Health Services
9. Medical History
10. Social History of Medicine

11. Social Science and Medicine
12. The Lancet

Literature search results were recorded in an Excel table providing publication and author information (such as article title, author name(s), year of publication, and publication house), journal type, reference to specific historical figure(s), apparent reason for use of historical figure or their ideas, general article theme(s), focus of mention(s), article research area(s), and whether the ideas of historical figure were used to support a specific idea.

I applied content analysis in conjunction with a constant comparative method. The goal of this analysis is to identify "key characteristics or factors related to a concept." (Pollock et al., 2023, p. 520) first through open coding which is a "process of breaking down, examining, comparing, conceptualising, and categorising data" (Strauss & Corbin, 1990, p. 61) in order to categorise retrieved publications, and then through axial coding whereby "data are put back together in new ways after open coding, by making connections between categories" (Strauss & Corbin, 1990, p. 96). This allows for identifying patterns, themes, and categories within the literature to understand the breadth and depth of research on the use of historical figures and their works in contemporary literature.

According to Pollack and colleagues (2023) "There are a multitude of ways that scoping reviews can present data and answer the proposed review questions. Scoping reviews commonly include tables that present the available data" (p. 528), other forms of scoping review data presentation include word clouds (for example Tricco et al., 2016), honeycomb (Kynoch et al., 2019), as well as heat maps, tree graphs, waffle charts, or iconography (Pollock et al., 2023). In this study various visualisations have been created to help understand study findings, such as heat maps, co-occurrence network analysis, and graphs were used to visualise data retrieved through the scoping review. Figures 1 and 2 on historical figure by journal distribution and yearly publication trends were created in Excel, and the co-occurrence network and heat maps were created in GPT-4o based on data recorded in Excel.

In summary, by analysing the content qualitatively, researchers can uncover nuanced insights, contextual factors, and conceptual frameworks that may not be evident through quantitative analysis alone. This process enhances the comprehensiveness of scoping review, providing a richer, more detailed understanding of the subject matter and highlighting gaps or

areas for future research. Details of the scoping literature review and data that emerged are discussed in Chapter 6.

2.3.4 Interviews. The third part of this study consists of semi-structured, in-depth interviews with 11 prominent scholars who have written about the ideas and concepts of the three Victorian thinkers. The interviews aimed to understand the motivations of contemporary academics for evoking the three figures, as well as gather their insights into the relevance of the three thinkers for promoting public health, what the authors believed were contemporary implications for action proposed by the three figures, and lastly the barriers and facilitators the interviewees thought existed for putting these actions into practice in contemporary society. Finally, the interviewees were asked to discuss whether they felt that evocations of these figures met their expectations.

Interviewees were selected using purposeful sampling strategy, where each participant was chosen on their ability to inform the research study (Bernard, 2013; Creswell, 2009). Following a purposeful sampling strategy each participant has been selected based on their work in the field of public health, health history, and health promotion and their evocation of historical figures and their ideas (Creswell & Plano, 2011). Additionally, a list of potential interview participants was generated based on the number of articles in which the scholar discussed the works and ideas of Chadwick, Virchow, and Engels derived from the scoping review of literature. According to Patton (1990) “There are no rules for sample size in qualitative inquiry. Sample size depends on what you want to know, the purpose of the inquiry, what’s at stake, what will be useful, what will have credibility, and what can be done with available time and resources” (p.184, emphasis in original). Based on the approved study proposal, the aim was to conduct six to ten interviews. However, due to a positive response rate, 11 interviews were conducted.

Interview invitation letters were sent directly to each potential participant, along with an attached informed consent form. Prior to the interview, informed consent was obtained either electronically, or in writing. Please refer to Appendix A for the Participant Recruitment Letter and Appendix B for the Participant Informed Consent Form.

In total, 11, 40–120 minute one-on-one semi-structured or in-depth interviews were completed between January to May 2024. Nine of the 11 interviews were held over the Zoom

video conferencing software, one interview was conducted over the phone, and one was completed in-person. All interviews were audio recorded. Ten consent forms were obtained from interviewees prior to the meeting, one consent form was completed in-person. The interviews consisted of seven to ten open ended questions. An interview guide was used to ensure comparability of data collected across participants (interview guide and sample questions are available in Appendix C).

Interview recordings were saved on a password protected computer, and later moved onto a password protected USB device. All interview data was subsequently removed from a personal computer. Password protected audio recordings ensured accuracy and confidentiality.

Seven interviewees chose to waive anonymity in alphabetical order by last name: Dr. Anne-Emanuelle Birn; Dr. Arnel Borras; Dr. Robert Chernomas; Dr. Michael Harvey; Dr. Nate Holdren; Dr. Ilona Kickbusch; and Dr. Howard Waitzkin. The other four chose not to waive anonymity: one Professor from Canada; one Medical Doctor and Professor from the United Kingdom; and two Professors from the U.S.A. Confidentiality and anonymity were maintained to the highest ethical standard and applicable laws and regulations of York University Ethics Board.

Interview recordings were transcribed using the Microsoft Word application. When using Microsoft's transcription feature, the audio files are sent to Microsoft for processing, but they are not stored by the service (Microsoft, 2024). The content and the transcription results are not saved or accessible by Microsoft or any third party (Microsoft, 2024). All interviews were anonymized, unless, as noted, study participants agreed to disclose their names. All transcripts were double checked for accuracy and coded using a qualitative data management software Atlas.ti. Atlas.ti uses 256-bit AES encryption to encrypt data, and this software is compliant with the General Data Protection Regulation, which is a European Union regulation on information privacy in the European Union and the European Economic Area (Atlas.ti, 2024). Upon research completion all electronic data (including audio/video files, interview transcripts) will be permanently deleted from a portable USB device.

The interviews were then analysed using thematic analysis, in which themes were identified, analysed, organised, and reported based on the data collected (Nowell et al., 2017). These themes involve multiple perspectives from participants under study and use a variety of

quotations and evidence to support the findings (Creswell, 2013). Categorising the data into themes identifies main findings from interviews.

To assure the accuracy of reporting of the interview quotes and interpretation, each interviewee was contacted to conduct a member check (Lincoln & Guba, 1985). In qualitative research the use of member checking is utilised to strengthen study rigour and credibility by providing an accurate description, perspectives and interpretations of a phenomena (Lincoln & Guba, 1985). Lincoln and Guba (1985) argue that "the member check […] is the most crucial technique for establishing credibility […] as they allow participants to add, omit, and clarify the data." (p. 314). Furthermore, member checking is used "to validate, verify, or assess the trustworthiness" (Birt et al., 2016, p. 1802), importantly member checking "provide opportunities for additional data and elaboration that will enhance the credibility of the emerging analysis" (Tracy, 2010, p. 844). Birt and colleagues (2016) state that this approach can increase trustworthiness of findings, allowing the participant to see "their own experiences within the synthesised themes" (Birt et al., 2016, p. 1804).

Member checks were conducted by returning synthesised and analysed data of each participant interview quotations to the informant. Once interviews were coded, quotes extracted, and results written up, an email was sent to each interview participant with a chapter summary, introduction of each theme along with selected quotes. Quotes from other participants were deleted to ensure confidentiality of all who participated in the study. Ten out of 11 participants completed member checks, one was not able to due to time constrains and work responsibilities. Data derived from interviews is discussed in Chapter 7.

For analysing interview data, I utilised a trusted and widely used method of thematic analysis. Thematic analysis assists in "identifying, analysing, and reporting patterns (themes) within data" (Braun & Clarke, 2006, p.79). Thematic analysis involves coding qualitative data to capture recurring themes and concepts (Naeem et al., 2023). Thematic analysis method helps researchers systematically interpret and make sense of the data by focusing on patterns and meanings (Braun & Clarke, 2006). I followed Braun and Clarke's (2006) six-phrases for conducting thematic analysis which consists of: 1) become familiar with study data; 2) generate initial codes; 3) search for themes; 4) review themes; 5) define themes; and 6) write analysis. When developing codes, clusters, and themes, I used language consistent with that which is used in the data (Schreier, 2013).

Braun and Clarke (2006) state that “Part of the flexibility of thematic analysis is that it allows you to determine themes (and prevalence) in a number of ways” and “there is no right or wrong method for determining prevalence” (p.83). The concept of “bucketing” as described by Roller and Lavrakas (2015) and Gibbs (2007) was used to help organise codes into broader categories that share underlying constructs or meaning. This approach helped manage a large dataset by clustering codes and facilitating the transition from codes to themes.

The analysis of all three parts of this study – historiography, scoping literature review, and interviews – was guided by sensitising concepts that serve as departing points of this study, and critical materialist political economy framework that considers issues of structures and societal processes, power and influence, and the ideologies held by society and its members.

2.4 Ethics

York University Research Ethics Board approved the participation of human subjects in this study (application #STU-2023-013). Part of obtaining this ethics approval included a completion of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans Course on Research Ethics (TCPS: CORE). My study is guided by the Tri-Council Ethical Conduct for Research Involving Humans, including the General Approach and Methodological Requirements and Practices for Qualitative Research (CIHR et al., 2018).

2.5 Potential Study Difficulties

There are a number of difficulties with a study of this kind that should be addressed. The theoretical orientation of the study, while innovative, may be seen as overly abstract. This could limit the study’s impact, particularly among practitioners who seek more tangible and actionable insights. The focus on spectres and traces, while intellectually stimulating, may not provide direct solutions to the pressing health issues.

Additionally, historical analysis can be subjective and biassed. And drawing comparisons between historical and contemporary context can obscure both the past and the present. Triangulation of methods is a resource intensive methodology which requires time, resources and effort (Arias Valencia, 2022). The overwhelming volume of data can lead to difficulties in managing and analysing study findings, potentially resulting in superficial or incomplete analysis (Arias Valencia, 2022).

Thematic analysis has several disadvantages, unlike methods such as grounded theory, ethnography, or phenomenology, thematic analysis does not allow researchers to make claims about language use (Braun & Clarke, 2006). Its flexibility, while an advantage, can also lead to inconsistency and lack of coherence in theme development. Ensuring consistency and cohesion requires explicitly stating epistemological positions which underpin the researchers' ideological standpoint and consequently study findings (Cohen & Crabtree, 2006; Holloway & Todres, 2003).

2.6 Chapter Summary

Chapter 2 discusses the theoretical considerations and methodologies employed in this study. It begins by exploring three knowledge paradigms: positivism, idealism, and realism. The primary theoretical lens used in the study, critical materialist political economy which examines the role of economic, political, and social forces in shaping health, the social determinants of health, and health promotion.

The chapter outlines the triangulation of methods and data derived from the use of three qualitative methods: historical analysis, scoping review of literature, and interviews with contemporary scholars evoking the ideas, works of historical figures under investigation. Historical analysis focuses on the contributions of Victorian-era thinkers Chadwick, Virchow, and Engels to public health. The scoping review maps key concepts in contemporary literature, while the interviews aim to understand current scholars' perspectives on these historical figures and their influences on contemporary public health discourses. The chapter provides an overview of the use of content and thematic analysis to identify and interpret recurring themes in the literature and interview data.

Lastly, ethical considerations are addressed, highlighting the need for rigorous techniques to ensure research validity, reliability, and trustworthiness. The chapter concludes with a discussion of potential study difficulties, including challenges related to historical analysis, study applicability, method triangulation and thematic analysis.

SECTION 2: BACKGROUND AND METHODOLOGIES EMPLOYED IN THIS STUDY

CHAPTER 3:
HISTORICAL ANALYSIS AND COMPARISONS BETWEEN THEN AND NOW

> *Men make their own history, but they do not make it as they please; they do not make it under self-selected circumstances, but under circumstances existing already, given and transmitted from the past. The tradition of all dead generations weighs like a nightmare on the brains of the living. And just as they seem to be occupied with revolutionising themselves and things, creating something that did not exist before, precisely in such epochs of revolutionary crisis they anxiously conjure up the spirits of the past to their service, borrowing from them names, battle slogans, and costumes in order to present this new scene in world history in time-honored disguise and borrowed language.*
> (Marx, 1852)

3.1 Introduction

In one of the most seminal sociological works of the 20th century *The Sociological Imagination,* C. Wright Mills notes that research must gain "an historical scope of conception and a full use of historical materials" (1959, p. 145) because histories play an essential role in understanding (Mallinson et al., 2003) and should not be treated as "mere general background" (Mills, 1959, p. 150). Rooting contemporary meanings, ideas, frameworks and strategies in history provides a deepened understanding of their origins and evolution, thus allowing us to critically analyse current practices and develop historically informed approaches for the future.

In health studies, history can play an important role in examining and interpreting past events, thinkers and their ideas, and the consequences of these ideas and structures on the past as well as present. By developing historical logic, awareness, and consciousness, researchers can trace and recognize the continuities and discontinuities and understand how historical events and processes influence contemporary society and discourses. This chapter examines the significance of historiography, historical analysis, and historical consciousness and awareness in public health. It then explores the importance of comparative historical analysis and the method of periodization. The chapter proceeds by exploring how the analysis of health and the social

determinants of health has evolved throughout the centuries and concludes by discussing the contributions of major health historians to the analysis of health and its determinants.

3.2 Historiography

Historiography is not merely the study of history, it is the study of how history has been written, the various interpretations of historical content and context, and the methodological approaches used to study historical sources (Perdiguero et al., 2001). Thus, historiography, the study of historical writing and methodology, is important for several reasons. First, it helps in understanding the historical process by highlighting how historical knowledge is constructed (Tosh, 2015). This involves examination of methods and approaches used by historians to interpret past events, and it reveals the dialogue between evidence and hypotheses, which is imperative for developing accurate historical narratives (Tosh, 2015).

Second, historiography allows historians to critically assess the validity of historical evidence (Evans, 2000). By examining how history was written, by whom, using what knowledge and evidence, historians ensure that their interpretations are grounded in rigorous research (Evans, 2000). In the words of Tosh (2015):

> History as a disciplined enquiry aims to sustain the widest possible definition of memory, and to make the process of recall as accurate as possible, so that our knowledge of the past is not confined to what is immediately relevant. The goal is a resource with open-ended application, instead of a set of mirror-images of the present. (p. 2)

Additionally, historiography addresses bias and subjectivity by exposing the biases and subjective values that may influence historical interpretations, because “Historical interpretation is a matter of value judgement, moulded to a greater or lesser degree by moral and political attitudes” (Tosh, 2015, p. 161). Thus, historical researchers should be fair in evaluation of the past, while acknowledging their own biases as influencing interpretations.

Studying historical developments informs contemporary understanding by helping researchers gain perspective on how past events and processes shape the present. As Fee and Brown (1997) argue:

> A broad historical perspective can help us shrink specific disappointments to size and show them in context as only temporary setbacks. Historical case studies may be able to teach us useful lessons about successful strategies used by public health reformers in the past. They may assist us in identifying patterns and deeper continuities beneath the surface shifts. At yet another level, history may provide new insights into the difficulties of change, whether of social and political realities, attitudes, or behaviours. It allows us to perceive deep structural impediments, identify blind spots, and analyze social forces and cultural trends over which we have little control. At the same time, historical study shows us that despite the difficulties, change is possible, given dedication, organization, and persistence. (p. 1763)

Engaging in historical analysis aids in making novel observations about contemporary issues and offers valuable lessons from history. In public health, Berridge (1999) states that:

> History in public health has two main practical functions. At the policy level, it is a matter of the 'lesson of history', of historical 'facts' giving specific historical messages for the present, often implicitly justifying what current policy interests want to do. Among researchers, it is this - but also a matter of 'folk tales', the professional equivalent of family history, tracing origins back to people in the past, looking at current practice in terms of lineages, tracing the origins of 'what we do now' in the light of what people did in the past. (p. 25-26)

Thus, historiography is essential for constructing accurate, reliable and meaningful historical knowledge, ensuring that the study of history remains a rigorous and reflective discipline that can serve to understand the present and help us prepare for the future. The historical method is a systematic approach to researching and writing about history. It involves critical examination of sources, rigorous analysis, and the use of evidence to support historical narratives (Bentley, 1997). This method has evolved to include diverse sources and interdisciplinary approaches (Horn & Ritten, 1986), enhancing the depth and breadth of historical research.

Thompson's (1978) concept of "historical logic" refers to a distinct logical method specifically developed for the field of history. Historical logic is designed to test hypotheses about structure, causation, and other historical phenomena, avoiding self-confirming biases (McCann, 2019). Thompson (1978) argues that historical logic involves a rigorous dialogue between concept and evidence, where successive hypotheses are evaluated against empirical research.

Understanding presentism and how to avoid it is essential when engaging in historical analysis, Berridge (1999) warns:

> History in public health can be presentist, simply reproducing the preconceptions of the present in its analysis of historical work. But it does not have to be so. It can be a tool of analysis, bringing a historical understanding to bear, not presentist, but aware of the present. (p. 34).

As such the historian must refrain from forcing contemporary moral judgements on past events and should rather restrict themselves to the description of the past devoid of present-day biases and judgements. However, we must also acknowledge that it is hard not to pass moral judgements on events such as the establishment of the Indian Residential Schools and involvement of historical figures like John A Macdonald or Egerton Ryerson, or the Salem "witch" trials of 1692. Avoiding moral judgement can negate the perspectives of the people who lived through these periods and events, as not having a voice in what happened to them (Reaume, 2000). While it is important to exercise caution when passing moral judgements based on contemporary ideas of right and wrong – since future generations of historians will likely denounce or criticise us for our actions and inactions – this does not mean we cannot or should not pass judgement. We both can and should, with humility and acknowledgement of our own biases and moral limitations.

Possessing and engaging with "historical awareness" of past discourses and figures and the influence these have on modern society is necessary because it invites a meticulous interpretation and an examination of the past that is "not confined to what is immediately relevant" (Tosh, 2015, p. 2). Tosh (2015) states that there are three principles to historical awareness, first is "difference" meaning that there is a need for recognition that separates the

then and now, second is “context” the underlying principle that all historical work “must not be wrenched from its setting” (p 10), and lastly the recognition of historical process and continuum in which events and their relationship to society cannot be viewed in isolation, but rather as part of a larger “story”, a historical narrative.

Philosophically, according to Grever and Adriaansen (2019) the concept of historical consciousness can be understood as first “a collective phenomenon” which “studies its perceived rise as a pivotal moment in the genesis of modern self-understanding” (p. 815) or “as an individual competence” used “for the training of cognitive capacities with which people can understand the past.” (p. 815). Grever and Adriaansen (2019) develop this concept further and present a novel tradition of historical consciousness that emphasises the interpreter’s historicity and the continuous interaction between past and present. This approach draws attention to the ontological dimension of understanding, where historical consciousness is seen as an ongoing process shaped by historical context and its sources as well as individual interpretation.

It is important to acknowledge the limitations of historical analysis. Churchill’s famous dictum “history is written by the victors” carries important considerations as the origin of the quote itself is quite contested (Phelan, 2019). History is not as straightforward as some may assume. History can be biased, as argued by Parenti (1999) “objective factual history” is often “refracted through official lenses” (p. 166). Academia and political organisations are the holders of history, and throughout time we have seen how certain histories are pushed to the side or altogether excluded (Parenti, 1999). Since the conception of history as a profession – in modern understanding, and its entrance into the university, the history that was promoted was of the “affluent, Anglo-Protestant gentlemen’s perspective” (Parenti, 1999, p. 171).

Historical perspectives that challenge the dominant status quo are more often than not pushed to the side. Lewis (1978) argues that some of the university intelligentsias have been “coopted by the ruling class”. In more recent post WWII times, “unpopular” historiographers that questioned global capitalism, imperialism or global power relations have been denied university positions having their works called ““a scandalously intemperate polemic,” “farcical,” and “an elaborate hoax.”” (Parenti, 1999, p. 179). In the publishing world prior to the 20th century, the industry was dominated by a few multibillion-dollar media conglomerates (Moran, 1997) stories and authors that tell histories that serve the ruling class tend to be promoted. Posing

a question of: how did the silencing of certain histories and historical figures influence academia, public policy, and resurgence of specific spectres? Using the words of Parenti (1999):

> […] history is not just what the historians say it is, but what government agencies, corporate publishing conglomerates, chain store distributors, mass media pundits, editors, reviewers, and other ideological gatekeepers want to put into circulation. Not surprisingly, the deck is stacked to favour those who deal the cards. (p. 198).

Although critical interpretations of history are much more prevalent today compared to 1950s and 1960s, the silencing of certain histories and perspectives was raised as a barrier during interviews with contemporary scholars and is discussed in greater detail in Chapter 7.

Fortunately, cultural hegemony and ruling class ideologies have not silenced all. Historical materialism, as developed by Marx and Engels and further reconceptualised by Thompson (1978) among many other historians and social scientists, is an approach to understanding history that focuses on the material conditions of society, particularly the modes of production and their influence on social structures and ideas.

Thompson (1978) views historical materialism as a flexible method that acknowledges human agency in history. Thompson's (1978) historical materialism approach is based on a six step methodology: 1) evaluating of the "credentials" of historical evidence; 2) analysing evidence "at the level" of its "own appearance"; 3) examining "value-free evidence" using statistical method; 4) connecting evidence in a linear fashion, through the use of narrative; 5) studying facts as "links in a lateral series" of social, ideological, economic, and political relations to reveal underlying relations; and 6) assessing for "structure-bearing" characteristics such as the influence of the legal, regulatory, or other social systems (Thompson, 1978). By emphasising the interrelationship between economic, political, and intellectual structures in historical analysis, Thompson (1978) advocated for a historical analysis that considers not only the historical context but also the influence of human agency on the development of history.

Thompson's monumental book *The Making of the English Working Class* (1963) aids in a reconceptualization of history offering as Iglis (1982) argued "a new past to live from", changing "the social memory so that, differently understanding how the present came about, the agent thinks forward to a new set of possibilities" (Iglis, 1982, p. 199 as quoted in McCann,

2019, p. 2). Thompson's methodology, grounded in the Historians' Group's "history from the bottom up" prioritised the origins and formation of the English working class, challenging conventional perspectives of marginalised and helpless working-class history (McCann, 2019). For Thompson (1978) historical materialism became a theory of liberation (McCann, 2019).

In conclusion, historiography is not just the study of history but also the study of how history is written, encompassing various interpretations, methodological approaches and historical sources. It is critical for understanding the historical process by highlighting the construction of historical knowledge, revealing the dialogue between evidence and hypotheses, and aiding in the development of accurate historical narratives. Historical analysis allows for the critical assessment of validity and reliability of historical evidence, by addressing biases and subjectivities that influence interpretations, thus leading to more accurate historical accounts.

Moreover, historiography informs contemporary understanding by offering perspectives on how past events shape the present, helping researchers make novel observations about current issues. Historical materialism, developed by Marx and Engels and refined by Thompson (1963), focuses on the material conditions of society, particularly the modes of production and their influence on social structures and ideas, emphasising human agency and the interplay of economic, political, and intellectual forces in historical analysis.

3.2.1 Comparative historical analysis. This study engages in a number of comparisons. First it compares the three historical figures of Chadwick, Virchow, and Engels as well as conducts a comparative analysis between past and present contexts and health policies. As such a note on comparative historical analysis is needed.

Comparative historical analysis has a long history in social sciences, taking a prominent stage during the Victorian-era (Mahoney & Rueschemeyer, 2003). This approach was used by foundational figures such as Adam Smith, Karl Marx and Max Weber (Mahoney & Rueschemeyer, 2003; Skocpol, 2003). Albeit somewhat forgotten, this approach has seen a resurgence in recent decades, specifically, the 1960 and 70's saw a revival of comparative historical analysis (Skocpol, 2003).

In historical analysis, comparative historical analysis is defined by its focus on causal analysis, emphasis on processes over time, and systematic and contextualised comparison. Comparative historical analysis often focuses on a small number of cases to allow for a detailed

comparison and theoretical refinement (Mahoney & Rueschemeyer, 2003). When using comparative historical analysis researchers aim for historically grounded explanations of specific cases rather than universal knowledge (Skocpol, 2003). By placing a strong emphasis on understanding long-term processes in social and political phenomena, comparative historical analysis tends to focus on "big questions" about large-scale outcomes such as institutional change or policy shifts that are substantively and normatively important (Skocpol, 2003). Methodologically, this technique is open to innovations including the use of network techniques and quantitative methods alongside qualitative methodologies (Skocpol, 2003).

3.2.2 Periodization. Within comparative historical analysis periodization serves as a useful methodological tool that divides history into distinct periods or epochs characterised by significant structural changes and transformations (Katznelson, 2003). This study examines a period in history characterised by significant social, political and economic transformations. A time period when rapid industrialization, proletariat revolutions, and European wars were taking place, a time period during which Chadwick, Virchow, and Engels were alive. Thus, periodization can be utilised as a useful tool for understanding long-term processes and critical junctures that shape historical trajectories (Katznelson, 2003).

By using periodization this study is focused on identifying and understanding critical junctures or epochs (or as Derrida (1994/2012) put it, moments when "time is out of joint") that shape historical trajectories of the past and the present. Unlike traditional comparative historical analysis, periodization examines changes in societal, economic, or political systems that happened over important historical time periods, in this case the Victorian-era. Although periodization tends to prioritise structural conditions over individual agency, Katznelson (2003) argues that examination of individual agency is an essential component for better understanding of how individual and collective choices shape historical outcome, and consequently future histories. This perspective aligns well with Thompson's (1978) process of historical materialism that centres around human agency.

3.3 A Brief Overview of Historical Perspectives on Health and Health Determinants

This section provides a brief overview of historical perspectives on health. Although the main focus of this study is on a specific period – the Victorian-era – that transformed health and

many of its facets, situating health on a broader historical spectrum is useful in understanding the developments that led to Victorian-era transformations. Thus, understanding the historical context in which our knowledge about health throughout recorded history is essential for several reasons. First, it allows us to trace the evolution of medical and social knowledge as well as our understanding of health and its determinants. Second, historical context illuminates the social, economic, and political determinants of health, demonstrating how factors such as industrialization, colonisation, wars, revolutions and social movements have influenced health over time. Lastly, situating health knowledge within broader history fosters a deeper appreciation for the complexity of health discourses, illustrating that many contemporary health challenges are deeply rooted in how we humans come to understand reality, medicine, health, and how we organise the factors that shape our health such as our societal, economic and political structures.

Historical Origins

The study of disease and treatment has evolved from prehistoric times (Grauer, 2018), with paleopathology and paleo medicine examining ancient diseases and treatments (Grauer, 2018). In the Stone Age, disease causation was predominantly magico-religious (Ackerknecht, 2016). Due to the lack of written records and artefacts, it is unclear if prehistoric humans considered preventive and social medicines.

Ancient histories

The humoral theory prevailed in ancient Greece. Health was seen as a balance of four bodily humours—blood, phlegm, yellow bile, and black bile (Sigerist, 1987). Disease was believed to occur due to an imbalance of these humours. During this time period, it was widely believed that health and disease were influenced by external factors such as air, water, and lifestyle (Nutton, 2012). Hippocrates's contributions, although contested, directed attention to external factors like "Air, Water, and Places" impacting health (Tountas, 2009). For instance, widespread diseases were attributed to a common environmental cause like the air (Lloyd, 1987; Nutton, 2012).

On the other hand, Plato, in the fourth century BCE, discussed how living conditions, particularly inequality, impacted society (Plato, 360 BCE/1871). Awareness of how social position affected health was noted, though often health was linked to leisure, property, and

freedom (Sigerist, 1987). Aristotle emphasised the moral and ethical responsibility of society to maintain health for human flourishing (Ruger, 2004). Importantly, the classical Greeks separated magico-religious beliefs from medicine (Sigerist, 1987). The Hippocratic texts laid foundational ideas for epidemiology by emphasising naturalistic explanations over divine interventions (Sigerist, 1987; Lloyd, 1987). Nevertheless, the concept of balance in the humours influenced later medical theories and discourses up until the Victorian-era.

In ancient China health was viewed as a balance between the dynamic forces of yin (negative) and yang (positive), with disease resulting from a disturbance in this balance (Lloyd & Sivin, 2002). Correspondence with the natural and social order was critical, emphasising hierarchy and proper relationships (Lo & Stanley- Baker, 2022). Similar to the humours theory prevalent in Europe, the five phases hypothesis: wood, fire, earth, metal, and water, represented different aspects of life and their interrelationships (Unschuld, 2005; Krieger, 2024). Health was seen as harmony among these phases, while disease resulted from disruption in their balance (Unschuld, 2005; Krieger, 2024).

In Andean and African traditions, the Kallawaya (in the Andes) understood health in terms of the body's relationship with the mountains, emphasising the cyclical and oscillatory balance of natural elements like air, blood, and fat within the body (Krieger, 2024). And Ogori (in modern day Nigeria) distinguished between natural and supernatural causes of diseases based on frequency and severity (Krieger, 2024). Common ailments were attributed to natural causes, while rare or severe diseases evoked supernatural explanations (Ackerknecht, 2016)

In general, ancient peoples viewed health as a balance between various internal and external factors (setting the stage for the social determinants of health). Ancient theories often distinguished between common diseases attributed to natural causes, and rare or severe diseases, often linked to supernatural or extraordinary causes (Ackerknecht, 2016). The development and acceptance of disease theories were deeply influenced by the societal structures, political systems, and environmental conditions of the time (Krieger, 2024)

European Age of Revolutions & the Victorian-Era

The Enlightenment in the 17th century marked a shift to focus on this world's conditions, coining the term and discipline of "social science" and initiating the field of public health (Ackerknecht, 2016). The period saw sanitary reforms in various institutions (Tulchinsky &

Varavikova, 2014). The first chair of "Medical Physical Physics and Hygiene" was established after the French Revolution, this position emphasised the study of both individual and public health, laying the foundation for public health as a discipline (Ackerknecht, 2016).

Systematic large-scale sanitary public health measures emerged in the mid-19th century, influenced by figures like Louis-René Villermé and Alexander Parent-Duchâtelet (La Berge, 1984; 1988). Major revolutions, such as the American, French, and Haitian revolutions, impacted public health policies and led to the first mandatory public census in the U.S. Constitution in 1790 (Krieger, 2024). The transatlantic slave trade, colonialism, and the Industrial Revolution influenced patterns of disease and spurred new public health initiatives and policies (Mann, 2016; Krieger 2024).

The Industrial Revolution in Europe propelled public health efforts in England and Germany, with pioneers like Chadwick, Virchow, and Engels examining the health effects of living and working conditions of the poor and working-class populations. Chadwick emphasised sanitation, Virchow focused on reforms in politics, education, and social life, while Engels criticised capitalism's modes of production and its impact on health. This period brought unprecedented urbanisation, leading to new patterns of disease. This contributed to the development of the field of epidemiology to understand and address these new patterns of disease and health outcomes (Krieger, 2024). Throughout the 19th century, debates raged over the causes of diseases like cholera and yellow fever. Contagionists argued for person-to-person transmission, while miasmatists believed in disease arising from environmental filth and miasma. This debate influenced public health policies and the development of sanitation systems (Krieger, 2024).

The Post World War II Era and the World Health Organization

The WHO's 1948 constitution recognized social and political factors in health outcomes, promoting multisectoral collaboration (Solar & Irwin, 2010). The Alma-Ata Declaration (1978) and the Ottawa Charter for Health Promotion (1986) further emphasised health equity through social conditions (WHO, 1978; 1986). WHO's subsequent work included the Social Determinants of Health: The Solid Facts and the Commission on Social Determinants of Health (WHO, 2003) which described the social conditions needed for good health based on the principles of fairness, justice, and non-discrimination.

Latin American Social Medicine

Stemming from Virchow's 19th century work, the field of Latin American social medicine gained momentum around 1900 (Carter, 2023). This new yet already established perspective on health integrated social, economic, and political conditions in health. Salvador Allende, a prominent figure in the field, linked structural drivers to health such as political, economic, and social conditions, advocating for political action (Waitzkin, 2005; 2020). Other contributors included Juan Lazarte, Carlos Paz Soldan, and Ernesto Guevara (Vasquez et al., 2019).

> In social medicine, disease as it occurs is not simply an inevitable and random biological phenomenon but, in part, an outcome of man-made - and thus culpable, mutable, and consequently reformable - social circumstances. (Rosenberg, 2007, p. 531)

The Western Academic Scene – 1980s Onward

Although described for many centuries, the official term "social determinants of health" appeared in the 1979 volume *The Political Economy of Health* (Doyle & Pennell, 1979). *The Black Report and the Health Divide* (1992) in the UK highlighted health inequalities and the role of public policy in addressing them (Acheson, 1998; Marmot & Wilkinson, 2006). Canadian policies also recognized various determinants of health (Lalonde, 1974; Epp, 1986).

3.4 Chapter Summary

In summary, historical analysis is unequivocally important to understanding how past perspectives shape contemporary public health discourses. Rooting contemporary meanings, ideas, frameworks, and strategies in history allows for a deeper analysis of their origins and evolution. This chapter details how historiography aids in tracing continuities and changes over time needed for understanding current health practices and future developments. Various methodological tools are used in historical research, in this study comparative historical analysis and periodization are utilised to understand significant structural and societal changes over time.

By recognizing historical context, researchers can make novel observations about contemporary issues and learn valuable lessons from the past. In this study historical awareness, logic and consciousness are employed for interpreting the past beyond immediate relevance,

acknowledging the influence of power, ideology, and values on historical narratives. The chapter concludes by exploring how the analysis of health and its determinants has evolved, highlighting contributions from ancient civilizations, and the impact of major movements such as the Enlightenment and the Industrial Revolution on understanding of health and health determinants.

CHAPTER 4:
DERRIDA AND RAINEY AND HANSON'S CONCEPTS OF SPECTRE AND TRACE

4.1 Introduction

This dissertation uses several analytical concepts developed by a French-Algerian philosopher Jacque Derrida. It provides an overview of Derrida's main contributions to philosophy and the study of language. The chapter proceeds by examining the concept of hauntology, as developed by Derrida, to explore how figures, discourses, and ideas from the past continue to shape and influence contemporary issues. Hauntology, which contrasts with ontology, examines the return of elements from the past – such as symbols, ideologies, and, in this context, or the ideas of three Victorian-era figures. The chapter unpacks Derrida's concepts of spectres whose persistent influence haunts the present and the future. These spectres challenge established truths and remind us that all concepts and social structures are imbued with traces of the past.

The concept of the trace, also introduced by Derrida, is critical in understanding how past influences manifest in the present. The trace represents a lingering mark of what is no longer present, playing a significant role in constructing meaning through the interplay of presence and absence. The chapter concludes by examining contemporary uses of the concepts of trace by Rainey and Hanson whose examination of Engels statues in Manchester serves as an example of how traces connect past and present. In this study, contemporary literature that evokes the spectres of Chadwick, Virchow, and Engels is also considered as traces. By applying Derrida's concepts of spectre and trace the chapter aims to illustrate how these spectral figures and their textual legacies continue to inform and shape current analyses and discourses, particularly in addressing social inequities, public health issues, and the enduring impact of capitalism on health and health determinants.

4.2 Jacques Derrida

> [...] haunting is historical, to be sure, but it is not dated, it is never docilely given a date in the chain of presents, day after day, according to the instituted order of a calendar. (Derrida, 1994/2012, p. 4)

Jacques Derrida (1930-2004) was an Algerian-born French intellectual and philosopher of Jewish heritage. Derrida's work transformed the study of philosophical theories of language, identity, and politics (Royle, 2003; Glendinning, 2011). Derrida's philosophy resists simplification, instead, Derrida's thought is characterised by a continuous interrogation of meanings emphasising the interconnectedness and open-endedness of ideas (Royle, 2003; Salmon, 2020). Derrida's work on deconstruction is central to his philosophy (Silverman, 2004). Deconstruction is a complex process – which Derrida himself avoided to define – of de-centralising or deconstructing traditional or singular interpretations of text, language, and meaning (Silverman, 2004; Norris, 2003; Salmon, 2020). For Derrida language and meaning are in a constant state of transformation and deferral, never fully settled, as they are continuously shaped by context, interpretation, and the interplay of presence and absence (Royle, 2003). Norris (2003) writes that for Derrida "Language is in this sense diacritical, or dependent on a structured economy of differences which allows a relatively small range of linguistic elements to signify a vast repertoire of negotiable meanings" (p. 25) and "Writing is the endless displacement of meaning which both governs language and places it forever beyond the reach of a stable, self-authenticating knowledge." (p. 28).

Deconstruction is not simply a method but rather a way of questioning and unsettling traditional assumptions about meaning, truth, and identity (Silverman, 2004). A fundamental concept in deconstruction is the term "différance" which Derrida argues is "neither a *word* or a *concept*" (1988, p. 279) which plays on the French words "différer" (to differ) and "déférer" (to defer) (Maclachlan, 2018; Norris, 2003; Silverman, 2004). Derrida (1988) writes:

> Différance is what makes the movement of signification possible only if each so-called 'present' element, each element appearing on the scene of presence, is related to something other than itself, thereby keeping within itself the mark of a past element, and already letting itself be vitiated by the mark of its relation to the future element, this trace being related no less to what is called the future than to what is called the past, and constituting what is called the present by means of this very relation to what it is not, to what it absolutely is not: that is, not even to a past or a future as a modified present. An interval must separate the present from what it is not, in order for the present to be itself,

> but this interval that constitutes it as present must, by the same token, divide the present in and of itself, thereby also dividing, along with the present, everything that is thought on the basis of the present, that is, in our metaphysical language, every being, and in particular the substance or subject. (p. 288)

Différance suggests that meaning arises from the differences between words and that meaning is always deferred and never fully present or complete, as explained by Norris (2003) "Language depends on 'difference' [...] it consists in the structure of distinctive oppositions which make up its basic economy" (p. 32). For Derrida "Differance 'is' what makes presence possible while at the same time making it differ from itself." (Royle, 2003, p. 71). This continual deferral and differentiation disrupt the idea of a stable, unchanging meaning of language and text (Derrida, 1982). Because meaning is always context dependent, literary work is continuously being reinterpreted in various ways depending on context, the reader, as well as time and space (Royle, 2003). Thus, Derrida urges us to think of language and meanings we ascribe to text as fluid, evolving and in constant state of change (Glendinning, 2011).

4.2.1 Derrida's concept of hauntology. In one of his seminal works the *Specters of Marx* (1994), Derrida explores the ongoing relevance of Marxism or Marxisms (as he argues there are more than one Marx and Marxisms) through the lens of hauntology or "spectropoetics" – the study of what is not, what is dead or the opposite of ontology, the study of being – as well as deconstruction (Fisher, 2012; Halpern, 2013). Derrida examines the legacy of Marx(s) and Marxism(s) in the context of the "end of history" narrative presented by Francis Fukuyama in his book *The End of History and the Last Man* (1992) which saw the fall of the Berlin Wall and collapse of Soviet-style communism as signalling the final triumph of liberal democracy and free-market capitalism (Derrida, 1994/2012). In the *Spectres of Marx*, Derrida critiques Fukuyama's triumphalist claims of capitalism, and argues that the problems identified by Marx still persist (Lewis, 1996; Glendinning, 2011). As such Derrida stresses the need for continuous critique of capitalism and cultural and intellectual stagnation (Fisher, 2012). He argues this by declaring that Marx's ideas continue to "haunt" contemporary thought and politics (Royle, 2003). Marx's spectral presence challenges the idea that Marxism is dead, in fact Derrida

proposes that the spectres of Marx will always return to haunt those who believe they have buried him (Royle, 2003).

Hauntology disrupts traditional notions of time and existence, and aids in thinking about the presence of the past within the present (Fisher, 2012). In hauntology, Derrida (1994) further developed the concepts of spectre and trace. Proposing that spectral presence is neither fully present nor fully absent, hovering in a state of constant deferral and difference (Fisken, 2011; Glendinning, 2011). Derrida's work highlights how the supposedly absent entity can exert influence, much like a ghost, suggesting that historical ideas and figures cannot be neatly contained or fully dismissed (Fisken, 2011; Royle, 2003). For Derrida, texts and signs carry a ghostly presence and are continuously interpreted beyond their original context.

Philosophically, *The Specters of Marx* is an exploration into the nature of ideology, history, identity and future (Maclachlan, 2018; Glendinning, 2011; Royle, 2003). Derrida deconstructs and critiques Marx's ontological assumptions, and beliefs around the evocation of ghosts or spectres, which he does by carefully unpacking his own reading of Shakespeare's *Hamlet* - one of Marx's favourite pieces (Derrida, 1994/2012; Lewis, 1996). Aside from the critiques of Marx and Fukuyama, Derrida emphasises the political urgency of rethinking Marxism(s) in contemporary times and context (Fisken, 2011).

The concept of hauntology has influenced numerous fields, including literature, cultural studies, and media theory, and now health. It provides a framework for understanding how historical texts, figures, and ideas continue to haunt the present day. Deconstruction on the other hand allows us to understand the complexity of meaning making and interpretation of textual legacies left by the spectres of the past. By acknowledging the ghostly presence of previous thinkers and their work, Derrida calls for a more responsible and critical approach to history and meaning making.

4.2.2 Spectral figures and their legacies.

> The spectre is the future, it is always to come, it presents itself only as that which could come or come back. (Derrida, 1994/2012, p. 39)

The concept of the spectre is central to Derrida's work in the *Specters of Marx* (1994). By embodying the ghostly presence of the past within the present, Derrida challenges the boundaries of presence and absence, life and death, and meaning making (Halpern, 2013). For Derrida, the spectre (his focus was on Marx) presented in written form, is the reified spirit of past discourses which is "a deconstructive figure hovering between life and death, presence and absence, and making established certainties vacillate" (Davis, 2005, p. 376). Derrida (1994) writes:

> The 'intellectual' of tomorrow should learn it and from the ghost. He should learn to live by learning not how to make conversation with the ghost but how to talk with him, with her, how to let them speak, or how to give them back speech […]. (p. 221).

Derrida argues that the past informs present understanding. For a mark or text remains readable and influential even in the absence of its original context or author, embodying a sort of spectral presence (Royle, 2003). Thus according to Rainey & Hanson (2021):

> Spectres haunt us in their absence, throwing open the very notion of what it means to be "present" while also forcing us to critically engage with heterogeneous pasts and possible futures. In their ghostly presence-absence, spectres perpetually "question and probe the validation of political, social and epistemological forms." (p. 266)

For Rainey and Hanson (2021), the spectre of Engels points to "the need for a return to the grounded political analysis of Engels." (p. 266).

The evocation of specific historical figures and their ideas in literature in a sense brings that person back thus placing them into the realms of the timeless (Glendinning, 2011). Raising up historical figures and their ideas from the past rejuvenates them and their spectre – in a way (re)sacralising and (re)signifying their importance and applicability to contemporary discourses (Rainey & Hanson, 2021; Verdery, 1999). Derrida (1994) writes "[…] a ghost never dies, it remains always to come and to come-back" (p. 123). Spectres help disrupt the clear distinction between life and death, suggesting that what is absent can still exert significant influence on the present.

Quoting Shakespeare in *Specters of Marx* Derrida (1994) states that "time is out of joint" because injustice is widespread and

> [...] the ghosts of those who are not yet born or who are already dead, be they victims of wars, political or other kinds of violence, nationalist, racist, colonialist, sexist, or other kinds of exterminations, victims of the oppressions of capitalist imperialism or any of the forms of totalitarianism. (p. xviii)

Continue to haunt us and will do so time and time again. It is during the times of "disjointure (adikia) or the 'injustice' of the present" (Derrida, 1994/2012, p. 30) that spectres appear. As such, Derrida calls for a rethinking of Marx(s) to address contemporary injustices and inequalities, urging us to engage with the spectres of the past and their legacies as a way to critically examine and challenge current political, economic, and social systems that perpetuate inequality and injustice. This rethinking involves not only revisiting Marx's ideas but also adapting them to address contemporary forms of oppression and exploitation.

As such, Derrida calls on the academic of today to speak to the ghost, quoting Shakespeare he states, "Thou art a scholar; speak to it, Horatio." (Derrida, 1994/2012)

4.2.3 Traces of the past in the present. In *Specters of Marx* the concept of the 'trace' refers to an element that signifies the presence of an absence, the kind of residue or mark left by something that is no longer present (Norris, 2003). It is one of the key concepts of Derrida's deconstruction, suggesting the inherent instability of meaning, as every signifier (the word) carries within it the traces of other absent signifiers thus creating instability within the signified (the concept) (Salmon, 2020). The concept of iterability is central to understanding traces (Davis, 2005). A mark or text must be capable of being repeated and recognized in different contexts, independent of the presence of its originator (Royle, 2003). Derrida (1998) writes:

> If one admits that writing (and the mark in general) must be able to function in the absence of the sender, the receiver, the context of production, etc., that implies that this power, this being able, this possibility is always inscribed, hence necessarily inscribed as

> possibility in the functioning or the functional structure of the mark. [T]his possibility is a necessary part of its structure. (p. 48)

The concept of trace embodies the idea that meaning is always deferred, never fully present or absent, and constantly influenced by past contexts and future possibilities. Thus, the trace is a kind of an imprint left by something that has passed, yet it remains within the entity. For Derrida the trace operates within the structure of différance, suggesting that meaning is never fully present but is always constituted through a specific context and reader. Traces appear in various ways, in this dissertation traces are found in contemporary health literature that evoke the spirits of Chadwick, Virchow, and Engels.

4.3 Rainey and Hanson's Concept of Trace

Rainey and Hanson (2021) use Derrida's concepts of spectre and trace to examine the meaning and significance of the installations of two statues of Engels in Manchester, UK. One is a fibreglass statue at the University of Salford, and the other a former Soviet monument transported from now occupied Eastern Ukraine to Tony Wilson Place in central Manchester. Rainey and Hanson discuss these statues and their erection and relocation amid Manchester's post-industrial regeneration and in the broader context of economic and political changes following the 2008 financial crisis and Brexit. The authors open a dialectics of geographical traces to understand social contradictions and socio-political fractures of the present-day Manchester, because for them "The dialectic is in the detail, or at least it begins with the detail, via the 'trace'" (Hanson, 2014, p. 21).

For Rainey and Hanson (2021) "Traces are the details of place and social life that tell stories of change, putting into motion the dialectic and with it a whole set of epiphanies and realisations" (p. 266). The sculpture at the University of Salford is seen as a trace that connects past industrial history with present socio-economic realities. Its fragmented and ruin-like appearance symbolises the enduring influence of Engels' ideas amid the ruins of past industrialism and ongoing capitalist cycles (Rainey & Hanson, 2021). While the Soviet-era monument serves as a trace linking different historical and geographical contexts, signifying the ideological shifts and tensions between radical politics of the former Soviet regime and neoliberal urban redevelopment (Rainey & Hanson, 2021). The authors suggest that Engels'

return to Manchester is more than just a historical nod but resonates with contemporary issues, opening up a dialectic (Rainey & Hanson, 2021). Because traces are inherently unstable and are subject to (re)signification, the statues of Engels embody new meanings in the contemporary landscape of Manchester, reflecting ongoing political, economic, and cultural debates. Rainey and Hanson (2021) write:

> The two statues of Friedrich Engels function as traces in this respect. They contain seething contradictions of meaning, which either begin dialogue or remain tightly held apart paradoxes or both (and all three possible outcomes are aufhebung, the dialectic). As traces, the statues resignify in multiple modes while also illuminating the human discourses surrounding them and the wider environment they are placed in.
>
> In his imagined return to twenty-first-century Manchester, we felt that Engels would encounter both the familiar and the strange and still have something to say. […] In their ghostly presence-absence, spectres perpetually question and probe the validation of political, social and epistemological forms, but do so without ever offering a secure response in return. (p. 265–266)

Rainey and Hanson (2021) use the concept of the trace to bridge historical analysis with contemporary critique, highlighting how the spectres and traces of the past continue to shape the present. By examining the traces left by Engels' sculptures, the authors unveil the deeper socio-political movements running through Manchester's urban landscape, illustrating the ongoing relevance of Engels' insights to contemporary discourses. Rainey and Hanson (2021) state that "By invoking Engels in this way, we want to reckon with our past as well as our future, both of which are entwined with circuits of capital accumulation, forms of concealment and the twisted, nostalgic turns [...]" (p. 272).

When examining the mainstream literature around the return of Engels from Ukraine in light of Rainey and Hansons article, the authors (Medvedyuk et al., 2023) came across an article by Verdery (1999) who makes an important comment on the political lives of dead bodies stating:

> Statues are dead people cast in bronze or carved in stone. They symbolize a specific famous person while in a sense also being the body of that person by arresting the process of that person's bodily decay, a statue alters the temporality associated with the person, bringing him into the realm of the timeless or the sacred like an icon. For this reason, desecrating a statue partakes of the larger history of iconoplasm … removes the specific body from the landscape, as if to excise it from history … Raising up new statues reverses the process, (re)sacralizing persons who were gone for some time unremarked. Both actions signal a change in the universe of meaning that hitherto prevailed. (p. 5)

I would extend Verdery's (1999) argument to state that raising up spectral figures and evoking them in contemporary literature also (re)sacralized them, changing the meaning of their work and ideas to fit contemporary context and issues, and to aid the writer in their quest. For Rainey and Hanson (2021) the statues helped open up a dialectic through spectres and traces, where in this analysis traces can be found in the published works of contemporary academics who evoke the spectres of Chadwick, Virchow, and Engels. Within academic publications, traces illuminate past continuities and present interpretations of health and its determinants.

4.4 Chapter Summary

In this chapter, concepts of hauntology, spectre and trace developed by Jacques Derrida are explored to provide a framework for analysing the use of historical ideas and figures in contemporary health discourses. Derrida's concepts of deconstruction, hauntology, spectre, and trace are introduced to emphasise the fluid and context-dependent nature of meaning. The chapter discusses how Derrida's ideas challenge traditional notions of fixed meanings and illuminate the ongoing relevance of past discourses, particularly those of Marxism(s), in present-day contexts. By examining the spectral presence of historical figures and their ideas in literary traces, this study aims to show how these ghostly figures continue to shape current health discourses. Contemporary applications, such as that by Rainey and Hanson on the installation of Engels statues in Manchester, demonstrate the applicability of Derrida's concepts in understanding the interconnectedness of past and present especially when critiquing capitalism.

SECTION 3: RESULTS

CHAPTER 5:
LESSONS FROM THE PAST: WHO WERE CHADWICK, VIRCHOW AND ENGELS AND WHY DO THEY MATTER TODAY?

5.1 Introduction

This chapter begins by exploring Victorian-era Europe, a time period characterised by significant social, economic, and technological change. It first examines how the Industrial Revolution fundamentally altered production, transportation, and economic structures, leading to widespread urbanisation and the emergence of exploitative working conditions, particularly for the working-class populations. This is followed by an examination of the contributions of various historical figures who played key roles in shaping public health and social reform during this period.

The chapter proceeds by exploring the contributions of the three historical figures central to this study, Chadwick, Virchow and Engels. Chadwick's advocacy for sanitary reforms laid the foundation for modern public health, yet this celebrated legacy is examined against critiques of proposed reforms and the consequences they had for the least well of members of Victorian society. The chapter then discusses Virchow's groundbreaking work in pathology, social medicine, and progressive political reform, emphasising his efforts to connect socio-economic conditions with health outcomes and his role in advancing public health as a political and social issue. Lastly, Engels is regarded for his critical analysis of the exploitative nature of capitalism, which he linked to the poor health and living conditions of the working-class.

By examining these developments and the influential figures behind them, this chapter underscores how the Victorian-era's challenges, ideological developments and innovations continue to shape contemporary public health practices, medical advancements, and our understanding of the relationship between society, economy, politics, and health.

5.2 Victorian-Era Europe

The Victorian-era in Europe, spanning from the early 19th century to the beginning of the 20th century, was a period of immense change and transformation. During this time, Europe

witnessed significant shifts in population demographics, political ideologies, wars, revolutions, public health movements, and advancements in medicine. This was a period marked by significant transformations in production, transportation, and economic and social structures caused by the industrial revolution (Ashton, 1948).

> The change ... was sudden and violent. The great inventions were all made in a comparatively short space of time … In a little more than twenty years all the great inventions of Watt, Arkwright, and Boulton had been completed, steam had been applied to the new looms, and the modern factory system had began. (Usher, 1920, p. 249 as quoted in Cameron, 1982).

The creation of the steam engine, improvements in iron and other metal productions, and the rise of textile manufacturing propelled the UK from agrarian and handcraft, farming economies to industrial and machine manufacturing processes (Cameron, 1982). The modernization in manufacturing had significant effects on the population, especially some of the most vulnerable members of any society - children "most accounts stressed the use of child labour, the displacement of traditional skills by machinery, and the unwholesome conditions of the new factory towns." (Cameron, 1982, p. 378). Child welfare, education and protection were nonexistent, and children were viewed as "economically useful household assets" (Pooley, 2013, p. 83) who were sent to work in some of the most dangerous and health threatening conditions (Engels, 1845/2009). The newfound inventions and mechanical developments quickly spread through Europe and other parts of the world transforming natural landscapes, demographics and social structures, working and living conditions, political ideologies, and consequently public health.

During the Victorian-era, Europe experienced monumental demographic shifts characterised by declining mortality rates (Griffin, 2008) and increasing birth rates which began to decrease by the end of the century due to "reversals of intergenerational flows of wealth" (Pooley, 2013, p. 83) as well as a change in children being viewed as a "burden" rather than an "economical asset" (Pooley, 2013). Increased movement of workers into industrial cities created stark urbanisation, as people moved from rural areas to cities in search of employment opportunities (Cameron, 1982)

Although, there is some debate about the increased standard of living during the Victorian-era due to significant increases in wage (see Woodruff, 1956; Hobbs, 1957; Taylor, 1975; Hartwell, 1961), many of these accounts do not include the progressively worsening and often harmful working conditions, rampant unemployment, and inflation (Hobsbawm, 1963). Increased urbanisation also contributed to overcrowding, unsanitary living conditions, and spread of disease among the most impoverished populations (Woods & Shelton, 2000).

The Victorian-era was also marked by several significant conflicts and revolutions (Pilbeam, 1995; Grinin, 2022). The Crimean war (1853-1856) between the then Russia Empire and the allies of the Ottoman Empire, Britain and France, and Napoleonic wars which lasted from 1803 to 1815 (Black, 2009). Additionally, this era witnessed the Revolutions of 1848, which spread across Europe as people protested against autocratic rule, calling for political reforms (Grinin, 2022) of the liberal state. These revolutions were largely unsuccessful in achieving their goals but set the stage for future political changes and social movements in and outside of Europe (Grinin, 2022).

Political and economic ideologies were also transforming rapidly prior to and during the Victorian-era. The influence of 18th century political philosophers such as Jean-Jaques Rousseau, Thomas Jefferson, Jeremy Bethnam and James Mills helped develop some of the main principles of liberal democracy such as individual liberties, private property rights, political and electoral transformation, secularisation, and educational reforms (Macpherson, 1977/2012). The influential work of a Scottish economist, Adam Smith, propelled capitalist thought with his analysis in *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776), which laid the foundation for classical economics and the principles of modern capitalism.

On the other hand, the revolutionary and radical works of Marx and Engels, such as *Das Kapital* (1867), *The Communist Manifesto* (1848) and - the text that influenced much of Marx and Engels's future work *The Condition of the Working Class in England* (1845) (Hunt, 2009) – proposed salient critiques of the social order, economic conditions and political organisation of the emerging liberal democratic state. Engels even called out the culprits (the bourgeoisie) and charged them with social murder (1845/2009). Together, Marx and Engels proposed revolutionary changes in order to create a more just society free of oppression and inequality.

One of the most significant transformations during the Victorian-era was the rise of the public health and sanitation movements (Gill, 2000). Historical figures like Edwin Chadwick, a

British social reformer and public servant, played a key role in changing policies for the working poor (albeit not always for the better). Influenced by the statistical work of French physicians Louis-René Villermé and Alexander Parent-Duchâtelet (La Berge, 1988), Chadwick advocated for government involvement in sanitation and public health, leading to the creation of the first Public Health Act in Britain (Finer, 2016). The implementation of sewer systems, clean water supply, and improved housing conditions in cities was a response to social and demographic changes of the Victorian-era period.

In medicine, the Victorian-era witnessed remarkable advancements (Youngson, 2018). It marked the introduction of anaesthesia, as well as advancements in pathology, bacteriology, radiology, veterinary sciences, and surgical procedures (Youngson, 2018; Connor, 1999). Many of the scientific breakthroughs happened in military colleges, as in the case of Rudolf Virchow's professional trajectory (Ackerknecht, 1953). Moreover, the era saw the development of antibiotics and vaccines (Carpenter, 2009), laying the groundwork for modern prevention and treatment of viral diseases and epidemics essential to contemporary public health efforts.

In summary, the Victorian-era was a time of profound change and development. The era witnessed shifts in population demographic and social arrangements, evolving political and economic ideologies, wars and revolutions, advancements in medicine, and the rise of public health movements. The contributions of figures like Chadwick, Virchow and Engels played significant roles in shaping the social, political, and medical landscape of the time and beyond.

5.3 Lessons from Victorian-era Public Health Pioneers

Three Victorian-era influencers Chadwick, Virchow and Engels recorded the effects of expanding industrial capitalism on the living and working conditions of the working-class populations arguing that disease and early mortality were disproportionately experienced by the poor and the working-class. However, they were not the only individuals who made significant contributions to the study of health, health determinants and advancements in medicine.

The below list of public health pioneers is by no means exhaustive; however, it highlights some of the key figures during the Victorian-era that lie outside of the focus of this study. In the UK, John Snow (1813-1858) pioneered the field of epidemiology by tracing the source of a cholera outbreak to a single water pump in London (Krieger, 2024; Stewart, 2017). Sir Joseph Bazalgette (1819-1891) with whom Chadwick had a significant professional relationship rooted

in their mutual dedication to public health and sanitation reform. Chadwick's report on sanitation set the stage for Bazalgette's work of designing and building extensive sewer networks in London (Finer, 2016; Stewart, 2017). Sir John Simon (1816–1904), the successor of England's first Chief Medical Officer John Sutherland (1898-1891), played a pivotal role in public health legislation. Although his relationship with Chadwick was marked by differing approaches and professional tension (Finer, 2016) due to Chadwick's focus on engineering solutions like sewage systems, while Simon, emphasised a scientific approach to public health, including disease prevention and statistical analysis. Despite their differences, both contributed significantly to public health advancements (Stewart, 2017). Another close collaborator of Chadwick was Thomas Southwood Smith (1788–1861) a physician and sanitary reformer. Smith made seminal contributions to Chadwick's report on sanitation, Smith's empirical data, medical expertise and practical experience were invaluable to Chadwick (Finer, 2016).

Fair working and living condition pioneers such as George Cadbury (1839–1922) and George Smith of Coalville (1831–1895), made salient contributions by focusing on housing, education and food policies, and improving conditions for children respectively (Stewart, 2017). In Liverpool, Thomas Fresh (1803-1861) and William Henry Duncan of Liverpool (1805-1863) both played significant roles in sanitary reforms and public health practices (Stewart, 2017).

Three prominent female pioneers also deserve a mention, Margaret McMillan (1860–1931) advocated for children's health, promoting better living conditions and health care services for children (Stewart, 2017). Florence Nightingale (1820–1910) reformed nursing and hospital sanitation. Also known as the founder of modern nursing, Nightingale revolutionised hospital sanitation during the Crimean War. Her work led to significant improvements in hygiene practices and hospital design, thus dramatically reducing mortality rates (Stewart, 2017). Octavia Hill (1838–1912) was an advocate for housing reform and social welfare. Hill's dedication to improving housing conditions for the poor led to the foundation of the National Trust. Her work emphasised the importance of clean, well-maintained housing for overall health and wellbeing (Wohl, 1971).

In Germany, Robert Koch (1843-1910) pioneered the field of bacteriology and infectious disease by discovering bacteria responsible for tuberculosis, cholera, and anthrax (Brock, 1843/1988). Virchow and Koch, albeit having great respect for each other's work, had significant disagreements when it came to the nature of disease causation and public health approaches

(Norman, 2022). Max von Pettenkofer (1818-1901) pioneered the field of hygiene, whose work on cholera and water supply led to significant improvements in urban sanitation (Rosen, 2015). Both Pettenkofer and Virchow played pivotal roles in Germany's sanitation movement, albeit having divergent views on the importance of miasma versus germs (Rosen, 2015). Johann Peter Frank (1745–1821) was an influential figure in German and Austrian politics, his work laid a framework for public health and medical police, similar to Chadwick and Virchow, Frank advocated for the state responsibility and intervention in maintaining public health (Rosen, 2015; Schneider & Lilienfeld, 2008).

Influential Public Health Workers Mentioned during Phase 3 Interview

To complete this background picture, I provide some findings from the interview phase of this research. Study participants highlighted several other important public health figures. Two of the names, Louis-René Villermé (1782-1863) and William Farr (1807–1883) came up in several interviews. Villermé was a French physician and a pioneer in social epidemiology, his report titled *Tableau de L'état Physique et Moral des Ouvriers* (1830) documented health inequities between the rich and poor classes, and his statistical method had a significant impact on Chadwick's work (La Berge, 1988). Farr's work on vital statistics also had a salient impact on public health contributing to the emerging field of epidemiology (Krieger, 2024). Farr established a systematic method for collecting and analysing data on births, deaths, and diseases, which informed public health policy and interventions. The work of Florence Nightingale (discussed above) was also mentioned as being instrumental in revolutionising hospital sanitation.

Two prominent political thinkers were also raised, Jean-Jacques Rousseau (1712-1778) and Otto von Bismarck (1815-1893). Rousseau's work influenced political theory, education and literature, highlighting social and civil responsibility for collective good and he drew attention to the responsibilities of the government in protecting its citizens (Cranston, 1991). Rousseau's work on social inequality resonates with the contemporary public health focus on the social determinants of health discourse (Cranston, 1991). Bismarck is another influential figure of the Victorian age, who played a key role in unifying Germany and introducing the first social welfare program which included health and accident insurance, and old age pension (Ștefan, 2015). Although Virchow and Bismack had major disagreements, particularly when it came to

Bismark's conservative viewpoints - with Bismarck challenging Virchow to a duel - Bismarck's later social reforms included many of Virchow's ideas (McNeely, 2002; Schultz, 2008).

Two prominent women were also discussed in the interviews, Olympe De Gouge (1748-1793) and Rosa Luxembourg (1871-1919), both of whom fought for social justice and equality. De Gouges's work on women's rights titled *Declaration of the Rights of Woman and the Female Citizen* (1791) laid early groundwork for women's health rights (Mousset, 2017). Luxemburg, a famous female Marxist endorsed women's suffrage, drawing attention to the "issues of gender and equity in left politics" (Smith & Carroll, 2000, p. 310).

W.E.B Du Bois (1868-1963) was mentioned in a number of interviews as an important figure in public health because of his work on health inequities experienced by African Americans, a topic that none of the three historical figures discussed in this study addressed, but an issue that is salient in contemporary health discourses. His work advocated for equal access to health care services for communities of colour (White, 2011).

20th century contemporaries highlighted by the interviewees include Salvadore Allende (1908-1973), Conrad Hal Waddington (1905-1975), Paulo Freire (1921-1997), Gro Brundtland (1939 - present), and Silvia Federici (1942 - present). Allende's role in the development of Latin American social medicine was instrumental. Influenced by the work of Virchow, Allende's health care reforms had a significant impact on the establishment of universal health care services in Chile (Waitzkin, 2005). Waddington's work on genetics and gene and environment interaction led to important research in gene expression under favourable versus unfavourable environments (Fabris, 2021), influencing important works of scholars such as Richard Lewontin (please see *Not in Our Genes* by Lewontin, Rose & Kamin, 1984). Freire's famous book *Pedagogy of the Oppressed* (1978) emphasised education and adult literacy as tools for empowering and developing critical thinking to understand social conditions (Hederman, 1982). And lastly, Brundtland's work as a Director-General of WHO, who used treaties to implement tobacco control, as treaties were the only available tool for making change (Yach, 2014). And lastly, Silvia Federici, a scholar and activist for gender disparities, women's health, and reproductive rights, is known for her work on feminist theory and critique of capitalism (Federici, 2018).

Although this list is by no means exhaustive, it does provide an overview of many important figures since the Victorian-era, along with individuals mentioned during study

interviews. The following sections, provide a more detailed background on the three historical figures whose lives intersected with many of the figures discussed above and inspired future public health pioneers.

5.4 Sir Edwin Chadwick (1800-1890): Contributions to the Sanitation Movement, and Public Health Policy

> The primary and most important measures, and at the same time the most practicable, and within the recognized province of public administration, are drainage, the removal of all refuse of habitations, streets, and roads, and the improvement of the supplies of water
>
> That for the protection of the labouring classes and of the ratepayers against inefficiency and waste in all new structural arrangements for the protection of the public health, and to ensure public confidence that the expenditure will be beneficial, securities should be taken that all new local public works are devised and conducted by responsible officers qualified by the possession of the science and skill of civil engineers. (Chadwick, 1843, p. 203)

Edwin Chadwick (1800-1890) was an English barrister and statesman who devoted his life to examining how health and living conditions of the English working poor could be improved through sanitary reform (Corbett, 1999). He is best known for his work on public health and sanitation reforms that had a lasting impact on urban health policies. His contributions to the study of public health included investigations of funerals and burials in urban areas, military sanitation, school architecture, child labour, factory inspectors, compensation for industrial labourers, among others (Bloy, 2000; Stewart, 2017). Chadwick is often viewed as a public health icon and the inventor of the civic hygiene movement (Hamlin, 1998). He played a key role in establishing the principles of public health and environmental management. He is also seen as the founder of the modern environmental health profession, also known as public health inspectors (Stewart, 2017).

Chadwick's philosophy and ideology were influenced by the utilitarian philosophies of Bentham who emphasised "the greatest happiness of the greatest number" (Finer, 2017, p. 512,

Macpherson, 1977/2012) and the role of the government in ensuring public welfare. Other important figures who influenced Chadwick's work include Villermé and Parent-Duchâtelet whose pioneering studies in occupational health and urban hygiene in France provided critical insights that Chadwick adapted to his analysis in the UK (La Berge, 1988). Dr. Southwood Smith and Sir John Simon play key roles in Chadwick's professional career. Southwood Smith, a physician and early sanitary reformer worked closely with Chadwick on the famous sanitary reports (Finer, 2017) and Simon succeeded Chadwick as Chief Medical Officer, also played a key role in continuing and expanding public health reforms initiated by Chadwick. Simon's work helped to further establish public health as a key government responsibility (Stewart, 2017).

In 1832, serving as an employee of the Royal Commission, Chadwick was appointed to investigate the operation of the Poor Law. The Poor Law Amendment Act of 1834, which Chadwick helped draft, was an important piece of legislation that sought to reform the outdated Elizabethan Poor Laws (Bloy, 2000). The amendment aimed to reduce the cost of poor relief and discourage dependence on welfare by making the conditions in workhouses deliberately harsh and unbearable (Finer, 2017). The Act established the Poor Law Commission, in which Chadwick served as Secretary. His work on the Poor Law laid the foundation for his later focus on sanitary reform. Influenced by Bentham's ideologies, Chadwick rejected the idea that starvation was possible in London, because admitting to this would point to the failures of his whole program of utilitarian reform (Finer, 2017). Chadwick drafted the revisions of the Poor Law including Poor Law Unions, and the workhouse reforms which promoted the notion of deterrence – where the conditions of the workhouse were greater than the pains of poverty (Stewart, 2017). For this Chadwick came to be known as the "most hated man in England" (Hamlin, 1998), and as a "pest wherever he went" (Finer, 1951, p. 442).

Political opposition to Chadwick's reforms argued that centralization was not appropriate for the control of poor relief, proposing that local parishes were better suited to manage their own needs (Finer, 2017). Other contemporaries rejected Chadwick's workhouse conditions reforms and argued that the Poor Law itself was the cause of ill health (Finer, 2017). By 1841 "one-tenth of the population of England were drawing poor relief" (Finer, 2017, p. 181) and not because of lack of a work ethic, but because there were no jobs. "This left the workman the choice of the workhouse, the gutter, or starvation" (Finer, 2017, p. 182). The harshness of the

1834 Poor Law reform which continued to be a point of contention eventually led to investigations and subsequent reforms.

Chadwick's seminal *Report of The Sanitary Condition of Labouring Population of Great Britai*n (1843) sought to examine "chief removable circumstances affecting the health of the poorer classes of the population" (Chadwick, 1843, p. 2). Chadwick strongly believed that the main cause of disease is "atmospheric impurity, occasioned by means within the control of legislation, as the main cause of the ravages of epidemic, endemic, and contagious diseases among the community, and as aggravating most other diseases." (Chadwick, 1843, p. 4). The report consisted of Chadwick's first-hand accounts of residential inspections, and those collected from medical officers in localities he did not visit. The goal was to understand disease distribution of working-class populations by examining "the physical circumstances under which the population is placed – as the external and internal condition of their dwellings, drainage, and ventilation." in both places of work and personal dwellings (Chadwick, 1843, p. 2).

The report consists of eight sections: 1) an overview of general conditions of residence of labouring classes where disease was most prevalent; 2) external environments such as town and house drainage systems, street and road cleaning and pavement, water supply, sanitary effect of land drainage; 3) ventilation in workplaces, workmen's lodging-houses, dwellings which examined bad ventilation and overcrowded houses, domestic mismanagements or the conditions of domestic life; 4) comparative analysis of life expectancy between different classes; 5) the cost of bad sanitation as measured in reduced years of life and work; 6) evidence on the effects of preventative measures which includes employer's influence on work and housing conditions; the employer's influence on substance misuse and health through modes of payment, employers influence on health through promotion of personal hygiene and dress, workplace ventilation, and prevention of dangerous fumes and dust; employers influence on housing and sanitary arrangements for protecting the labouring classes, the effects of public spaces such as gardens on physical and mental health; 7) the role of legislation and the state in protecting public health, which includes the authority of the state in executing laws that protect public health, authority of local governments in developing and maintaining drainage systems, the role of boards of health and public officers in preventing disease; 8) regulation of common lodging-houses.
The below observations summarise Chadwick's (1843) convictions:

That the various forms of epidemic, endemic, and other disease caused, or aggravated, or propagated chiefly amongst the labouring classes by atmospheric impurities produced by decomposing animal and vegetable substances, by damp and filth, and close and overcrowded dwellings prevail amongst the population in every part of the kingdom, whether dwelling in separate houses, in rural villages, in small towns, in the larger towns- as they have been found to prevail in the lowest districts of the metropolis.

That such disease, wherever its attacks are frequent, is always found in connexion with the physical circumstances above specified, and that where those circumstances are removed by drainage, proper cleansing, better ventilation, and other means of diminishing atmospheric impurity, the frequency and intensity of such disease is abated; and where the removal of the noxious agencies appears to be complete, such disease almost entirely disappears.

That the formation of all habits of cleanliness is obstructed by defective supplies of water.
That the annual loss of life from filth and bad ventilation are greater than the loss from death or wounds in any wars in which the country has been engaged in modern times.

That the younger population, bred up under noxious physical agencies, is inferior in physical organisation and general health to a population preserved from the presence of such agencies.

That these adverse circumstances tend to produce an adult population short-lived, improvident, reckless, and intemperate, and with habitual avidity for sensual gratifications.

That these habits lead to the abandonment of all the conveniences and decencies of life, and especially lead to the overcrowding of their homes, which is destructive to the morality as well as the health of large classes of both sexes.

> That defective town cleansing fosters habits of the most abject degradation and tends to the demoralization of large numbers of human beings, who subsist by means of what they find amidst the noxious filth accumulated in neglected streets and bye-places. (p. 203-204)

In order to resolve the described above issues affecting working class populations, Chadwick proposed sanitation, proper drainage, waste removal systems, street cleaning and increased government oversight of slaughterhouses, lodging houses, and workplaces (Finer, 2017, Morley, 2007). The report's recommendations led to the creation of the General Board of Health in 1848. In 1884 Chadwick became the president of the Association of Public Sanitary Inspectors, currently the Chartered Institute of Environmental Health (Stewart, 2017).

Chadwick used his political power and position to enact a Waterworks Clauses Act of 1847 into law, limiting the profit of water supply companies and requiring that there be a reasonable supply of water as well as environmental protection of waterways (Corbett, 1999). Chadwick's plea for safe water systems was not always welcome as he often encountered opposition from both private water companies, engineers, and both conservative politicians and local authorities (Finer, 2017). Private water companies feared financial loss, politicians argued that centralisation was an overreach of the government's power, and the public was worried about increased taxation (Finer, 2017). Nonetheless, together with Duncan's research on Liverpool's sanitation which led to the enactment of the Liverpool Sanitary Act of 1846 (Battersby, 2017) and Chadwick's seminal report on sanitary conditions became the precursors to the Public Health Act of 1848.

The Act established the General Board of Health which was responsible for public health initiatives and coordinating efforts to improve sanitation such as disease control, creation of drainage systems, regulation of water supplies, and monitoring of burial practices to prevent contamination (Finer, 2017). Local authorities were now required to form local boards of health to implement sanitation measures (such as removal of waste, construction of sewer systems, delivery of clean water, cleaning of streets, garbage removal, and registering of slaughterhouses and lodging-houses) (Finear, 2017, p. 319). Local boards were also given authority to enforce sanitary regulations, and property inspection (Finer, 2017).

For the first time the English government was made to acknowledge its responsibility for the health of the citizens (Morley, 2007). Chadwick believed that compulsory legislation was necessary, because without it, public health efforts would not stand. Through his work, Chadwick established the principle that no public municipality is to be dirty, and public hygiene became a recognized part of the medical curriculum of that time period (Finer, 2017). By placing the government at the centre of the solution to the problem of sanitation, Chadwick helped create pathways which showed that environmental conditions and consequently public health was the responsibility of the government, but only as a provider of technical solutions, not the apparatus that can or should change economic and political systems. His efforts laid the groundwork for modern public health systems and the role of government in ensuring sanitary living conditions for all citizens.

Like most great thinkers and reformers, Chadwick had supporters as well as those who opposed his reforms. However, his goal was to enshrine the idea that prevention was better than cure (Stewart, 2017). Chadwick's "technical fixes" were implemented because he was able to show that the government had a role in improving health through sanitation – a real fix to a real problem that used real science. "By proving that the individual had no control over these conditions the remedy was lifted at once from the regime of private initiative to that of public administration" (Finer, 2017, p. 217). Thus, firmly establishing the relationship between environment and health, which must be controlled by the government who Chadwick viewed as riddled with bureaucratic complexities (Stewart, 2017).

Chadwick's lesser-known achievements include support for professional and educational rights of women, and support for Women's Suffrage (Finer, 2017). He also made significant contributions to the education of children by showing that children could not learn for longer than three hours without exercise or manual work. He argued that good ventilation and lighting, as well as warm environments increased children's capacity to learn (Finer, 2017). Insisting that every school have a "gymnasium and its swimming bath", "school meals for the poorer children" as well as "annual medical examination" (Finer, 2017, p. 508).

In 1889, Chadwick was knighted, his long-time supporter Sir John Smith (as quoted in Finer, 2017) wrote:

> [...] - to the ten years' arduous labour which he had given to the causes before the General Board of Health was called into being, we of this nation unquestionably owe that our statesmen in those times were first awakened to the duty of caring for the Public Health, and that the first of our modern legislative endeavours were made to bring Health under the protection of Law. (p. 514)

As revolutionary as Chadwick's sanitary reforms were, he held the belief that the primary cause of pauperism was not poverty or unrestrained capitalism, but filth, and retained his belief in the miasmatic theory of disease spread till his death. Chadwick was engulfed in this idea that cesspools, dung heaps, and water queues were the cause of moral decline, and death, not the conditions of work under capitalism (Hamlin, 1998). Despite all of Chadwick's accomplishments, and research by contemporaries such as Pasteur, Virchow, Koch and Snow's hypothesis on the causes of cholera, he held fast to his belief that miasma was the cause of epidemics (Finer, 2017).

Chadwick's contributions to the sanitation movement and public health policy significantly influenced the development of public health practices and policies in Britain and beyond. His emphasis on preventive measures and physical settings contributed to the contemporary *settings approach* in public health.

5.5 Rudolf Virchow (1821-1902): Contributions to Pathology, History, Public Health and Health Policy

> Medical statistics will be our standard of measurement: we will weigh life for life and see where the dead lie thicker, among the workers or among the privileged. (Virchow, 1848, as quoted in Taylor and Rieger, 1984)

> The law existed, the civil servants were there – and the people died in their thousands from starvation and disease. The law did not help, as it was only paper with writing; the civil servants did no good, for the result of their activity again was only writing on paper. The whole country had gradually become a structure of paper, a huge house of cards to be toppled in a confused heap when the people touched it. (Virchow, 1848, p. 89)

Rudolf Virchow (1821-1902) was a German physician and pathologist and is often referred to as the father of modern cellular pathology and social medicine (Krieger & Birn, 1998; Lange, 2022). In addition to being a medical doctor, Virchow was also an anthropologist, biologist, writer, civil reformer, activist, and a politician (Brown & Fee, 2006). Serving as a Prussian government envoy Virchow's investigation of the typhus epidemic in 1848 in Upper Silesia which was published as a *Report on the Typhus Epidemic in Upper Silesia* (1848) is said to be the foundational piece of the field of social medicine.

Virchow's work in pathology was taking place during the period when the four humours theory of blood, phlegm, black bile and yellow bile was still very much prevalent. Thus, his work was truly revolutionary, paving the way for modern understanding of pathology. Virchow's career began at Berlin's Charité Hospital, where he conducted chemical and microscopic research (Ackerknecht, 1953). During his time at Charité, Virchow made many significant medical discoveries such as leukaemia, embolism and thrombosis, importantly his work on cells laid the foundation of cellular pathology (Krieger, 2024). Additionally, Virchow laid the groundwork for informed consent, by asserting that the patient has the right to information about diagnosis and treatment (Ackerknecht, 1953). His early work led to important publications and the co-founding of the journal *Archives for Pathological Anatomy and Physiology and Clinical Medicine* in 1847, later renamed to *Virchows Archiv* which is still in publication today.

Virchow's ideological standpoint was significantly influenced by his upbringing in Prussia, modern day northwest Poland. Prussia's government at that point in history was described as "hopelessly anachronistic and rooted in bureaucratic-absolutist traditions" that was "oppressive and authoritarian" (McNeely, 2002, p. 17). "The paper-pushing officialdom, with its deadening centralization, surveillance mentality, and "patronising and artificial formalism"" (McNeely, 2002, p. 17) did the bare minimum to promote the well-being of the Prussian working-class population. Virchow witnessed what the lack of political intervention can do to the health of the population. Virchow's humanity and compassion for those he served, coupled with belief in empirical scientific objectivity informed his belief in the political nature of medicine and later his political ideology of the state. Discussing Virchow's liberalism, McNeely (2002) writes:

> Medical practice combined social distance with fraternal humanism in the relation of doctor to patient, and to Virchow this relationship paralleled that between liberal social scientists and the suffering masses. From his superior vantage point, he strove to heal the people by elevating them to a social and political level he deemed "healthy". The strategy of co-opting the disenfranchised into a stable order based on equal rights, education, rule of law, democracy, personal freedom and scientific rationality formed the outlines of Virchow's social politics. To achieve these aims would entail a social revolution, but one whose explosive potential must be moderated by a reformist élite exercising its power through a benevolent state. (p. 14)

The tenets of Virchow's liberalism were based on his view of medicine as social science, whereby poverty and inequality directly contribute to disease and require political interventions as part of medical treatment. Virchow strongly believed that empirical knowledge should be integrated into political decision-making, a notion that got him into arguments with politicians such as Bismarck (McNeely, 2002). Virchow's liberalism was firmly based in the belief of equal rights of individuals. He supported state secularism and education separated from religious influence (McNeely, 2002). Virchow believed that the state was responsible for the health of its citizens, as such systemic social, economic and political reforms were necessary to achieve good health (McNeely, 2002). Moreover, Virchow advocated for free association of medical professionals which he viewed as an "idea of our time" and as a general model for social organisation" which "represented a happy medium between interference in the lives of doctors and unrestricted competition" (McNeely, 2002, p. 23). Virchow liberal philosophy was opposed to authoritarianism and bureaucratic centralization. Importantly Virchow preferred reformist approaches within existing systems to achieve liberal reforms over revolutions which often turned violent. Lastly, Virchow's liberalism, which was quite progressive during his time, underscored the importance of a strong liberal state in enforcing social reforms that protect public health, and individual freedoms (McNeely, 2002). The tenets of Virchow's liberalism can be situated within the contemporary concepts of "liberal democracy" which remains dominant in Canada and elsewhere.

In 1848, Virchow was tasked with studying the typhus epidemic in Upper Silesia. It is important to note that in June of 1844 Silesian weavers uprising was silenced by the German

army, and the population was told to “eat grass” (Dunn, 2016). Writing frankly to his father, Virchow (1848) said:

> The towns look passable, but the villages are very wretched. The rooms of the houses are very small, animals and humans sharing the same accommodation with windows not meant to be opened; the stove and the beds occupy most of the room. The people, however, are horrible, pitiable figures, moving barefoot in the snow, feet swollen, and faces pale, eyes dull. [...] It is certain that the famine and typhus did not appear separately, but that the latter spread on such a scale only because of the famine. The extent of the epidemic is terrible: the number of orphans in the villages of both Rybnik and Pless is officially estimated to be about 3,000. Large rooms have been arranged to accommodate them. Staying in these well-aired and heated rooms on an adequate diet, they are so satisfied that not only do they not mourn the loss of their parents but are even happy about it.
>
> That this misery could never have reached such proportions had sensible preventative measures been taken, and that the government, especially Finance Minister von Bodelschwingh, due to his disbelief and stubbornness, has sacrificed as many people as would be lost in a minor war is absolutely certain. And yet the government does nothing more than send flour and here and there a physician and use a lot of paper in writing. It is horrible, disgusting. (Feb. 24).

Virchow’s famous report began by examining the geographical characteristics of Upper Silesia, including demographics and social characteristics as well as economic conditions and standard of living, Virchow wrote “as soon as the stocks of green vegetables were exhausted, people were obliged to use surrogates such as green clover, couch-grass, diseased and rotten potatoes. Many died of starvation directly; many others fell into a state of atrophy [...] (Virchow, 1848, p. 21). The second section of the report focused on endemic diseases and the development of the current epidemic and presented case studies, statistical data, and comparative analysis. This was followed by a section examining stages of the disease and its symptoms in which Virchow asserted that “As is well known, it is in particular the poorer classes which [...] are

affected first and most severely" (1848, p. 79). And lastly, Virchow outlined strategies against typhus consisted of both medical treatments, and social and public health measures which include education and literacy, free democracy and self-government, capital investment for public works like roads, and that the worker should have a share of the capital of whichever industry they labour in. Virchow (1848) wrote:

> In fact, an association of the unpropertied workers with the capital of the state or of the plutocracy or of the many small owners is the sole means of improving the social condition. Capital and labour must at least have equal rights, and the living force must not be subservient to non-living capital. (p. 97).

This Virchow argued will not only reduce severity, longevity, and recurrence of epidemics, it will also help the population prosper. Virchow's research in Upper Silesia served as part of his political awakening (Mackenbach, 2009). Through his observations Virchow saw how inadequate social conditions and social inequality, coupled with a lack of political representation created disease, disability, and premature deaths of the working-class population (Lange, 2022). In 1848, Virchow wrote to his father:

> The majority of human beings have long ceased to believe in the existence of hell; at present, they are beginning to consider even heaven highly doubtful. Hence, we wish that the poor and oppressed, which bear their sufferings on their side of the grave, would have a happier lot here on earth instead of waiting for heavenly joys. This improvement in welfare of the poor to which means the same thing, of the working classes, has not been possible under the existing constitution, for there the King's will alone is law, and the working classes had no means of asserting themselves. The privileged classes always oppressed them. [...] The King should have no other will than the will of the people; there should be no privileged classes, in fact, no classes at all. Instead, everyone should have the same rights in the state, as is natural and reasonable; we want to form from now on a united people, composed of human beings, all with equal rights. (May 2)

Virchow's participation in politics and public health was just as important as his empirical investigations. A period of food shortages due to poor harvests during the industrial revolution resulted in Italian, French, Austrian and German revolutions in 1848. After manning the barricades in the 1848 German Revolution, speaking out against the government, Virchow was exiled from Berlin from 1849-1856. During this time, he worked as the Chair of Pathological Anatomy at the University of Würzburg. While in Würzburg, Virchow gained a global reputation for his theories and discoveries (Ackerknecht, 1953). His international fame and revolutionary medical breakthroughs were his ticket back to Berlin, where he was offered a prestigious position as the Chair of Pathological Anatomy and Director of the newly established Institute for Pathology at the Charité Hospital (Ackerknecht, 1953).

In addition to his medical discoveries, and social-political observations, Virchow was a tremendous teacher. His strong beliefs in free education meant that he disseminated his findings to the public. In his lifetime, Virchow saw the creation of the health insurance bill, and a creation of a social welfare system in Germany (Ackerknecht, 1953). He helped establish a number of museums such as Berlin Ethnological Museum, the Folklore Museum, and Museum of European Cultures. Virchow also supervised a study of seven million German children which disproved the existence of the Aryan race (Zimmerman, 1999).

Having witnessed firsthand the living, working and social conditions in Prussia, Virchow developed a belief that "medicine on a grand scale" required political interventions (McNeely, 2002). More recently his famous dictum has been flipped to state that "medicine is politics on a smaller scale" (Meili & Hewett, 2016). Virchow's understanding of the political and economic causes of diseases made him an activist for fair working conditions, living wages and democracy (Brown & Fee, 2006). Although Virchow strongly believed in clinical observation, his investigations of the typhus epidemic helped form ideas on social medicine and politics (Waitzkin, 2006). For Virchow, since social inequality, poverty, and poor working conditions were the main causes of disease, fighting diseases required political action and social change (Brown & Fee, 2006). Virchow's work and understanding of the relationship between socioeconomic inequalities and disease distributions is very much applicable in today's study of the social determinants of health, health promotion, and health equity.

In the political realm, Virchow helped found the German Progressive Party, and devoted majority of his life to local, regional, and national parliaments in Prussia and the German empire

(McNeely, 2002). Virchow was also an elected member of the Prussian House of Representatives (Brown & Fee, 2006), with a belief that liberal principles such as democracy, pluralism, secularism, and education, among others, can be applied to both politics and medicine (McNeely, 2002). Virchow's goal was to connect medicine and politics and develop a practical philosophy to explain their interactions. Thus, he advocated for cooperation between statesmen and doctors to advance sanitation measures, professional reform, construction of medical infrastructure, collection of statistics, fair working conditions, living wages and democracy (Brown & Fee, 2006).

Virchow's observations of the relationship between social inequality, poverty, and poor living and working conditions with disease and early mortality, and his calls for political reform to address these causes of disease map upon current advocacy for quality and equitable distribution of the social determinants through *progressive public policy approach*. Many of his statements such as "If medicine is to fulfil her great task, then she must enter the political and social life", "The physicians are the natural attorneys of the poor" and "Disease is not something personal and special, but only a manifestation of life under modified conditions" are commonly evoked in social, medical and public health texts to this day. Virchow saw medicine as not merely a study of human disease or cells but a study of society, for him medicine was a social science (McNeely, 2002).

For this and many other of his accomplishments not mentioned here, Virchow was consistently held in the highest regard for his achievements and contributions to medicine, health, and political reforms. This esteem is likely why there are now four hospitals, as well as schools, streets, and lecture halls, named after him in Germany alone (Dunn, 2016).

5.6 Frederick Engels (1820-1895): Contributions to Health Analysis, and Social and Political Reforms

> When one individual inflicts bodily injury upon another such that death results, we call the deed manslaughter; when the assailant knew in advance that the injury would be fatal, we call his deed murder. But when society places hundreds of proletarians in such a position that they inevitably meet a too early and an unnatural death […] when it deprives thousands of the necessaries of life, places them under conditions in which they cannot

> live – forces them, through the strong arm of the law, to remain in such conditions until that death ensues which is the inevitable consequence – knows that these thousands of victims must perish, and yet permits these conditions to remain, its deed is murder… disguised, malicious murder, murder against which none can defend himself, which does not seem what it is, because no man sees the murderer, because the death of the victim seems a natural one, since the offence is more one of omission than of commission. But murder it remains. (Engels, 1845, p. 127)

Friedrich Engels (1820-1895), a German-born son of a textile manufacturer, later turned philosopher, activist, political critic, and theorist who made considerable contributions to the then emerging field of political economy. Born a bourgeoisie, Engels gained his insights into the living and working conditions of the Manchester's working class in 1842 at the age of 22, when he was sent by his father to Manchester, UK to learn and work at his family's textile business (Hunt, 2009). Over the next two years Engels observed and documented the living and working conditions, while also collecting reports and documents about the adverse effects of these conditions on the working class. Upon his return to Germany, he wrote one of his most seminal works *The Condition of the Working Class in England* (1845/2009) as a warning to the German bourgeoisie and the working-class of the consequences of uncontrolled capitalist industrial practices (Medvedyuk et al., 2021).

Engels' observations and writings of life in the industrial cities of England contributed to the development of Marxist ideology and thought (Hunt, 2009). Engels is often spoken about as the man behind Marx or his "second fiddle", profoundly influencing Marx's thinking, initially through the *Condition* (1845), and then by his other writings and personal communications (Hunt, 2009). Engels was Marx's main editor, helping him refine his ideas, theories, and writing. If it was not for Engels' dedication to Marx's thought, the second and third volume of *Das Kapital* would not exist today (Rigby, 1995).

Engels's ideological standpoint was influenced by Hegelian philosophy. His interactions with Young Hegelians – a group of radical thinkers who used Hegel's ideas to critique contemporary society – significantly shaped his thinking about dialectical methods and the nature of change and development (Hunt, 2009). Hegel's dialectical process of thesis-antithesis-synthesis or how Marx put it "position, opposition, composition" became a powerful tool for

understanding the dynamic and contradictory nature of reality and social processes (Edgley, 1990; Hunt, 2009). “This ‘dialectical progression’ was how the march of history happened: each age and its ruling idea was negated and subsumed by the following epoch” where “each era successively undermined by the tension within itself - until rationality and freedom prevailed” (Hunt, 2009, p. 53). In the words of Engels “[…] all successive historical states are only transitory stages in the endless course of development of human society from the lower to the higher […] Against it [the dialectic] nothing is final, absolute, sacred.” (Engels as quoted in Hunt, 2009, p. 53).

Furthermore, Hegel’s emphasis on historical development and evolution of ideas helped shape Engels and Marx’s framework of historical materialism (Moore, 1971). In contrast to Hegel’s idealism which saw the “absolute spirit” as the driver of historical development, Engels and Marx argued that material and economic conditions are the fundamental forces that shape history (Creaven, 2003). By turning Hegel’s ideology on its head, Engels and Marx showed how ideas are the reflection of material reality and economic relations. In 1888, Engels wrote:

> In modern history at least it is, therefore, proved that all political struggles are class struggles, and all class struggles for emancipation, despite their necessarily political form – for every class struggle is a political struggle – turn ultimately on the question of economic emancipation. (p. 387–388)

Engels relationship with an illiterate Irish working-class woman Mary Burns took place at the time when women in textile mills were seen as part of the master’s “harem” (Engels, 1845, p. 170). Mary guided Engels through Manchester's poorest neighbourhoods that would otherwise not be safe for him to enter, helping him observe and document the harsh reality, struggle and oppression faced by the working class (Hunt, 2009). Mary became Engels’s closest confidant and source of information about factory and domestic conditions of the working class (Rigby, 1995). Mary and Engels lived in a “free union” or a common-law relationship in today’s terms, he never publicised their relationship in order to preserve his status and to not anger his parents. And although Engels was known for his romantic escapades, Mary had a special place in his heart and was one of the most influential individuals in his life (Hunt, 2009).

Mary helped Engels document the exploitative working conditions which caused disability, spread of disease, and early mortality of the working-class women, children and men (Rigby, 1995). In his observations Engels criticised the political and economic structures of capitalism, the exploitative working conditions of production, and laws which favoured and protected landowners (Waitzkin et al., 2020). In 1845, Engels (1845/2009) wrote "I have now to prove that society in England daily and hourly commits what the working-men's organs, with perfect correctness, characterise as social murder". A concept that is reflected in Paul Farmers theory of structural violence which Farmer describes as:

> [...] social arrangements that put individuals and populations in harm's way [...] the arrangements are structural because they are embedded in the political and economic organisation of our social world; they are violent because they cause injury to people [...]. (Farmer et al., 2006, p. 1686 as quoted in De Maio, 2010)

In modern applications social murder has shown to be relevant to the analysis of working class population experiences during Covid-19 pandemic (Fuchs, 2022), and the role of corporate power in destroying the environment and creating social, political and economic conditions that cause premature death (Chernomas & Hudson, 2007) among others (for a detailed review of the contemporary uses of the concept of social murder see Medvedyuk and colleagues (2021) and Govender and co-authors (2022).

Engels's investigation of working and living conditions of Manchester's working class remains the classic empirical social analysis of how the conditions created by the liberal state shape health and well-being (Hunt, 2009; Fuchs, 2022). Written and published in German in 1845, an English edition with a new preface by Engels was printed 42 years later in 1887.

The *Condition* (1845/2009) begins with Engels's address to the working-class "Working Men! To you I dedicate a work, in which I have tried to lay before my German Countrymen a faithful picture of your condition, of your sufferings and struggles, of your hopes and prospects." (p. 9). The address is followed by a preface in which Engels (1845/2009) provides introductory remarks, setting the stage for his observations, he writes "The condition of the working-class is the real basis and point of departure of all social movements of the present because it is the highest and most unconcealed pinnacle of the social misery existing in our day." (p. 12) This

section is preceded by an introduction to the socio-economic conditions in England, and a broad overview of the effects of industrialisation on the working-class. This is followed by a section discussing various categories of industrial workers such as factory workers, miners, artisans and craftsmen, agricultural workers and Irish migrants. The next section titled *The Great Towns* provides a detailed account of the impact of urbanisation on the living conditions of the working-class in large industrial towns such as London, Manchester, Leeds, Liverpool among many others. This is followed by a discussion of industrial competition not only between classes, but among the people of specific classes, Engels (1845/2009) writes:

> This battle, a battle for life, for existence, for everything, in case of need a battle of life and death, is fought not between the different classes of society only, but also between the individual members of these classes. Each is in the way of the other, and each seeks to crowd out all who are in his way, and to put himself in their place. (p. 87)

In the following section Engels proceeds by discussing the lives of Irish immigrants describing the social tensions between the Irish and the English proletariat. In this section Engels uses language which in contemporary context would be problematic, referring to the Irish as "savage", "crude", "intemperate", and "drunks" reflecting the racial prejudice of the 19th century. The following section is titled *Results,* and it summarises the effects of urbanisation and industrialisation on the working class, speaking on the general conditions of living Engels (1845/2009) states "That a class which lives under the conditions [...] so ill-provided with the most necessary means of subsistence, cannot be healthy and can reach no advanced age." (p. 107) This section is followed by an examination of other branches of industry such as factory-hands, stocking weavers, lace makers, wool manufacturers, the metal, pottery and glass industries. The preceding section is titled *Labour Movements,* it provides examples of various labour movements and strikes, detailing how workers organise to improve working conditions. The next sections detail conditions experienced by the mining labourers and the impact of industrial capital on those working in agriculture and living in rural areas. The attitude of the privileged classes towards the proletariat is described in the following section, speaking about the bourgeoisie Engels (1845/2009) writes "I have never seen a class so deeply demoralised, so incurably debased by selfishness, so corroded within, so incapable of progress, as the English

bourgeoisie" (p. 281) stating that "it is self-interest, and especially money gain, which alone determines them". The book concludes with a description of a violent labour dispute between the brickmakers and the company employing them, which helps to illustrate the general social and legal struggle of the English working-class for fair working conditions and fair pay. Engels's description of exploitation and oppression of the working class remains one of the most influential ethnographies to date.

In *Condition* Engels documented practically every social determinant of health (Govender et al., 2023), examined the nature of the liberal state and social inequities arguing that the rich who "…control of the means of subsistence and production, is the weapon with which this social warfare is carried on…" (Engels, 1845/2009, p. 37–38) were waging a war on the working class (Govender et al., 2023). Engels documented how epidemics and diseases such as "rachitis, scarlet fever, indigestion, scrofula, and lung disease, among others, disproportionately afflicted the working class" (Govender, 2023, p. 1616). Engels (1845/2009) described health inequities and inequitable distribution of the social determinants of health, he writes:

> They are given damp dwellings, cellar dens that are not waterproof from below, or garrets that leak from above…They are supplied bad, tattered, or rotten clothing, adulterated and indigestible food. They are exposed to the most exciting changes of mental condition, the most violent vibrations between hope and fear…are worked every day to the point of complete exhaustion of their mental and physical energies […]. (p. 108–109)

Engels described purposeful union busting by both employers and the government, lack of wage regulation, and worker exploitation. He states:

> Naturally, the workers are perfectly free; the manufacturer does not force them to take his materials and his cards, but he says to them. "If you don't like to be frizzled in my frying-pan, you can take a walk into the fire". (1845/2009, p. 206).

> The history of these Unions is a long series of defeats of the working men, interrupted by a few isolated victories. All these efforts naturally cannot alter the economic law according to which wages are determined by the relation between supply and demand in

> the labour market. Hence the Unions remain powerless against all great forces which influence this relation. (1845/2009, p. 224)

In this seminal work, Engels described poor public policies, for example welfare relief for the poor:

> All relief in money and provisions was abolished; the only relief allowed was admission to the workhouses immediately built. The regulations for these workhouses, or, as the people call them, Poor Law Bastilles, is such as to frighten away every one who has the slightest prospect of life without this form of public charity. (1845/2009, p. 291–292)

Engels outlined how the state through legislative reform and changes in the electoral system "legally sanctioned the distinction between bourgeoisie and proletariat and made the bourgeoisie the ruling class" (1845/2009, p. 222), by giving greater electoral representation to citizens paying higher rates (Govender et al., 2023).

Additionally, he commented on bourgeoisie philanthropy, and introduced the concept of 1%:

> Hence, too, there exist here only a rich and a poor class, for the lower middle class vanishes more completely with every passing day. Thus the class formerly most stable has become the most restless one. It consists today of a few remnants of a past time, and a number of people eager to make fortunes, industrial Micawbers and speculators of whom one may amass a fortune, while ninety-nine become insolvent, and more than half of the ninety-nine live by perpetually repeated failure. (Engels, 1845/2009, p. 34-35)

In *Condition* Engels documented how working conditions created disease, disability and death stating:

> [T]he number [of accidents] is still large enough, as the foregoing cases prove, to arouse the grave question as to a state of things which permits so many deformities and

> mutilations for the benefit of a single class and plunges so many industrious working people into want and starvation by reason of injuries undergone in the service and through the fault of the bourgeoisie. (1845/2009, p. 175).

And:

> Women made unfit for childbearing, children deformed, men enfeebled, limbs crushed, whole generations wrecked, afflicted with disease and infirmity, purely to fill the purses of the bourgeoisie'. (Engels, 1845/2009, p. 175)

In summary, Engels's reporting examined the following social determinants of health: income and income distribution, education, unemployment and job security, employment and working conditions, early child development, food security, housing, social exclusion, social safety net, health services, geography, disability, gender, immigration, race, and globalisation (Govender et al., 2023). Engels showed how class relations, and capitalist modes of production created exploitation and oppression, as well as general social injustice that had severe consequences for the working-class population.

Eventually, Engels returned to Manchester in 1849 and was employed until 1870 by the family-owned textiles business. During this time, he financially supported Marx and his family, continued to organise the international socialist community, and published numerous manuscripts many of which are considered classical texts in political economy (Fuchs, 2022).

Engels's empirical research and resulting writings continue to influence modern day discourses in the critical political economy of health and the study of health equity (Medvedyuk et al., 2021; Govender et al., 2022; Govender et al., 2023). His analysis of patriarchy inspired the development of social feminism (Fedirici, 2012). His neglected masterpiece as described by Hyman (1962) is experiencing a resurgence in both academic and non-academic publications (Medvedyuk et al., 2021). By identifying just about every social determinant of health and linking the capitalist drives for accumulation, profit, and expansion with human illness and premature mortality, Engels provided the basis for the *critical materialist political economy of health* perspective. Engels's call for the establishment of a post-capitalist socialist society is increasingly being heeded by those concerned with health inequities (Raphael and Bryant, 2023).

5.7 Chapter Summary

This chapter began by exploring the Victorian-era in Europe, a time of significant change and transformation from the early 19th century to the early 20th century, a time truly out of joint. It examines how industrialization revolutionised production, transportation, and economic restructuring, lead to urbanisation and harsh working conditions for all members of working-class society. Historical figures such as Chadwick, Virchow and Engels played salient roles during this period. Chadwick championed sanitary reforms that laid the foundation for modern public health policies, Virchow made groundbreaking contributions in pathology, and social medicine by linking socio-economic conditions to health, and Engels provided a critical analysis of the exploitative nature of the capitalist system. The chapter emphasised how the work of the three historical figures together with other contemporaries of that time advanced public health, medicine, and political ideologies. Advances and approaches which still reverberate through public health to date.

CHAPTER 6:
SCOPING REVIEW: THE USE OF CHADWICK, VIRCHOW AND ENGELS IN CONTEMPORARY LITERATURE

6.1 Introduction

This chapter examines the evocation of Chadwick, Virchow, and Engels in contemporary academic literature, analysing how these historical figures continue to influence modern health discourses. It begins by detailing the methodology used for a scoping review of literature published between January 2000 and June 2023, focusing on articles from prominent journals in health, public health, and history. The chapter then discusses the specific themes and categories associated with each figure, revealing how their ideas are referenced in contemporary contexts.

The chapter proceeds to explore the results of the scoping review, highlighting dominant themes that emerged from analysis. For Chadwick, the most frequent mentions involve sanitary reform, public health, and socio-economic inequalities. Virchow, who appears most frequently in the review, is noted for his contributions to public health, pathology, and his famous dictums on the intersection of medicine, social science, and politics. Engels is often cited for his analysis of political economy, health inequalities, and critiques of capitalism, reflecting his impact on socio-economic discussions within health literature.

Finally, the chapter presents a co-occurrence network analysis and frequency heat maps to visualise the relationships and trends in the literature over time. These tools illustrate the relevance of Chadwick, Virchow, and Engels showing how their ideas have been evoked during significant historical anniversaries and other critical moments. The chapter concludes by discussing the significance of these figures in shaping contemporary health discourses, with Virchow's work being particularly influential across multiple fields.

6.2 Evocation of Chadwick, Virchow, and Engels in Contemporary Literature

The second part of this study consists of a scoping review of traces left in contemporary literature. Academic literature was reviewed between the years January 2000 - June 2023. In order to produce a manageable number of citations a focused scoping review was conducted by examining prominent academic journals that examine health, public health and history such as *American Journal of Public Health, Bulletin of the History of Medicine, Social History and*

Medicine, The Lancet, Medical History, and Social Science and Medicine (the full list of journals can be found in Chapter 2, Figure 1). The search terms used were the name of the Victorian-era thinker and the word "health", for example, "Chadwick" and "health". A note on the search in the *Medical History* journal is needed, for this journal the search had to be modified and only the historical figure's name was used as a keyword. This scoping review followed Arksey and O'Malley's (2005) five stages of scoping review: 1) specify the research question; 2) identify relevant studies; 3) select from these studies; 4) chart the data; and lastly 5) collate, summarise and report the results. Literature review results were recorded in an Excel table which contained general article information, along with article theme(s). Stages four and five of the Arksey and O'Malley's (2005) framework were supplemented with content analysis techniques described by Pollock and colleagues (2023) and Elo and Kyngäs (2008), and constant comparative methods for coding described by Strauss & Corbin (1990).

For content analysis a co-occurrence network analysis and frequency of category(ies) heat maps were created using generative AI program GPT-4o. To create these charts, I uploaded literature review data recorded in an Excel file and prompted the program to produce two charts. For co-occurrence network figures, I first prompted the program to create a co-occurrence matrix based on the uploaded Excel data spreadsheet. After a careful review of the co-occurrence matrix for accuracy, the program was prompted to create a co-occurrence network analysis visualisation or network. Then the visualisation was edited for better viewing, for example the program was prompted to set node titles in bold, add number of frequencies, and resize the node according to frequency of mention, so that themes that were most frequently mentioned were represented by larger nodes.

Additionally, the program was prompted to colour code relationship lines or arms based on the strength of its relationship to other nodes, where strong relationship was coloured in purple, medium in green, and weak relationship in yellow. Centrally located nodes are most prominent with highest mentions, and peripheral nodes are less common and tend to have weaker relationships to other nodes. A co-occurrence network analysis helps understand category frequency and relationships between main categories identified in each article.

Heat maps were also created by uploading Excel data spreadsheets recorded through literature review analysis into GPT-4o. Once the data spreadsheets were uploaded, the program was prompted to create a year by frequency of theme heatmap. No additional prompts were

required to generate these visualisations. Frequency heat maps help analyse what themes appear during what time period showing most prevalent themes in specific years.

Initial scoping review search retrieved 434 articles for Chadwick, 485 for Engels, and 416 for Virchow. The first screening excluded articles that mentioned Virchow's Triad (related to the medical study of vascular thrombosis), the Rudolf Virchow Hospital, Engel's law or Engel's coefficient developed by Ernst Engel in 1857, and Engel equation (used in hydraulic engineering). Additionally, articles that mentioned other individuals with the same last names as the three historical figures were also excluded in the first round of screening.

The second round of review was based on the relevance of the mention of one of the historical figures to the core concepts relevant to this study such as health, public health, health determinants (including social, political, economic, and biological determinants), health promotion, health history, or medical history and one of the historical figures. For example, an article written by Ferry (2001) titled *Dangerous Sexualities: Medico-Moral Politics in England* which mentions Hamlin's (1998) biographical work on Chadwick was excluded because it only references Hamlin's book which contains Chadwick's name. Another example of an excluded publication in the second round is an article written by Weaver (2010) which mentions Virchow in relation to clinical use of laboratory tests, and technologies such as microscope, thermometer and calorimeter in children's medicine, however this mention is not related to the research question of this study. After the second round of review 107 articles were included for Chadwick, 118 for Engels, and 228 for Virchow.

The third round of reviews focused on examination of the type of mentions, where superficial mentions of one the three historical figures were excluded for example, a publication by Loff and colleagues (2001) which reads "Mann and colleagues, like reformers from Virchow and Engels to Jogn Ryle and Richard Titmuss, sought to harness tools for social change to bring better health." (p. 1901) was excluded because it does not provide sufficient or meaningful discussion of Engels's or Virchow's contributions to public health. The final third screening yielded 91 articles for Chadwick, 98 for Engels, and 203 for Virchow.

Figure 1 documents the number of articles published in each journal mentioning each public health figure. The top three journals that identified Chadwick are *Social History of Medicine, The Lancet,* and the *American Journal of Public Health,* followed by *Social Science and Medicine.* Virchow was most prominently mentioned in *The Lancet,* followed by the

American Journal of Public Health, Social Science and Medicine, and *International Journal of the Social Determinants of Health and Health Services.* Engels most often appeared in the *International Journal of the Social Determinants of Health and Health Services* (*IJSDH)* (formerly known as the *International Journal of Health Services* established by Vicente Navarro in 1971), followed by *Social Science and Medicine,* and the *American Journal of Public Health.*

The analysis shows that Chadwick is the only one frequently mentioned in a journal focusing on medical history titled *Social History of Medicine,* followed by one of the most reputable albeit less critical health journals, *The Lancet*, and then the *American Journal of Public Health*. Whereas Virchow also makes a significant appearance in a health journal known for its critical views, the *IJSDH*. The sheer number of articles which focus on Virchow – 203 (almost double as that of the two other historical figures) shows that he is much more likely to be mentioned in health discourses. Additionally, the fact that he appears in both mainstream and critical journals highlights that his ideas appeal to both mainstream and critical scholars.

Engels, on the other hand, is most likely to be examined in critical social science journals that examine health determinants, and two prominent public health and health and social science journals.

Figure 1: Distribution of Evocations of Historical Figures by Journal

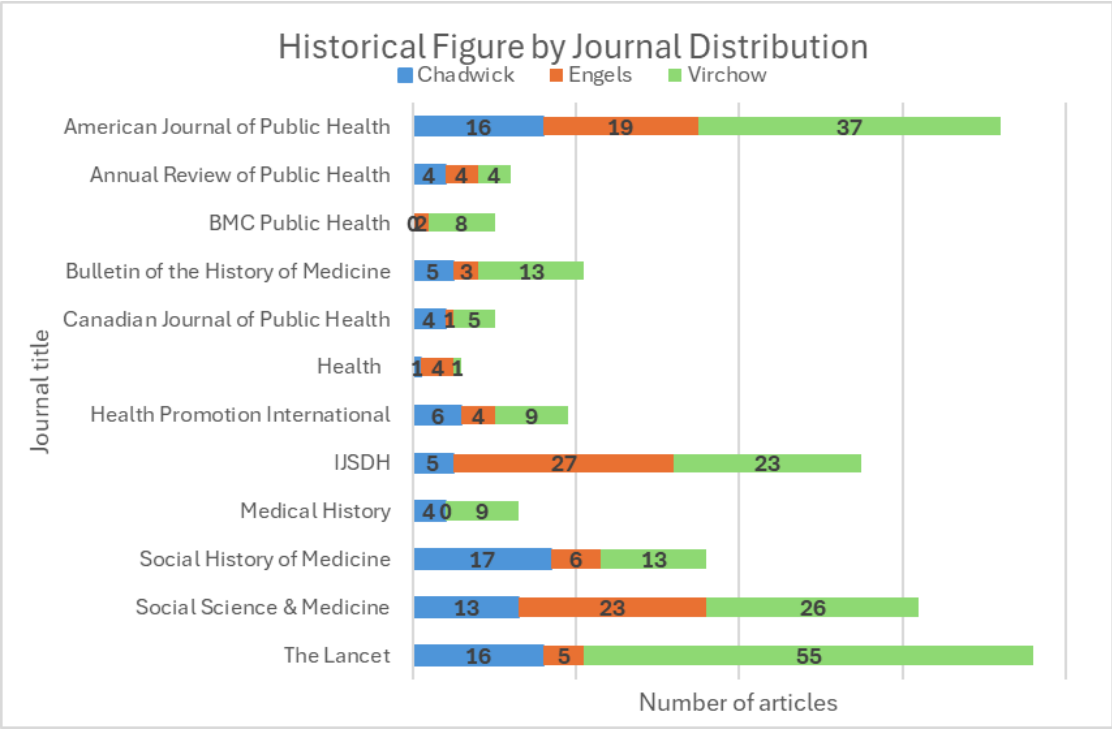
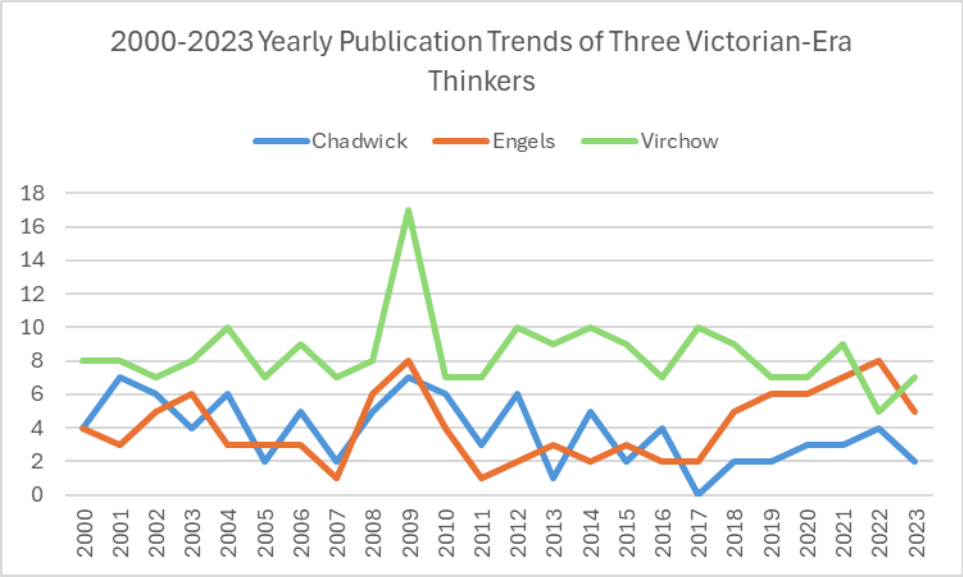


Figure 2 identifies the prevalence of publications by each historical thinker by year to understand if there are any observable trends (Figure 2). Interestingly, there was a spike in literature among all public health pioneers in 2009 which marked 150 years since the decade which saw many of the most prominent publications by the three historical thinkers. As Fee and Brown (1997) state "Anniversaries provide a natural opportunity to acknowledge milestones, celebrate achievements, remember turning points, and honour individuals of courage and vision who have made significant contributions." (p. 1764).

The year 2009 also coincided with the World Health Summit in Germany, and in 2008 the WHO produced one of its most important albeit less critical reports on the social determinants of health titled *Closing The Gap in a Generation: Health Equity Through Action on The Social Determinants of Health* (2008) generating a number of articles that critique the report (for example, Baum et al., 2009; Birn, 2005; Navarro, 2009; Raphael, 2009). Additionally, the 2009 economic crisis likely contributed to the increase in mention of all three authors. Since 2009, publications mentioning all three figures have generally declined.

Despite this general decline, a continuous upward trend in publications that mention Engels from 2017 to 2022 is apparent as is a similar trend for Chadwick (although the number of articles is lower than those for Engels), this observation has been made in other studies (Medvedyuk et al., 2021; Govender et al., 2022). It is also important to note that literature review was conducted up to June 2023, thus limiting the number of publications for 2023. With that in mind most recent years have seen a significant decline in publications that mention Virchow with Engels and Chadwick experiencing an upward trend through 2002 (2023 data is for half the year).

Figure 2: 2000-2023 Yearly Publication Trend of Three Victorian-Era Thinkers



A final observation determined how many of the articles are simply biographical rather than using their concepts and ideas. For Virchow, only three of 203 articles were biographical, five of 98 articles that mention Engels were focused on him and his life, and eight of 91 articles provided a biography of Chadwick.

The scoping review results produced a fair number of articles to understand the use of Chadwick, Virchow, and Engels's ideas in health discourses. All articles were analysed using content analysis based on the theme of the focus of mention. In Derridian and Rainey and Hanson's terms the articles carry within them traces of the textual legacies and identities of three historical figures, and the authors evoking the ideas of these spectral figures in effect create continuities between the past, present and sometimes future perspectives. A detailed content and thematic analysis for each historical figure is provided below.

6.3 Chadwick in Contemporary Literature

The main themes that emerged from articles that evoke Chadwick are presented from most to least frequent: sanitary reform (52); Public Health Act (43); socio-economic and health inequalities (34); urban settings (24); environment/settings (21); poverty (18); public policy (17); Chadwick as hero/pioneer (14); quantitative analysis (14); contemporary application (12); social reform (11); critique of Chadwick (12); the Poor Law (12); life expectancy (12); miasma (11); epidemics (9); industrialisation (4); epidemiology (3); and lastly education (2).

The majority of the articles had more than one focus of mention and were coded under multiple categories. For example, an article by Forbes and Wainwright (2001) was grouped under the themes “sanitary reform”, “quantitative analysis” and “health inequalities”. Forbes and Wainwright (2001) write: “The analysis of large-scale survey data has been the central modus of work within the health inequalities field since the days of Chadwick and the sanitary reform movement of the 1840s” (Forbes & Wainwright, 2001, p. 801).

Grouping the focus of mention under multiple categories identified how Chadwick and his work is being evoked by contemporary authors. Multiple category assignment also assists in understanding the traces or threads that are being weaved from the past into the present fabric of health discourses. To provide a comprehensive analysis of data, two figures are presented for each historical figure; the first represents a co-occurrence network of focus of mentions themes or domains, and the second provides a domain frequency of occurrence by year. Below examples illustrate the categories presented in articles that mention Chadwick (a list of included citations is provided in Appendix D).

Articles that examine sanitary reforms such as Brown and Fee (2014) evoke Chadwick to describe his work on sanitary reform and this article in particular also mentions socio-economic conditions in urban settings. They write:

> In Britain, Edwin Chadwick’s famous report (in 1842) on the sanitary condition of the laboring population clearly demonstrated that overcrowding, poverty, ill-health, and heavy mortality were closely associated and found together in the same run-down urban areas. (p. 386)

Similarly, Davis and colleagues (2014) examine Chadwick’s sanitary and public health work, and the role of government in administering services:

> The 1842 Chadwick report on sanitary conditions of the working population was highly influential in informing public health policies, with the 1848 Public Health Act acknowledging the core role of national and local government in improving the population’s health. The Act included provisions for the organisation of public health,

addressing issues such as sewerage, drainage, water supply, safety, and the environment more widely. (p. 1890)

The quote from Whitley and Prince (2006) is an example of a mention that was categorised under sanitary reform, urban settings, and health inequalities, it reads:

> Figures such as Chadwick, Snow and Virchow documented how factors particular to urban environments, for example overcrowding and unsanitary conditions, could lead to increased risk and elevated rates of numerous health problems. (p. 19)

The article by Goldberg (2012) provides an example of a more complex relationship among focus of mention themes of sanitary reform, critique of Chadwick's work, public health, the Poor Law, and urban settings:

> Scottish public health reformer W. P. Alison urged collective social action to ameliorate the devastating social and economic conditions of the 19th-century urban poor, the Chadwickians narrowed the scope of the public health platform considerably by focusing simply on the poisons thought to inhabit filth (for which sanitation was the obvious policy remedy). As Christopher Hamlin has shown, Edwin Chadwick was primarily motivated by a desire to preserve existing social and class hierarchies in the form of the 1834 New Poor Law, not to overturn them or flatten the social gradient of health. (p. 46)

An article by Kickbusch (2003) highlights Chadwick's role as a social reformer of public health:

> The decision to move in a direction that was quite different from the approach chosen in the United States can be understood only by keeping in mind the strong link between public health and social reform in European public health history—the work of Villermé, Virchow, Chadwick, and Engels, to name but a few—and the role of the state in the provision of health and social services in the European region. (p. 384)

Navarro (2009) comments on Chadwick's role in public health and how studies of socio-economic inequalities, poverty, and life expectancy, regard him as a hero whose ideas resonate with contemporary discourses. Navarro (2009) writes:

> Recall that it was Chadwick, one of the founders of public health, who, as Commissioner of the Board of Health of Great Britain in 1848–1854, declared that the poorer classes of that country were subject to steady, increasing, and sure causes of death: "The result [of the social situation] is the same as if twenty or thirty thousand of these people were annually taken out of their wretched dwelling and put to death." A century and a half later, millions of people, in both the North and the South, are put to death in just this way. And we know the economic, financial, and political forces responsible for this. And we have to denounce them by name. (p. 440)

In their article on inequalities and social murder, Chernomas & Hudson (2010) highlight application of Chadwick's ideas, along with those of Engels in contemporary times, they write:

> In our previous article on social murder and conservative economics, we identified the origins of the idea of social murder in the works of Edwin Chadwick and Friedrich Engels, who indicted capitalist society for choosing not to use its resources to ensure the health and well-being of its citizens. Conservative contemporaries of Chadwick and Engels provided the ideological cover for policies that served, first and foremost, the business class of the time. We went on to discuss how modern conservative economists have made similar ideological contributions to the extraordinary increase in exploitation, stagnation, and environmentally destructive deregulation of the past 30 years. In this article, we discuss the connection between inequality and health, examine the conservative justification for inequality, and track its extraordinary increase over the past 30 years. (p. 61)

Freudenberg and colleagues (2021) discuss Chadwick's role in sanitary reforms, public health, and urban settings during industrialisation:

> Beginning in the mid-19th century, in response to health concerns, workers, reformers, and the emerging public health profession mobilised to improve working conditions, urban water and sanitation, and housing within imperialist nations. In the 1830s and 1840s, the Sanitary Movement brought public attention to the deleterious consequences of industrialization, and later labour movements forced governments to regulate occupational health and safety hazards. (p. 2205)

The article by Hart (2008) provides a critiques Chadwick as a social reformer while examining his work on the Poor Law:

> Until 1948, the institutional gift economy was still organised around the principle of less eligibility, which was originally adopted by Edwin Chadwick to make life in workhouses meaner, uglier, and more uncomfortable than the worst life outside—a principle endorsed by Sydney and Beatrice Webb, and by most other eminent social reformers of the early 1900s […] (p. 1884)

Similarly, albeit different in focus, Kelly and Tumblety (2016) highlight Chadwick's public health work and role as a social reformer, stating:

> Some of the most successful public health campaigns of the 19th century hinged on the ability of medical advocates to secure the support of influential politicians. The social reformer Edwin Chadwick relied heavily on the medical support of Thomas Southwood Smith to secure the Public Health Act in 1848. (p. 1976)

Singh-Manoux and Marmot (2005) state that socio-economic inequalities observed in the past are also present in contemporary times writing "Reports on socioeconomic inequalities in 19th-century Europe (Chadwick, 1842; Villerme, 1840) have been followed by research showing the existence of a socio- economic gradient in health in developed countries." (p. 2129)

Remais and Eisenberg (2012) provide an example of Chadwick's work on sanitation, urban settings and epidemics:

> The use of environmental strategies to reduce infectious diseases has a long history. John Snow identified cholera as a water-borne agent in the UK in the 1850s, and Edwin Chadwick brought about major improvements in environmental conditions in British urban areas during the same period. (p. 1457).

When discussing the role of education in promoting health, St Leger (2004) writes about Chadwick's pioneering role in addressing environments and settings, sanitation, and socio-economic inequalities:

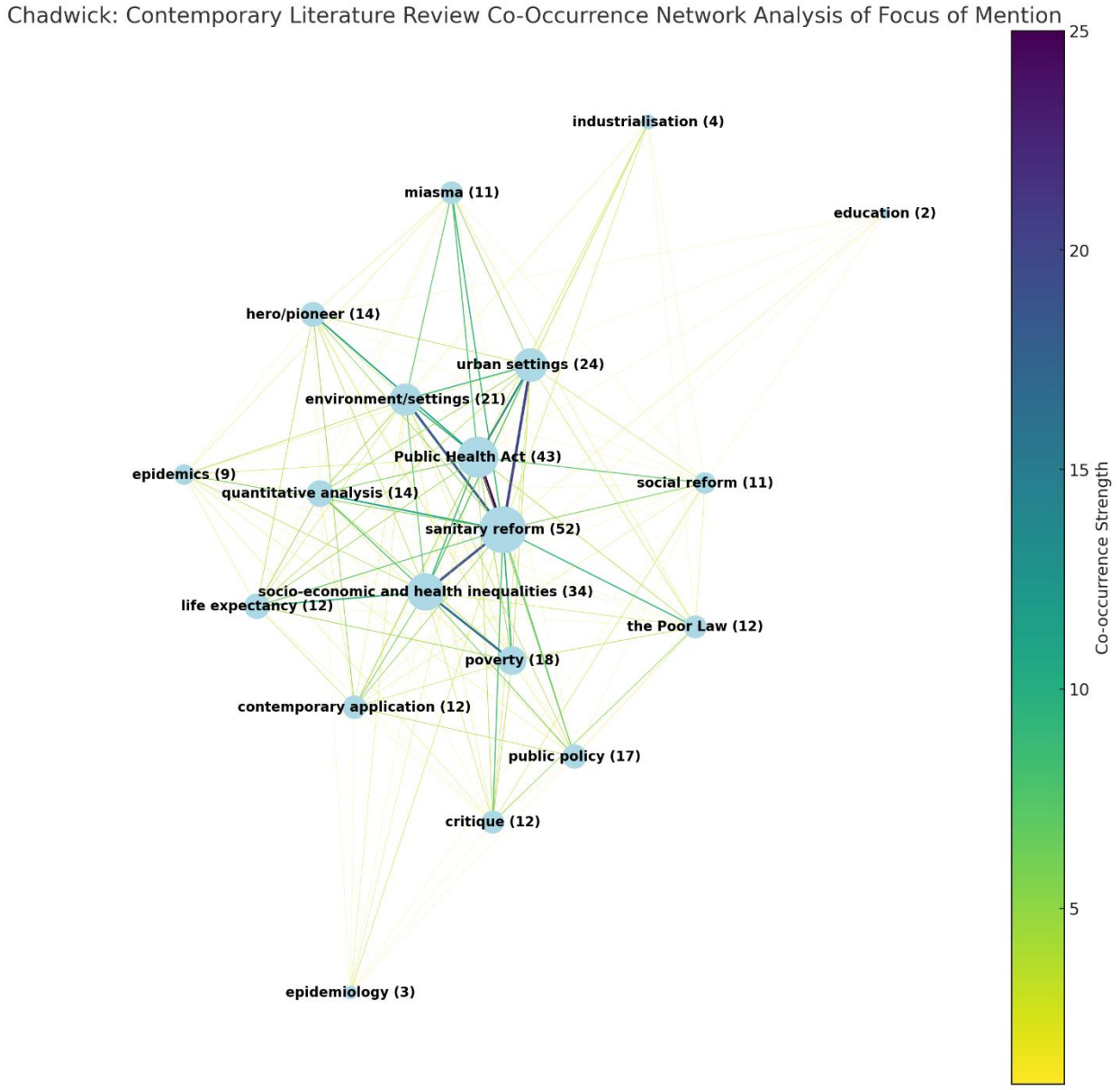
> Compulsory schooling in many countries began in the latter half of the 19th century. This was a time when pioneers such as Chadwick, Howard and Simon had argued that addressing the settings in which people lived, by developing policies to change the social conditions and physical environments, produced significant improvements in the health status of communities. (p. 405)

The thematic co-occurrence analysis of the themes of focus of mention is presented in Figure 3. This figure provides analysis on the relationship between category themes (as most of the articles were categorised under more than one theme or domain) through co-occurrence network analysis. Each node represents a specific theme or concept mentioned in the literature. The size of the node indicates how frequently that theme appears across the reviewed literature. Larger nodes represent more frequently mentioned themes. The colour coded lines or arms between the nodes represent the co-occurrence of themes, meaning how often two or more themes are mentioned together in the same article. The thickness and colour intensity of the relationship lines indicates the strength of the co-occurrence. Thicker and darker purple lines represent a stronger relationship, while thinner and yellow lines represent weaker relationships.

Themes that are more central in the network are considered as core themes that are frequently discussed in relation to other themes. Peripheral themes, with fewer connections, appear less central in the literature. For example, the nodes "Sanitary Reforms" and "Public Health" are large and have a thick, purple line connecting them suggesting that contemporary literature often discusses Chadwick's work on sanitary reforms and public health. This is because Chadwick's contributions are often discussed in relation to improving public health through

sanitation. The node titled “Socio-economic Inequalities” is a one of the central nodes with many connections to other themes like “Health Inequalities”, “Poverty” and “Urban Settings” indicating that contemporary discussions about Chadwick often explore the socio-economic aspects and their impact on health and urban conditions.

Figure 3: Chadwick: Contemporary Literature Review Co-Occurrence Network Analysis of Focus of Mention (2000-2023)



The central themes of “Sanitary Reforms” and its relationship to other prominent nodes such as “Public Health”, “Health Inequalities”, “Socio-economic Inequalities”, “Urban Settings” and “Environment/settings” indicates a strong contemporary interest in Chadwick’s analysis of health inequalities, socio-economic conditions and settings and environments. Furthermore, centrally positioned nodes, such as “Sanitary Reforms”, “Public Health”, and “Health Inequalities” further exemplify their roles as core topics intersecting with various other discussions in the literature. While peripheral themes such as “Industrialization” and “Education” are smaller and less frequently mentioned, indicating they are less frequently discussed within the broader discussions about Chadwick. “Epidemiology”, while mentioned along many other domains, appears less central compared to themes like “Public Health” and “Sanitary Reforms”.

Figure 3 also reveals clusters of related themes. For example, themes like “Public Policy”, “Social Reform”, and “Poor Law” cluster together, indicating a focus on legislative and social reforms. Another cluster involves “Environment/Setting”, “Urban Settings”, and “Miasma”, suggesting a strong focus on the environmental determinants of health.

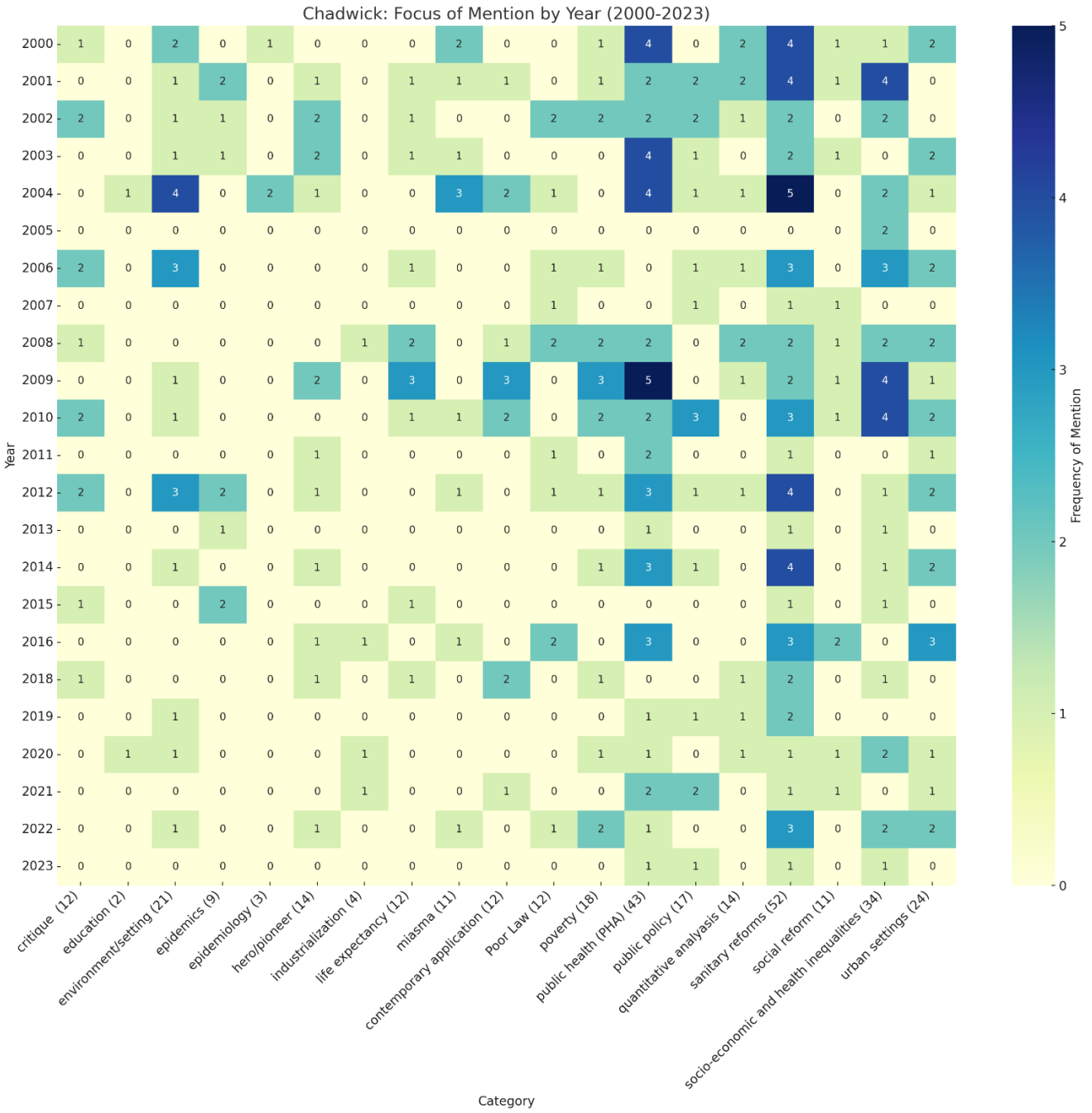
Overall, the co-occurrence network analysis shows that contemporary literature on Chadwick emphasises sanitary reforms, public health, and urban settings, reflecting Chadwick’s historical contributions. Peripheral themes add context and depth, although they are less central to the main discussions. The co-occurrence network analysis helps to visualise the themes in scholarly discourse that invoke Chadwick, showing both the individual prominence of themes and their interrelationships.

Another way to make sense of the literature review data was to look at the themes that occurred most often during specific time periods. Figure 4, shows which themes occurred most often during which years. For example, consistently mentioned categories include “Sanitary Reforms” and “Public Health”. Similarly, “Socio-economic” and “Health Inequalities” themes as frequently mentioned themes throughout the years of analysis. This reflects Chadwick’s well-known contributions to these areas, particularly his work on sanitary conditions, public health reform, and analysis of social conditions that lead to poor health. Temporal peaks for example in the categories of “Environment/settings” and “Quantitative Analysis” showed interest prior to 2012.

There are inconsistent mentions of “Poor Law” and “Miasma” suggesting that these themes are less discussed but are still relevant in specific articles. Less frequent themes such as

“Critique” of Chadwick's work was most frequent between 2006-2012 and has not been documented since 2018. Most recent literature examines Chadwick’s contributions to environment and settings, public health, sanitation, poverty and socio-economic inequalities, however overall, the analysis shows that interest in Chadwick’s work is weakening in academic health discussions.

Figure 4: Chadwick: Focus of Mention by Year (2000-2023)



Overall, the heatmap provides a visual summary of how discussions related to Chadwick have evolved over time. It highlights key periods of interest and shifts in focus, offering a comprehensive overview of his impact across various fields.

In summary, Chadwick's textual legacy is most remembered in his work on sanitary reforms and public health. He is often evoked for his work on socio-economic and health inequalities, poverty including Poor Law, quantitative analysis, urban settings and general environments and settings. The traces of his legacy can be found in discussions on miasma, life expectancy, industrialisation, epidemiology and education. For many of his accomplishments, Chadwick is regarded as a hero and a pioneer.

6.4 Virchow in Contemporary Literature

Virchow yielded by far the highest number of articles with 203 being included in the final review. Identified categories are: contemporary application (94); political conditions (82); pathology (60); public health (60); social conditions (59); dictum "medicine is social science and politics" (51); political reform (49); health inequalities (48); political economy (38); epidemics (38); social medicine (35); medical and social reform (24); hero/pioneer (22); mortality (15); education (13); veterinary sciences (11); dictum "physicians as attorneys" (10); anthropology (9); living conditions (6); sanitation (5); democracy (4); social murder (2). The observed themes within the focus of mention are closely related to Virchow's work in Upper Silesia which examined the relationship between public health and political conditions. Virchow is also remembered for this work in pathology.

Overall, there is a strong presence of the use of Virchow's work in contemporary times. Virchow's famous dictums of "medicine as social science and politics", and "physicians as natural attorneys" have a strong presence in contemporary literature. Similar to Chadwick, Virchow is recorded as a hero or a pioneer. The less mentioned categories of sanitation and his work in anthropology highlight the lower occurrence of these categories in contemporary health discourses (this is perhaps because sanitation was not Virchow's main domain, although he did play a key role in the sanitation movement in Berlin).

Experts from contemporary academic articles highlight the traces through which Virchow is evoked in scholarly literature. In line with content analysis, multiple categories were assigned in order to capture the ways in which Virchow's legacy is presented in present times.

Gilligan's (2000) article on violence in public health provides an example of a multi-category reference to Virchow's work and is categorised under pathology, public health, politician, medicine as social science, epidemics, contemporary application, and anthropology. Gilligan (2000) writes:

> We can prevent violence if, and only if, we replace the moral and legal approach with the approaches of public health and preventive medicine. This is a matter of vital importance to the future of humanity, in which the medical professionals can serve an invaluable role as educators and leaders. If that seems too political, it is well to remember the words of Rudolph Virchow, one of the greatest physicians of all time, a founder of public health and preventive medicine, pathology and anthropology, who showed how epidemics of disease resulted in part from social conditions, and who therefore also served as a politically progressive statesman in the Prussian Reichstag: "Medicine is a social science, and politics is simply medicine on a larger scale. (p. 1804)

Dissmann and de Ridder (2002) provide an example of the relevance of Virchow's ideas on medicine and political reform in contemporary times, categorised under political economy, socio-economic inequalities, and contemporary application. The authors state:

> Over 150 years ago, the German Rudolf Virchow, stated: "If medicine is ever to fulfil its great ends it must penetrate the larger political and socioeconomic aspects of our life." Virchow is dead, but his scientific and political vision is still valid and indispensable. (p. 2029)

Writing about health equity and racial and ethnic disparity, Ibrahim, Thomas, and Fine (2003) use Virchow's ideas on social-political inequality and health relationship, the authors state:

> [...] there are several reasons why identifying and understanding health disparities and marshalling the "political will" needed to eliminate them are essential for all Americans. First, health and well-being are measures of social equality and quality of life. This

> concept was captured by Rudolph Virchow, a 19th-century German physician and public health scholar, who believed that health is an indirect measure of a society's collective democracy (freedom). (p. 1619)

Discussion global capitalism as a societal determinant of health Flynn (2021) evokes the works of Virchow and Engels, stating:

> The deleterious health effects of capitalism have been exposed since the days of Friedrich Engels and Rudolf Virchow, but a review of scholarly literature from the Network for Critical Studies of Global Capitalism and the Global Studies Association revealed limited application of the conceptual toolkit derived from perspectives global capitalism to global health. (p. 3)

Commenting on political conditions, public health and life expectancy, Mackenbach (2013) writes:

> During the past decades, the idea that health needs to be brought into the political arena has become part of mainstream public health, often with a reference to famous antecedents like Virchow ("Politics is nothing but medicine at a larger scale") (Mackenbach, 2009) and Rose ("Medicine and politics cannot and should not be kept apart") (Rose, Khaw, & Marmot, 2008). (p. 134)

Writing about cancer, epidemics and political reform Colditz (2001) evokes Virchow's writing on epidemics and societal disturbances "To paraphrase Virchow, the rise of melanoma and the almost complete decline of stomach cancer clearly reflect disturbances of our human culture during the 20th century." (p. 357).

Discussing masculinity and working conditions of undocumented migrants in San Francisco, Walter, Bourgeois and Loinaz (2004), reference Virchow in their discussion of political and social conditions and health inequalities. The authors write:

> Rudolph Virchow, the founder of cellular pathology in medicine and a leading figure in what became social epidemiology, documented quantitatively the health implications of socioeconomic inequality: “Medical statistics will be our standard of measurement: we will weigh life for life and see where the dead lie thicker, among the workers or among the privileged” (Virchow 1848, cited in Farmer, 1999, p. 1). (p. 1167)

Virchow’s influence on the development of social medicine is frequently noted and is exemplified in below quotations by Tajer (2003) and Paluzzi (2004). Tajer (2003) states:

> The source of inspiration for Latin American social medicine (LASM) is the social movements that occurred in France, Germany, and England during the mid-19th century and the development of European social medicine, together with political processes whose main representative was Rudolf Virchow. (p. 2023).

> Rudolph Virchow, a 19th century German physician is usually cited as one of the earliest and most influential physicians in the development of the social medicine perspective. Salvador Allende and his generation of medical students at the University of Chile were students of Max Westenhofer who in turn had been a student of Virchow (Illanes, 1993). Salvador Allende himself acknowledged the work of Virchow and others in the European movement but developed his own “explanatory model of medical problems in the context of underdevelopment”. (Paluzzi, 2004, p. 764)

Labonte (2013) takes Virchow’s influence on social medicine further, arguing that overturning political order and socio-economic inequalities that cause poor health requires a marriage of both the medical and political. Labonte (2013) writes:

> In 1848 the Prussian pathologist Rudolf Virchow famously described medicine as a social science, and politics as medicine writ large. Virchow’s medicine today is better recognised as public health, writ large by our evidence of the political, social, and economic determinants of health. Virchow’s then-radical theory of social medicine was built upon his own youthful investigation of typhoid among Silesian coal miners. Snow

had a singular focus in response to a particular problem; Virchow was aligned with a broad movement aimed at overturning a pathological political order.

Virchow's legacy held some prominence in the 20th century, one exemplar being Salvador Allende, Chile's Minister of Health and later President. Allende, a physician, was a leader in the development of Latin American social medicine, and his progressive health-system reforms were tolerated. Unlike activism around tobacco or medicines, mobilising against global capital cuts much closer to the structural inequities inherent in our economic and political systems. It implies a vision of a social alternative, similar to that of Virchow's socioeconomic prescriptions to end a typhoid outbreak. How local health activists link up with PHM and other networks of global activists with a similar social vision, and how these international groups engage to affect shifts in national and global power structures, comprise the health activism challenges of the future. John Snow, meet Rudolph Virchow; may both strategies prevail. (Labonte, 2013, p. 2158)

The reverberations of Virchow's work in social medicine, and its contemporary application is noted by Brown, Lyson and Jenkins (2011), who state:

> Even in the early 20th century, sociology focused on the social determinants of health and illness, as in Faris and Dunham's (1939) work on mental illness. Decades later, Navarro (1976) and Waitzkin (2000), both MD/PhD sociologists, led the charge of other political economy scholars who sought to rekindle social medicine, found as early as Rudolf Virchow's work in mid-19th century Europe, and more recently in Chile during Allende's Popular Unity Government in the early 1970s. (p. 940)

Writing about Brexit, death of despair and statistics, Koltai and colleagues (2020) evoke Virchow and his work on politics and health and apply it to contemporary context to argue that health inequalities lead to increasing of populist ideologies:

> More than 150 years ago, Rudolf Virchow drew attention to the association between politics and health.33 While the ecological correlations between "deaths of despair" and Brexit votes should not be interpreted causally, our results nevertheless support the

> notion that epidemiological data can serve as a "canary in the coalmine," highlighting the existence of areas and groups that are being left behind by social developments, which may in turn reflect fertile ground for the growth of populist sentiments. (p. 405)

While revisiting the Marxist roots of political economy and health analysis, Harvey (2021) draws connections between Virchow, social medicine and Marxism, he states:

> The origins of the political economy of health are also associated with the 19th- century European and 20th-century Latin American social medicine traditions—and the works of Rudolf Virchow and Salvador Allende. Virchow, a 19th-century physician whose name today is commonly associated with discoveries in the area of cellular pathology, read Engels's 1845 work. Like Engels, Virchow wrote about the material conditions in which disease manifested and how political and economic forces prevented social reforms aimed at alleviating poverty, food insecurity, and harsh labor conditions among the poor and working classes. (p111) Virchow wrote that biomedical and public health interventions among these classes would always fail if they did not challenge upper-class political power and capitalism's economic exigencies, which together produced the social conditions that were fundamentally responsible for health inequalities. Virchow's famous dictum, "Medicine is a social science, and politics nothing but medicine on a grand scale," (p548) conveys his belief that acting in the political domain should be central to the practice of a reformed medicine that is based in the social sciences, rather than narrowly in biomedicine. During his medical training, Allende received instruction from former students of Virchow who had emigrated from Germany to Chile. As the Chilean minister of health, Allende penned the report, "The Chilean SocioMedical Reality," which—in the spirit of writings by Virchow and Engels—identified the organization of labor and the working and living conditions of the working class as responsible for its outsized disease burdens. (p. 295)

When examining the political economy of infant mortality rates, Rosenberg (2018) uses Virchow's famous dictum and the more recent work of Navarro to draw attention to the relationship between health, democracy, and infant mortality. Rosenberg (2018) writes:

> Navarro emphasizes the scarcity of political studies of health: “This silence on the relationship between politics and health is particularly surprising for a profession in which one of its founders, Rudolf Virchow, wrote that ‘Medicine is a social science and politics nothing but medicine on a grand scale.’ (p. 436)

Writing about social capital, social determinants of health, social environmental and causes of disease Kim and colleagues (2011) reference Virchow’s century old work as fundamental causes of health inequalities, the authors write:

> The notion of societal conditions and the social environment as fundamental causes of health and disease is not new, dating back more than a century to the works of Durkheim and Virchow (Cassel, 1976; Durkheim, 1897; Link & Phelan, 1995; Virchow, 1848). Social capital, a major attribute of the social environment, has garnered scientific and government attention over the last decade as a plausible broad determinant of population health, educational outcomes, and economic growth. (p. 1689)

Pilgrim (2016) provides an interesting observation of Virchow’s biosocial determinism, this quotation is multicategorical (categorized under public health, pathology, socio-political conditions, contemporary applications, social medicine, medical and social reform, as well as hero/pioneer):

> Now biological or social determinism (to be made a hybrid in Virchow’s biosocial determinism in public health medicine – see below) might exclude the relevance of the longstanding consensus on moralisations about healthy living. For example, Rudolph Virchow was an early champion of biomedicine but he is also credited with being the father of social medicine. He focused his research efforts on pathology, physiology and anatomy but he considered that the environmental contingencies affecting health were political matters requiring social reforms in order Romanticism. Moreover, the consequence of a shift from social medicine to a narrow clinical approach (the two horses

> ridden for a while successfully by Virchow) was to provoke attacks from critics by the middle of the 20th century. (p. 434)

Brown and colleagues (2008) write about fundamental causes of disease and epidemics, stating “Disenfranchisement and socioeconomic deprivation have been identified as fundamental causes of disease since Virchow, sent to investigate an outbreak of typhus in 1849, called for “political reform and local democratic self-government [and] education, with its daughters, liberty and prosperity.”” (p. 35)

Relating Virchow’s legacy on the role of political conditions in health to sovereignty, and self-determination of Palestinian people Becker and colleagues (2009) state “As Virchow might have put it, the solution lies in justice, sovereignty, and self-determination for the people of the West Bank and Gaza Strip.” (p. 987). Similarly, Watt and colleagues (2014) use the voice of Virchow to comment on health care in Palestine:

> A key function of the *Lancet* Palestinian Health Alliance has been to use structured enquiry to describe the health and health care of ordinary Palestinians living in extraordinary circumstances. Rudolf Virchow, the founder of social medicine, said many years ago, “Medicine is a social science and politics nothing but medicine on a large scale. (p. 1)

Writing about working conditions, and calling out the murders of the working class, Napier and colleagues (2014) evoke Virchow and Engels (the only reference to Engels as a pioneer) to argue that exploitative working conditions are a form of structural violence. The authors write:

> Pioneer 19th-century thinkers about health and its maldistribution, such as Engels and Virchow, regarded those who defended or promoted structures that systematically worked to their advantage and to the disadvantage of others as murderers (eg, for Engels, the Manchester factory owner murdered his employees by exploiting them to the point of making them sick and so shortening their lives). This kind of structural violence is not as controversial if acknowledged in the past or in distant places. However, it clearly applies

> no less to contemporary financial, business, political, and other elites than it did to Engels's factory owners. (p. 1623)

Marmot (2006) discusses Virchow's contributions to health to examine social inequalities in health, as well as his work in pathology, and political reform, stating:

> Rudolph Virchow has featured many times in these Lectures. Paul Nurse, for example, quotes Virchow's understanding of cells: "that every animal appears as a sum of vital units, each of which bears in itself the complete characteristics of life". My first contact with Virchow's writing was in relation to his studies of the blood and blood vessels that are still important for our understanding of the pathology of atherosclerosis. As well as being a scientist who contributed so much to our understanding of pathology, Virchow was also concerned with improving public health. He wrote: "If medicine is to fulfil her great task, then she must enter the political and social life. Do we not always find the diseases of the populace traceable to defects in society?" He went on: "If disease is an expression of individual life under unfavourable circumstances, then epidemics must be indicative of mass disturbances". Since disease so often results from poverty, he said, then physicians are the "natural attorneys of the poor", and social problems should largely be solved by them. For Virchow, then, it was not biology or society, but both. We need biological understanding of disease but we need, too, understanding of how society influences biology, in order to change disease risk. (p. 2092)

Cooper and colleagues (2006) evoke Virchow's famous dictum on mass disease and societal dysfunction, while writing about disease risk factors in Cuba, the authors write:

> Virchow's famous dictum - "mass disease means society is out of joint" - stands as one of the few theoretical statements of the role of structural elements in molding the disease patterns of populations. Virchow's contention was that humans are well adapted to the natural environment of this planet, and if a disease afflicts large segments of the population it must be the result of the breakdown of normal social processes. Alexander Semasko, the Soviet commissar of health in the early years after the Bolshevik

> Revolution, extended Virchow's basic idea with the corollary assertion that the role of the state was to protect the health of the population, not sacrifice it to the demands of the economy. (p. 99)

Discussing ethics, politics and public health Goldberg (2012) refers to Virchow's dictum on social medicine and politics, they state:

> Ultimately, the political nature of public health policy grounds Virchow's dictum that social medicine is nothing but politics on a large scale, even if one ultimately rejects the broad interventionist model of public health that Virchow's position implicitly supports. Politics cannot be separated from public health policy any more than values can be excised from human endeavours. (p. 48)

Baum and colleagues (2009) examine unhealthy social and economic structures, social determinants of health and health promotion evoking Virchow's legacy and its relation to contemporary public health declarations and charters:

> There is a long tradition in public health that has recognized and called for interventions on the social and economic determinants of health, going back to at least the work of the nineteenth-century Silesian physician Virchow (Waitzkin, 2006). This tradition is reflected in the World Health Organisation's 1978 Alma Ata Declaration on Primary Health Care (WHO, 1978), and the Ottawa Charter for Health Promotion (WHO, 1986). (p. 428)

Ruffin (2010) discusses ways to eliminate contemporary health disparities evokes Virchow's ideas on social divides and inequality, they state:

> The 19th-century scientist and pathologist Rudolph Virchow gave voice to many of our present-day concerns about disparities and went a long way toward defining the task before us. Virchow stated the need for the medical profession to move beyond the biological causation of disease and appreciate the social and political influences that

> influence poverty. Virchow reminds us that health disparities reflect vast divides in the United States—in socioeconomic status, environmental quality, and educational opportunity—that must be addressed if we are to achieve health equity. (p. s8)

Writing about "new" epidemiology from a feminist perspective, Inhorn and Whittle (2001) evoke a contemporary application of Virchow and his pioneering work, stating:

> However, as lamented by many a contemporary critic, the true ‘‘public health’’ dimension of epidemiology so apparent in the early days of Snow, Virchow, Goldberger, and other epidemiological pioneers has been lost and replaced instead by the prevailing and hegemonic disease model in epidemiology, which frames health problems in terms of decontextualized exposures to risk factors, including the isolated behaviours of individuals (Wing, 1994). (p. 554)

Birn (2005) evokes Virchow when discussing technology in public health and the role of philanthropic organisations, stating:

> Rudolf Virchow—founding father of both cellular pathology and social medicine—perhaps stated this most succinctly and most presciently in one of his lesser-known quotes: "The improvement of medicine may eventually prolong human life, but the improvement of social conditions can achieve this result more rapidly and more successfully. (p. 5)

Discussing politics, health and history, Muntaner (2013) uses Virchow's work on macro-social determinants, stating:

> Although the impact of politics on health was already documented during ancient times in Greece and Rome (Porter, 2006) and emphasised in the 19th century (Engels, 1958[1845]; Virchow, 1848), scholarly work on politics as a macro-social determinant of population health has been surprisingly slow and uneven within the emerging field of social epidemiology. (p. 107)

Donohoe (2003) evokes Virchow's famous dictums to advance a discussion on causes and health consequences of environmental degradation, highlighting the relevance of Vichow's ideas to contemporary times:

> Physicians must advocate for the poor, the uninsured, and the disenfranchised, for whom we are "natural attorneys" and heed the advice of Rudolph Virchow: "If medicine is really to accomplish its great task, it must intervene in political and social life." (p. 583)

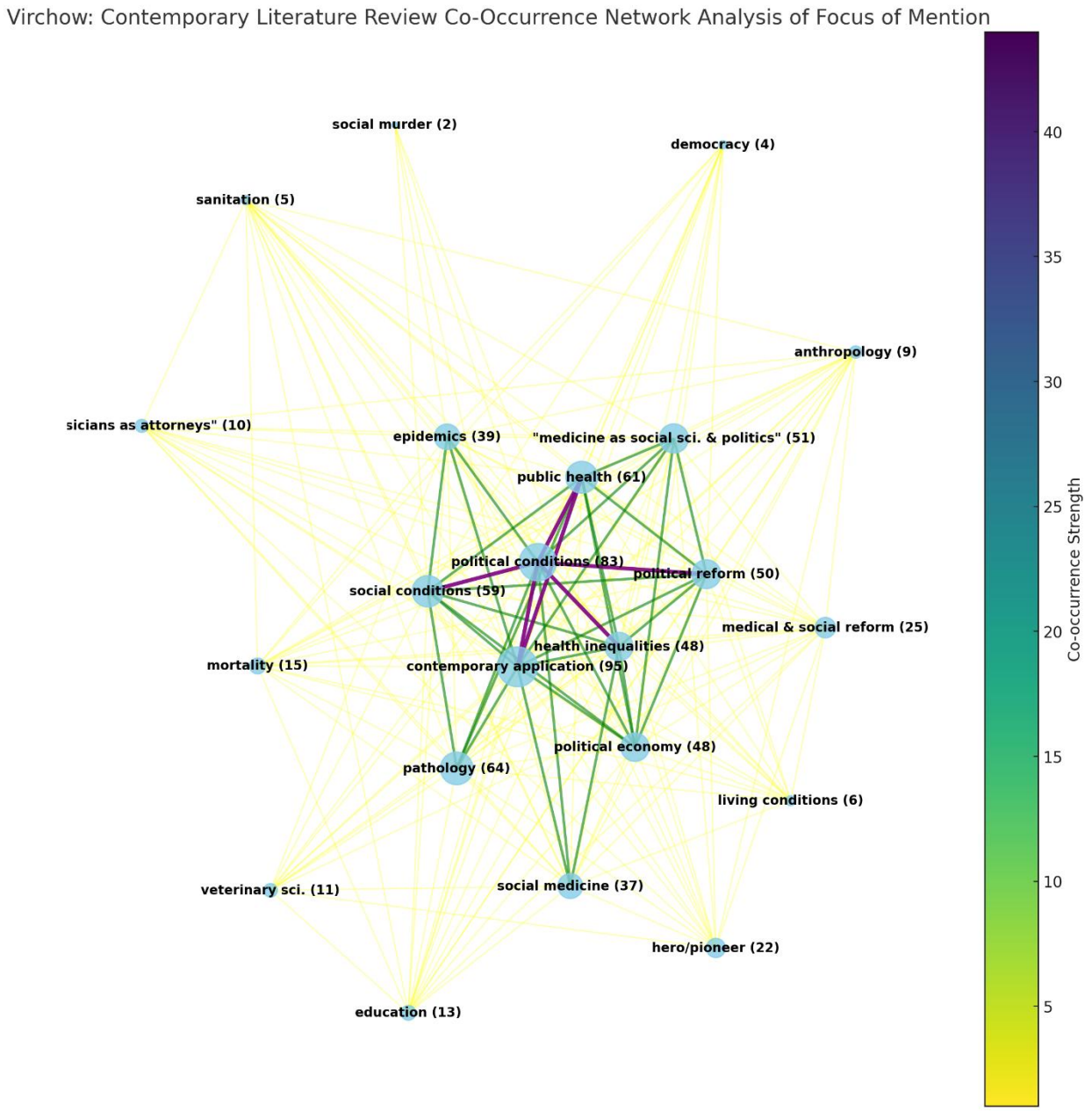
An example of Virchow's contributions to pathology and veterinary sciences can be seen in the work of Waddington (2003) who writes "Swayed by an understanding of tuberculosis that owed much to Virchow's conception of the disease, he adopted the veterinary model of localization and concluded that infection did not depend on any infective material present in the muscular tissue itself." (p. 656)

Figure 7 illustrates the co-occurrence network analysis of categories in articles that mention Virchow. The analysis shows a strong emphasis on political and social conditions, public health and pathology. "Political conditions" is shown as a central theme with strong relationship to various other key themes such as "Pathology", "Political reform", "Public health", "Social conditions", "Health inequalities" and "Contemporary applications". These themes form a cluster suggesting that these categories appear most often together. This suggests that "Political Conditions", "Reform", and "Political Economy" are commonly discussed in contemporary health articles. Further illuminating the impact of politics on public health, and health issues as situated within political context.

Another set of categories with strong relationships are "Political Economy", "Epidemics" and Virchow's famous dictum "Medicine is social science and politics". Other notable centrally located themes with strong relationships are "Medical and social reform", "Social Medicine", as well as the themes of Virchow being a "Hero/pioneer". Themes such as "Social Murder", "Sanitation", "Democracy", "Living Conditions", "Anthropology", "Veterinary science" and "Education" are located at the periphery indicating a less frequent mention and connection to other themes. Overall, the co-occurrence network shows the interdisciplinary nature of

Virchow's influence on political discourses around health, as well as the wide-ranging impact of his work on various fields in health and medicine.

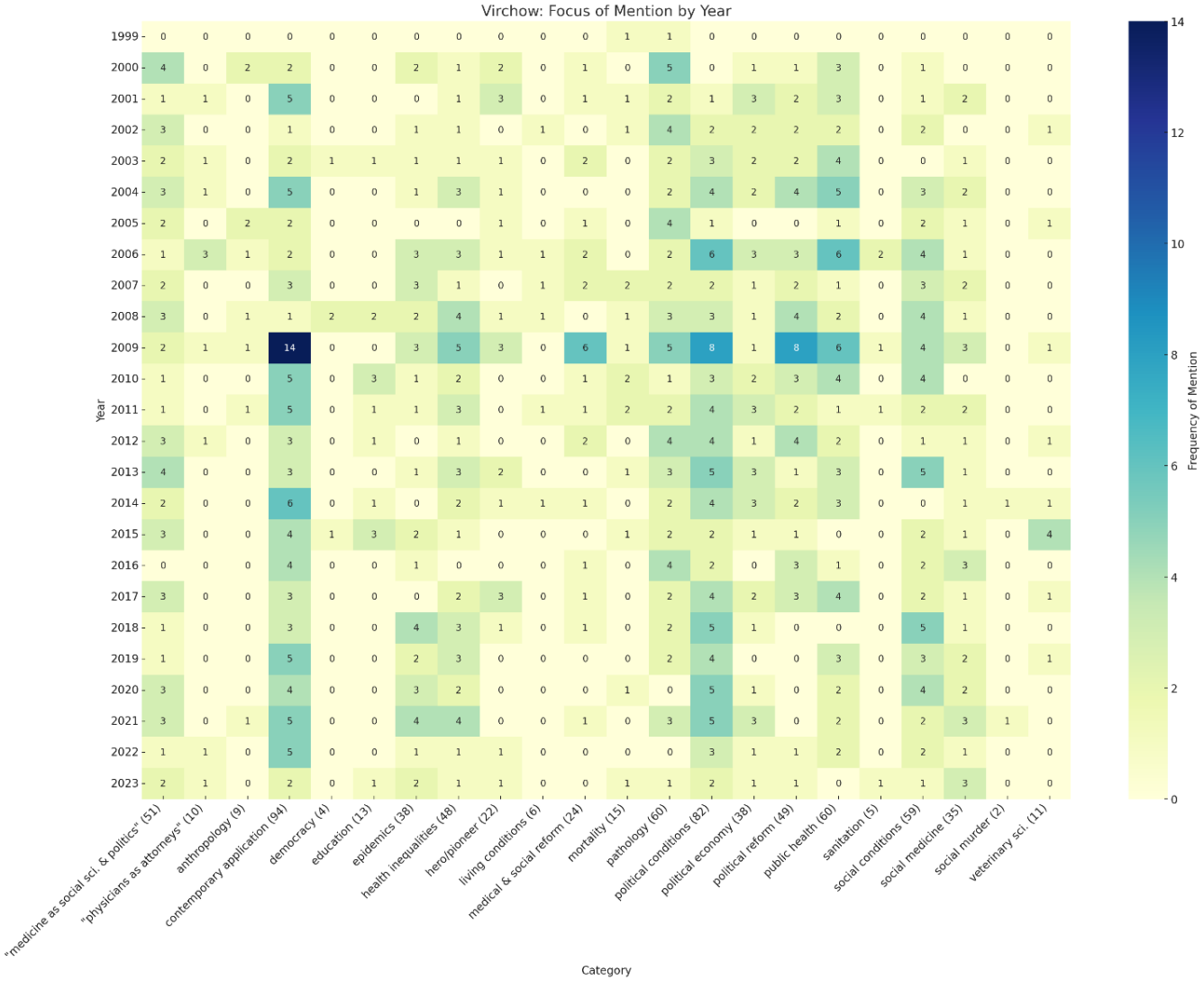
Figure 5: Virchow: Contemporary Literature Review Co-Occurrence Network Analysis of Focus of Mention (2000-2023)



The heatmap in Figure 6 allows for an overview of key themes and trends in how Virchow's work and ideas have been discussed in contemporary literature, providing an

overview of his influence across different areas and time periods. The themes that appear most frequently throughout the examined time period are “Political Conditions”, “Public Health”, “Contemporary Application”, and “Social Conditions”. Other prominent albeit less frequent themes are “Health Inequalities”, “Pathology”, “Epidemics” and “Social Medicine”. It is interesting to note that mention of “Contemporary application” was by far most prominent in 2009, a year that shows an overall strong reference to Virchow and his legacy. In recent years categories such as “Democracy”, “Living Conditions”, and “Veterinary Science” have not been discussed. The very sparse mention of “Sanitation” is not surprising, because usually Chadwick is noted in discussions of sanitation. Unlike Engels (see below) and Chadwick’s heatmap analysis, Virchow shows a consistent reference to his ideas without significant spikes as seen in the mention of Engels. It appears that Virchow’s work and traces of his legacy have a continued impact on contemporary health discourses.

Figure 6: Virchow: Focus of Mention by Year (2000-2023)



The span and influence of Virchow's scholarship is broad and truly enormous. His work in pathology, politics, political economy and socio-economic inequalities has been instrumental in both the biomedical and social science fields. Virchow's critiques of inaction on the part of governing authorities has helped establish important fields like social medicine. He is regarded by medical professionals and critical social scientists as one of the most influential historical figures of the 19th century.

6.4 Engels in Contemporary Literature

In total, 98 articles that mention Engels were included for full review. The main themes in the focus of mention that appears in literature which discussed Engels are: health inequalities

(53); political economy (40); contemporary application (39); socio-economic inequalities (38); working conditions (31); critique of capitalism (24); public health (20); living conditions (23); social origins of disease (21); mortality (21); exploitation of workers (17); class relations (12); industrialization (10); ethnicity (10); social murder (10); social medicine (8); environmental damage (7); epidemics (6); historical materialism (5); cultural hegemony and ideology (6); social reform (4); alcohol (3); population health analysis (3); structural violence (3); gender (3); religion (2); unions (2). The recorded categories indicate the multifaceted nature of discussions and traces of Engels's legacies in areas of politics, working conditions and exploitation of workers under capitalism, and his focus on socio-economic conditions and health determinants. These results show that Engels continues to provide valuable frameworks for analysing contemporary issues. The full list of citations mentioning Engels can be found in Appendix D.

Similar to Chadwick and Virchow, themes of the mentions of Engels were often categorised in relation to various other categories. Below quotes provide contextual examples of how Engels is discussed in contemporary literature.

Han (2000) situates Engels's work within a number of categories such as political economy, social origins of disease, working conditions, critique of capitalism, socio-economic inequalities, and contemporary application:

> A political economy perspective of health care utilisation puts health and health care use in a more fruitful context. This view essentially examines the social origins of illness and the allocation of health resources. The advocates of the view attribute the causes of illness and premature death among working class people to unhealthy working conditions, the nature of production relations, social relations and social reality (Engels, 1848). (p. 431)

In their commentary of housing, socio-economic inequalities and health Krieger & Higgins (2002) state:

> Engels, in his study of the working class in England, noted that 'There is ample proof that the dwellings of the workers who live in the slums, combined with other adverse factors, give rise to many illnesses.' In 1844, Engels observed, "in a word, we must confess that

> in the workingmen's dwelling of Manchester [England], no cleanliness, no convenience, and consequently no comfortable family life is possible; that in such dwellings only [beings] robbed of all humanity, degraded, reduced morally and physically to bestiality, could feel comfortable and at home. (p. 760)

Writing about occupational health le Roux (2005) evokes Engels to illustrate harsh working conditions, exploitation of workers and consequent health inequalities, they write:

> The history of occupational health includes many horrific stories that highlight the dangers of bygone practices. Workers sometimes found themselves trapped in the rapidly spinning leather straps of Victorian factories. Small children lost digits trying to extract objects blocking the machinery's cogs. Miners breathed in stone dust and later developed silicosis. (p. 1106)

Examining stigma and prejudice, Phelan, Link and Dovidio (2008) provide an example of the contemporary application of Engels and Marx's ideas on the role of ideology and hegemony in labour exploitation:

> Some groups must have less power and fewer resources for dominant groups to have more. Some groups provide labor that is exploited by others or perform unpleasant or dangerous tasks that others prefer to avoid. Ideologies develop to legitimate and help perpetuate these inequalities (p. 362).

Raphael (2015) uses Engels's commentary and work with Marx to discuss political economy, socio-economic inequality and class relations, stating:

> As early as 1845 Friedrich Engels argued the owners and managers of the economic system created the profound material and social deprivation that led to early mortality among the working class in England (Engels, 1845/1987). Karl Marx and Friedrich Engels identified social class as a key indicator of the power to shape the distribution of

> income and wealth. For Weber—as well as Marx and Engels—the politics of everyday life was essentially a struggle among individuals for power and influence. (p. 4)

Examining social and consequently health inequality and the effects of whiteness on health, categorised under health and ethnicity, public health, and socio-economic inequalities, Malat, Mayorga-Gallo, and Williams (2018) write:

> For centuries scholars have recognized that social inequity produces health inequities (e.g., Engels, 1887 [1958]). Yet, the ideologies of whiteness and capitalism repeatedly draw our attention away from comprehensive social policies that would improve health and toward individualistic explanations for health inequities (e.g., genetic differences, personal responsibility, and health behaviors). (p. 154)

Chernomas, Hudson and Chernomas (2018) provide an example of categories or living and working conditions, and industrialization, stating "A long tradition argues that health outcomes are heavily influenced by people's working and living conditions. In *The Condition of the Working Class in England*, Friedrich Engels found that health conditions in the major cities had deteriorated as a result of industrialization" (p. 167).

Benach (2021) uses Engels's ideas on exploitation of nature to critique capitalism, they write:

> Already in the 19th century, Friedrich Engels said: "Let us not, however, flatter ourselves overmuch on account of our human conquest over nature. For each such conquest takes its revenge on us... Thus at every step we are reminded that we by no means rule over nature like a conqueror over a foreign people." We are not invulnerable, but human beings, fragile, intra-dependent, interdependent, and eco-dependent. (p. 52)

Commenting on the development of structural violence, De Maio and Ansell's (2018) mention of Engels was categorised under political economy, structural violence, critique of capitalism and social murder, the authors write:

> In this way, his concept of structural violence is not dissimilar to Friedrich Engels's charge of murder against the capitalist system in The Condition of the Working Class in England (though Galtung himself did not make a connection to Engels, and aside from acknowledging the roots of structural violence in stratification, Galtung never advanced a connection between the concept and underlying political-economic forces, as did Engels in his critique of capitalism). (p. 751)

In similar vein, Raphael and Bryant (2022) use Engels's critique of the capitalist exploitation of the natural environment, and socio-economic and health inequalities is coupled with Engels's concept of social murder:

> We documented how growing social and health inequalities have been associated with the reemergence of Friedrich Engels's concept of social murder by which the capitalist economic system not only sickens many prematurely, but also consigns them to premature deaths. An increasing eco-socialist literature suggests there is no way we can avert environmental catastrophe under capitalism. Eco-socialists harken back to Engels and Marx's belief of the incompatibility of capitalism with environmental sustainability. (p. 430)

Discussing the rights of nature, public health and environmental damage Chilton and Jones (2020) evoke Engels's work to state:

> True, the consequences of heedless human interference with nature have been neglected at great cost to human rights. "Let us not flatter ourselves overmuch on account of our human conquests over nature," warned Frederick Engels prophetically close to two centuries ago. "For each such conquest takes its revenge on us."1(pp 179–180) But one could add, if nature was accorded inalienable rights, should a whimsical nature have the last word? (p. 461)

Engels's observations of social inequalities and health outcomes is connected to the observations in the Black Report, Crinson and Yuill (2008) state "Having minutely recorded the

squalor of working-class life in 1840s Manchester, Friedrich Engels concluded that the horrendous working and living conditions were “cause enough” to explain the poor health of the people he encountered (1). In many ways, the 1980 Black Report (2) on the social causes of inequalities in health concurred with this view.” (p. 455). De Camargo (2009) draws similar conclusions:

> In a book originally published in 1844, Friedrich Engels referred to the effects of the dismal living conditions of the English workers he closely studied thus: ‘‘That a class living under the conditions already sketched and is so ill-provided with the most necessary means of subsistence, cannot be healthy and can reach no advanced age, is self-evident’’ (Engels F. The Condition of the Working Class in England. Oxford, England: Oxford University Press; 1993:107). Fast-forward to the present, and echoes of Engels's ideas resonate in the writings of contemporary social epidemiologists. The ongoing economic crisis brings with it major concerns regarding the health of affected populations, particularly in places that have been hardest hit, including the United States and the United Kingdom. (p. 1735)

Borras (2023) refers to Engels when discussing health inequalities and working conditions:

> Critical political economists explain the causes, barriers, and ways to reduce social and health inequities based on social relations of production and class relations of power. For example, Engels showed that compared to the rich and capitalist class, unsafe workplaces, low wages, poverty, inadequate housing, homelessness, and hunger result in high mortality and morbidity for the poor and the working class in which women, children, older adults, immigrants, and enslaved people are further disadvantaged. (p. 133)

Muntaner and Benach (2023) further extend the critique of capitalism in creating social inequalities highlighting Engels’s work on the topic:

> The scientific approach to social inequalities in health and the social determinants has a long preamble and a short text. From the work of early population health researchers such as Friedrich Engels or Salvador Allende, and many others beyond Europe and America, to the Black Report and the Whitehall studies, population health and social scientists have been building evidence on how social—that is, economic, political, and cultural—processes (eg, Benach and Muntaner) affect the health of populations. (p. 117)

And Chaufan and Saliba (2019) use Engels in the context of their discussion on the diabetes epidemic, the role of ethnicity in health, socio-economic conditions and health inequalities stating:

> Despite a plethora of research demonstrating the disproportionate burden of diabetes among impoverished and racialized communities, despite NPOs acknowledging that being poor or a member of a racialized minority is a "risk factor" for developing diabetes, and notwithstanding 200 years of evidence that poverty and inequality breed disease and are neither features of individuals nor natural occurrences (Allende, 1939/2006; Waitzkin, 1981; Tedeschi et al., 2003; Virchow, 2006/1848; Chaufan and Weitz, 2009; Engels, 1845, 1968; Frank, 2003–1790) each organization attributed the root causes of diabetes to a mix, however "complex", of lifestyles and genetics. (p. 85)

Bhandari, Thomassen and Nathan (2022) mention of Engels was categorised under political economy, critique of capitalism and historical materialism to examine historical approaches in investigating incidents at mental health settings. The authors write:

> Historical materialism, on the other hand, looks for the *'ultimate cause and great moving power of all important historic events in the economic development of society'*, through examining the modes of production, group division into classes and the consequent struggles motivated by competing interests (Engels, 2001). (p. 8)

Article by Waitzkin and colleagues (2001) provides an example of two categories of exploitation - a more frequent theme - of workers and gender - a less mentioned theme. The

authors write “Marx and Engels argued, for instance, that the exploitation of workers was inherently linked to the exploitation of women, since economic production required the reproduction of the labour force, mainly through the activities of women within families.” (p. 1598). And Mansfield, Mitchell and King (2002) use Engels and Marx work to comment on religion on religion as the opiate of the proletariat (p. 400). Furthermore, Bradshaw and Ellison (2009) further comment on Engels’s legacy on religion stating:

> From the theoretical classics of Marx (Marx & Engels, 1955) and Weber (1964 [1922]), to the religion-mental health research involving coping (Pargament, 1997), to contemporary theories of religion (Stark & Bainbridge, 1996; Stark & Finke, 2000), a great deal of theory and research has been built on the assumption that religion is particularly salient, and possibly even beneficial, among socially and economically deprived individuals. (p.197)

Less mentioned category of ethnicity, together with social origins of disease, living conditions and mortality differences can be observed in the quote from Smith (2000):

> That health is related to what we now call ethnicity has been noted from the time when quantitative health data were first recorded in Britain. Thus, in 1845, Friederich Engels noted the poor health and mortality record of the Irish living in England. Engels also drew attention to the miserable social and environmental circumstances in which the majority of the Irish population lived, and he clearly considered these circumstances to underlie their poor health. (p. 1694)

Johansson and Partanen (2002) discuss the role of trade unions and trace its origins to Engels, stating “With a few outstanding early exceptions (Ramazzini, Pott, Engels), it is remarkable how late systematic research on the fundamental relations between work and health (both taken in the broadest sense) was started, including the uncovering of the role of unions.” (p. 180).

Lastly, Himmelstein and Woolhandler's (2023) critique of mainstream social determinants of health analysis and corporate efforts to further distort or co-opt such analysis was categorised under political economy, social origins of disease and living conditions, critique of capitalism, contemporary applications, and social medicine. They write:

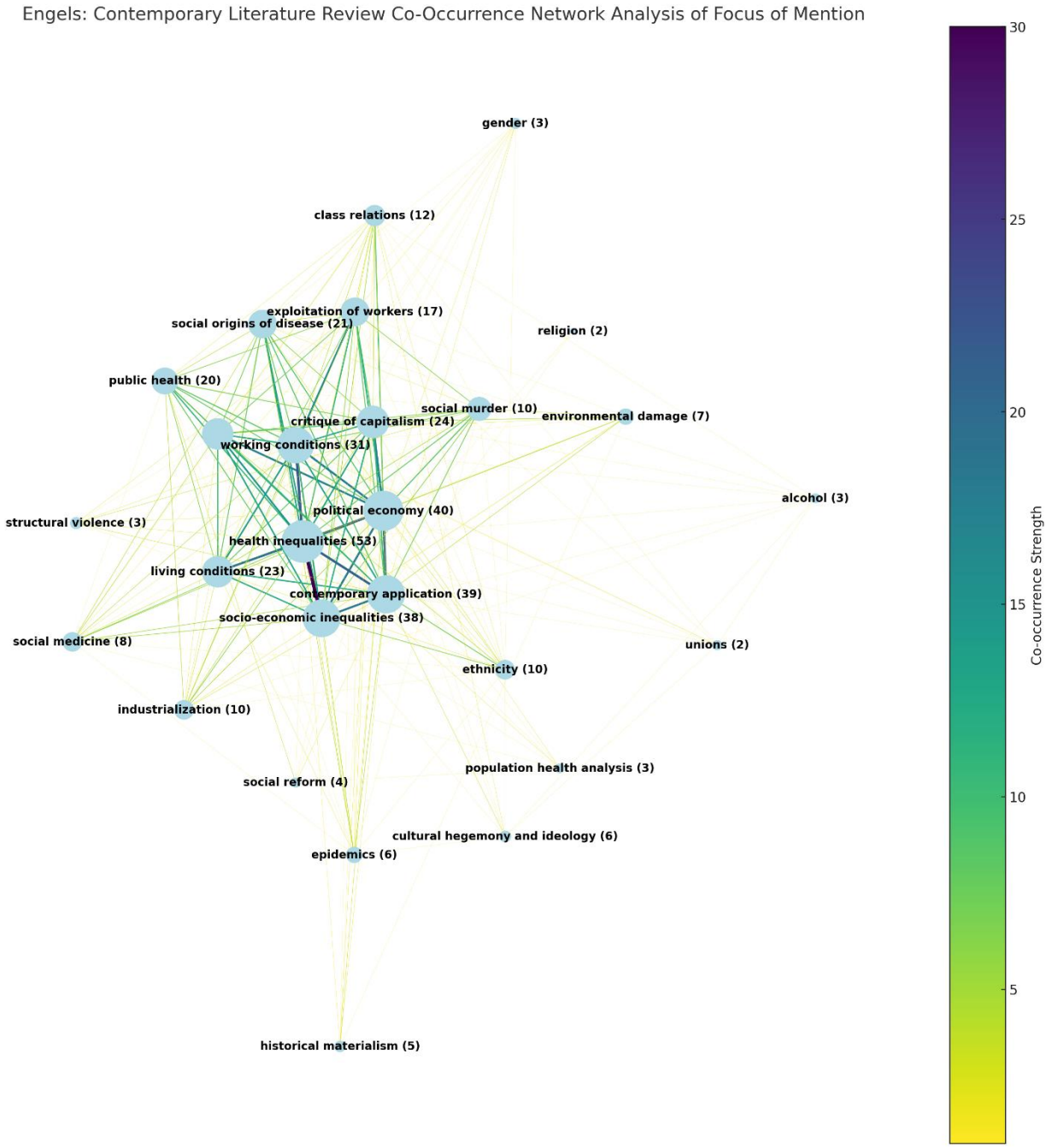
> The modern understanding that social conditions decisively shape health traces to Friedrich Engels, Karl Marx's partner in revolutionary analysis and advocacy. Engels's meticulous dissection of statistical and sociological data on England's working class led him to ask: "How is it possible, under such conditions, for the lower class to be healthy and long-lived? What else can be expected than excessive mortality, an unbroken series of epidemics, a progressive deterioration in the physique of the working population?." But neither that report nor most other analysts and advocates followed Engels and Virchow in analyzing the roadblocks to needed social interventions inherent in capitalism. The Latin American Social Medicine movement is a notable exception. It has critiqued the approach for failing to elucidate the roots of individual social determinants (e.g., food insecurity) in the complex web of political, economic, and social power. Howard Waitzkin introduced this critique to English-language readers and excavated and extended Engels's and Virchow's observations. (p. 249)

The co-occurrence network analysis of contemporary literature that evokes Engels and his work provides important observations on the prominent themes, relationships between themes, as well as themes clusters in Figure 7. Most prominent themes are "Political economy", "Public health", "Critique of capitalism", "Living" and "Working" conditions and "Socio-economic Inequalities". All these categories are frequently mentioned in contemporary literature and align with Engels's historical focus on conditions of the working class, critique of capitalism and the social conditions it creates. These nodes are also centrally located and have multiple connections to other nodes suggesting that these are core topics that intersect with other themes in literature. Less prominent themes, located at the periphery are "Religion", "Alcohol", "Gender" and "Unions", these appear as less central, however they still carry salience in contemporary literature as exemplified by previous quotes.

There is a strong relationship between the themes of “Socio-economic Inequalities” and “Health Inequalities” and “Political Economy” and “Contemporary Applications” in modern literature. These relationships suggest that discussions on public health, and health determinants are often linked to political economy. Additionally, a strong relationship is observed between “Working Conditions”, “Exploitation of Workers”, “Political Economy” and “Critique of Capitalism”, illustrating the relevance of Engels’s observations on the ways capitalism harms working-class populations.

Clustered nodes of “Public health”, “Living conditions”, “Mortality”, and “Epidemics” point toward a focus on the impact of social conditions on health. Whereas clusters of “Political Economy”, “Critique of Capitalism”, “Exploitation of Workers” and “Social Medicine” suggest a focus on economic theories and their critique. Lastly, themes like “Socio-economic Inequalities”, “Structural Violence”, “Environmental Damage” and “Social Murder” form a cluster, highlighting discussions on social injustices and their systemic roots.

Figure 7: Engels: Contemporary Literature Review Co-Occurrence Network Analysis of Focus of Mention (2000-2023)

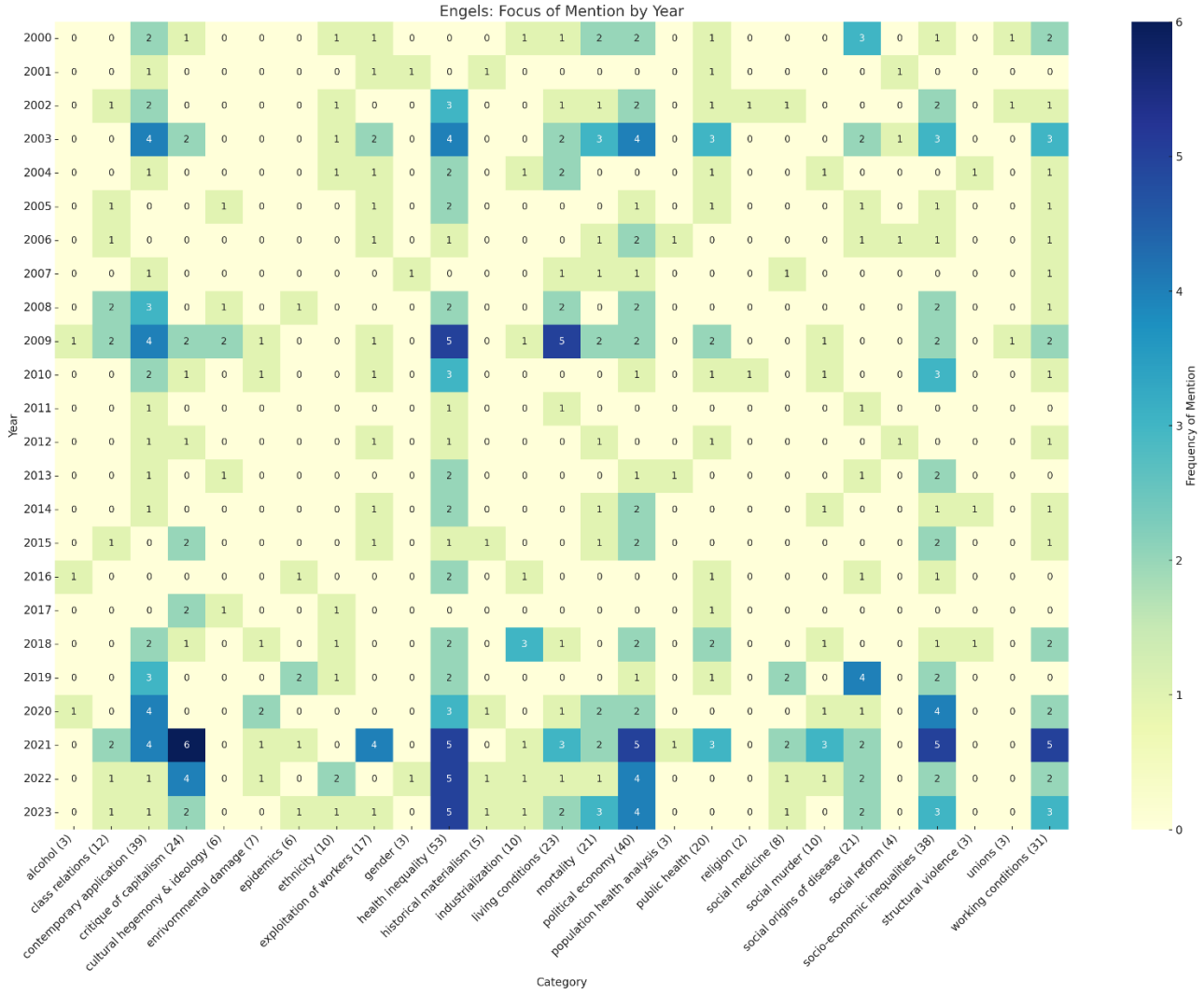


Overall, the co-occurrence network analysis suggests that contemporary literature on Engels emphasises themes related to public health, political economy, and critiques of capitalism, reflecting Engels's significant contributions in these areas. The strong co-occurrences between health-related themes and socio-economic inequalities indicate an approach developed

by Engels to understanding social conditions and their impacts on health. Albeit less frequent peripheral themes provide additional context and suggest a breadth of Engels's contributions.

Figure 8, the heat map of theme frequency according to yearly distribution, shows that overall Engels has seen a significant increase in most categories since 2018, with 2003 (coinciding with 150th anniversary of Engels's work) and 2009 –the time of one of the biggest economic crises of our time – showing prominent uptick in the use of his work in academic literature. Concepts such as "Political Economy", "Health Inequalities" and "Socio-economic Inequalities" have consistent mentions across multiple years. This reflects the salience of Engels's contributions and influence in these areas, especially in relation to his work on social and economic theory. Categories such as "Critique of Capitalism", "Working Conditions" and "Social Origins of Disease" have increased in the last five years. Mentions of "Alcohol", "Hegemony", "Religion", "Social Reform", "Structural Violence" and "Unions" have been sparse and almost absent in the last few years. Overall, the heatmap provides a visual summary of how discussions related to Engels have evolved over time. It highlights key periods of interest and shifts in focus, offering a comprehensive overview of his impact across various fields. And unlike Chadwick, who has seen a weakening interest in his work in the recent year, Engels's legacy is gaining momentum.

Figure 8: Engels: Focus of Mention by Year (2000-2023)



The analysis of articles that mention Engels and his work shows a resurgence of Engels's critical ideas in contemporary scholarship which has been observed by other researchers (Govender et al., 2022; Medvedyuk et al., 2021). Engels's contributions to the analysis of working and living conditions on health, as well as socio-economic and health inequalities observed under capitalism is present in the frequent critique of capitalism and its exploitation of not only humans but the environment as a whole. And although there is only one mention of Engels's contributions gaining him a status of a pioneer by Napier and colleagues (2014) it was done in relation to Virchow as well, highlighting that Engels is not viewed as a hero in public

health. However, based on contemporary literature it can be argued that Engels's work in political economy and health relationship has revolutionised critiques of capitalism for centuries.

6.6 Chapter Summary

Chapter 6 provides an overview of a scoping review of literature used to analyse how the ideas of the spectral figures of Chadwick, Virchow, and Engels, are evoked in contemporary literature between January 2000 and June 2023. The traces of these historical spectres appear as themes and categories within the literature.

Chadwick's traces are often associated with sanitary reform, public health and frequent mentions of socio-economic and health inequalities, however there are also significant critiques of Chadwick's approach to reform that deserve a mention. Virchow, who garnered double the mentions of both Chadwick and Engels, is noted for his contributions to public health, pathology and the intersection of politics and health with his famous dictum on medicine, social science, and politics, reflecting a tremendous influence of Virchow on contemporary health scholarship. Engels is often evoked for his analysis of political economy, health inequalities, critiques of capitalism suggesting his impact on socio-economic analysis of health and its determinants, however his work has not immortalised him as a hero.

The co-occurrence network analyses, and frequency heat maps further illustrate the relationships and prevalence of themes evident in mentions of each historical figure over time, highlighting spikes in scholarly attention during significant events and anniversaries.

CHAPTER 7:
CONTEMPORARY SCHOLARS' REFLECTIONS ON EVOKING PAST FIGURES AND THEIR IDEAS

7.1 Introduction

This chapter first overviews the third part of this study which consists of interviews with contemporary scholars who have evoked the ideas of historical figures of Chadwick, Virchow, and Engels in their publications. A total of 11 interviews were conducted, offering rich insights into the motivations and implications of referencing these figures in contemporary public health discourses. The chapter describes the interview coding process and findings. It then presents the key themes that emerged from these interviews. The chapter concludes with a reflection on the research questions and key findings.

7.2 Interview Findings Overview

The third part of this study consists of interviews with contemporary scholars who have evoked Chadwick, Virchow, and Engels and their ideas in recent publications. In total 11 interviews were conducted. Among these, all 11 had evoked Engels in their publications, nine Virchow, and nine Chadwick. Grouped, eight had evoked all three. Only one evoked Engels and Virchow without Chadwick, and only one Engels and Chadwick without Virchow. One participant referenced Engels alone.

Four interviewees chose not to waive anonymity: one Professor from Canada; one Professor from the United Kingdom; and two Professors from the U.S.A. Seven participants waived anonymity (in alphabetical order by last name): Dr. Anne-Emanuelle Birn; Dr. Arnel Borras; Dr. Robert Chernomas; Dr. Michael Harvey; Dr. Nate Holdren; Dr. Ilona Kickbusch; and Dr. Howard Waitzkin. Table 2 provides an overview of interview participants and categorization within this chapter.

Table 2: List of Key Informants

Informant ID	**Participant**
Participant A	Dr. Anne-Emanuelle Birn

Participant B	Professor from USA
Participant C	Dr. Ilona Kickbusch
Participant D	Professor from USA
Participant E	Dr. Robert Chernomas
Participant F	Dr. Arnel Borras
Participant G	Professor from UK
Participant H	Professor from Canada
Participant I	Dr. Howard Waitzkin
Participant J	Dr. Michael Harvey
Participant K	Dr. Nate Holdren

Member checks were conducted to assure that participants' views were accurately represented (one participant was not able to review the quotes due to work commitments and time constraints). Synthesised data from each interview, including quotes, were sent to participants for review to ensure trustworthiness of interview findings and researcher interpretation of interview data. The majority of the responses indicated that this was the case, as no major edits were requested on the part of the participants.

In order to make sense of the rich data produced through interviews, thematic analysis -- a common qualitative content analysis research method – was used to identify and analyse patterns within data. The analysis followed Braun and Clarke's (2006) six steps process of thematic analysis: 1) data familiarisation; 2) initial coding; 3) theme generation; 4) theme review; 5) theme definition; 6) and finally documenting of results.

In total 832 codes were created, separated into eight research question related themes and one bucket or category containing codes that were unrelated to research questions. Eight identified themes are: 1) motivations for evoking historical figures; 2) contributions to health and health policy of the three historical thinkers; 3) contemporary implications for action (described

by historical figures); 4) barriers to action; 5) health promotion through evocation; 6) meeting of scholar's expectations when evoking historical thinkers; 7) historical analysis; and 8) other important historical figures. Table 3 provides examples of interview themes and illustrative quotes. The interview excerpts provided below were slightly edited for clarity.

Table 3: Interview Themes and Illustrative Quotes

Theme	Illustrative quote
Motivations for evoking historical figures and their ideas	"Remembering the grandparents is the important factor here. I mean, if we are looking to find an answer in history, you know the old cliché, "the price to pay for not learning history is to repeat it"" (Participant E) "[...] part of it stems from my own undergraduate training but especially doctoral training. [...] as a scholar I wanted to ground my activism in crucial social and theoretical debates and forces, and that includes not only the three you mentioned [...] And of course, these are all very germane to my work, and my dissertation work, and later my first book." (Participant A)
Ideas on main contributions to health and health policy of the three historical thinkers	"I see Chadwick as having made a vast contribution to the establishment of public health within the global health medicine discourse." (Participant G) "Virchow, was a physician, [...] an anthropologist, [...] a statesman. [...] And the pamphlets that he put out in 1848, those were written as a physician, and that's where he came up with his ideas of physicians being attorneys of the poor." (Participant D) "Engels said explicitly that the problem is class relations, and that is the balance of class forces between the capitalist class and the working class in the two broad camps, not counting the other classes" (Participant F)
Contemporary implications for action (described by historical figures)	"Chadwick showed that [...] you need an implementation system [...] where you need laws, [...] regulations, [...] public health systems, [...] sanitation." (Participant C) Virchow: "[...] being involved beyond the boundaries of the health care system and institutional public health and instead involved in politics and political movements to bring about health-relevant social change: social supports, a degree of equality, state provision of services, like housing and food and education, particularly for people who otherwise don't have access to them." (Participant J) Engels: showed "[..] the need to continue to fight for a socialist society, a fully democratic socialist society, […] the history of capitalism is a blood stained one. We are saying there's a certain level of body count that will

	just say is politically acceptable. And I think part of the force of Engels's analysis is to say there is no acceptable body count. A murderous society is absolutely unacceptable. We have to move to a genuinely non murderous kind of society. That's a long-term contribution and it hasn't worked yet." (Participant K)
Barriers to action in public health	"unwillingness to destabilise hierarchies, entrenched interests, flows of power, money and capital and lack of political will" (Participant B)
Health promotion through evocation	"[…] useful to understand both the continuities and the discontinuities and that understanding of who they were historically and what it was for them to do the kinds of science and policy and advocacy in their times - does that provide any insights into the kinds of tensions for people doing it now" (Participant D)
Meeting of scholar's expectations when evoking historical thinkers	"[…] a bilingual journal [...] *Social Medicine, Medicina Social* [...] are living their lives dedicated to these efforts. So obviously we're still dealing with the enormously powerful, but very small group, less than 1%, that are responsible for the continuation of social origins [of disease]. But that doesn't mean that the whole world is living like 1%. You don't read about it in the New York Times, but it's actually what's happening. Over the last year, I actually have felt more optimistic than I ever have before. It's hard to interact with these young folks and not feel optimistic because of their tremendous insight" (Participant I)
Historical analysis: Drawing connections between past and present	"I think most historians are suspicious of efforts to map the past unto the present [...] And it's not problematic that we can do things or apply history in instrumental ways to reveal things about the present. I think fundamentally we can. But history, properly done, [...] and historiography and historiographic methods is for me has to do with appropriate contextualization. [...] you have to contextualise ideas, events and conditions, including people, their motivations, why they did what they did, why they said what they said, how they said, what they said, who they said, what they said. It [historical fluency] is meant to be very practical, it's meant to be an application. The use of the history of public health to help us do and be better now and in the future." (Participant B)
Other important historical figures.	It […] can be problematic to only look at those. It's not that we reject them, but rather build on them, so having you know, incorporating some feminist philosophers like Silvia Federici and Indigenous scholar-activists such as Silvia Rivera Cusicanqui […] and many others is absolutely crucial and essential to addressing the just redistribution of resources and power, and really understanding the continuities of the colonial extractive enterprise, which of course intersects intimately with imperialism/capitalism. (Participant A)

7.3 Historical Analysis: Drawing Connections Between Past and Present

Conducting historical analysis is no easy task, and some of the complexities of this process came out through interviews. The informants spoke of the importance of context and situating of the historical figure within their time. The concept of historical fluency was brought up as a tool for applying historical knowledge to new contexts. The need to understand historical continuities and discontinuities in intellectual thought was also raised. One of the informants discussed generational differences in views of history and its validity, another informant shared examples of barriers in access to information, and yet another one discussed the difference between historical verbal hand waves and use of historical ideas for in-depth analysis.

Participant B emphasised the importance of understanding historical context when examining past figures and their ideas in relation to contemporary discourses in public health, they stated:

> I think most historians are suspicious of efforts to map the past unto the present [...] And it's not problematic that we can do things or apply history in instrumental ways to reveal things about the present. I think fundamentally we can. But history, properly done, [...] and historiography and historiographic methods is for me has to do with appropriate contextualization. [...] you have to contextualise ideas, events and conditions, including people, their motivations, why they did what they did, why they said what they said, how they said, what they said, who they said, what they said [...]. So all of these different things have to be contextualised in the specific times and circumstances in which they were alive and doing the work that they were doing and sort of plucking them out and putting them over here to our contemporary context risks presentism [...] and it risks obfuscating or distorting important context that really helps to explain why Engels was doing what he was doing, why Virchow was doing what he was doing.
>
> We don't need to extract them from that context at all. In context, there are things that they are writing, thinking, focusing on that are definitely analogous in important ways to political, social, moral problems, legal problems we have with political economies of health in the present. We don't have to extract them in order to think about the

> implications of what they were doing and thinking and saying for our contemporary practices.
>
> [...] keep them in their context, don't just liberate them, don't remove them from the social political context, the times, the period they were writing, the motivations they had in their times and places for the things that they were doing, don't try to universalize them. Don't say Virchow is writing for people past and present. No, he wasn't. Virchow was writing for people in his time and place. [...] And so I think if you do that, you can still find things that resonate [...] that are still important and that are applicable to our present context. [...] They're not above time and space. They're - we are all historical actors, if that makes sense. They don't sit in some out of context, out of time period. And I think we very much risk distortion when we try to situate these actors out of time and space, which is a lot of what I think we do when especially people without sufficient historical training or trying to do this work. (Participant B)

The same informant spoke about the relevance of historical perspectives in shaping current debates and actions. They discussed a term historical fluency as a practical tool in research to highlight the need to build on foundations of past thinkers to move their ideas forward:

> The idea is you're looking to the foundations of modern public health in the West as not just as sort of an object of curiosity, but as an application, as a way of seeing what can we do; what can we learn about what we are doing now, what we could be doing, what we ought to be doing [...] by thinking deeply about some of the foundational documents, and foundational figures in Western public health. It [historical fluency] is meant to be very practical, it's meant to be an application. The use of the history of public health to help us do and be better now and in the future. (Participant B)

A Professor from USA, Participant D, described the need to understand historical continuities and discontinuities to gain insights into contemporary issues in public health:

> [...]it's useful to understand both the continuities and the discontinuities and that understanding who they were historically and what it was for them to do the kinds of science and policy and advocacy in their times - does that provide any insights into the kinds of tensions for people doing it now. [...] it's not a carbon copy by any means, but it's a way to get an idea of some context and an idea of some history and the fact that many of the problems described have been around for a very long time. (Participant D)

The difference between passive mentions versus in-depth analysis and engagement with historical work was also raised, the interviewee stated:

> So there are many different ways in which they're evoked. And I think it's really important to be specific and whether it's meant to be a real analysis of their ideas, the impact in their own times or the impact in subsequent times versus [...] a verbal hand wave. And the ones that are more in-depth analyses are very useful to people now that again, want to try to grapple with the ideas and the tensions and the actual conditions. The verbal hand wave [...] that's good for morale, sometimes it's good to just give a nod to history, but it's not seriously engaging with it. (Participant D)

Interviewee C also discussed the challenges of applying historical knowledge in contemporary contexts, recognizing the evolution of societal structures and emphasising the need for critical thinking when interpreting historical narratives.

> I think the past is disregarded and because at one level I can understand it, because of the decolonization movement, everything that's old and white doesn't count anymore. And the only thing that counts actually is that it's old and white. And none of their thinking can be trusted because they were old and white.

> [...] constructing the bridge from slave traders to a scientist sitting in Konigsberg writing their Evegefrieden [...] is something that is done today. And basically saying that everything that was constructed in this liberal world order and that we live in is built on the exploitation of others and therefore has no right to be [...]

> [...] the present generation doesn't trust any of this because it just doesn't fulfil the present way of thinking [...] and there is also this [...] enormous distrust in certain thinking and certain thinkers, in data [...]. There is a distrust in science, even by wanting to establish other means of knowledge and understanding. Which again is important, but it shouldn't be an either or. (Participant C)

Participant I discussed institutional suppression of certain historical perspectives and theoretical orientations during their academic journey. They described how some works were "blacklisted" in the USA noting that "it's only been in recent years that it's been OK to deal with these sources academically". The same informant described barriers to access stating that "they actually didn't allow ordinary Stanford students, residents or even faculty members into the Hoover Institute". But due to their association with a study group they were able to access the text that led them Allende and consequently to Engels and Virchow's political writings, the participant recounts: " That's the way I found the book you see, *Medical Social Reality of Chile* that was written by Allende, and it was in the Hoover Institute Counterinsurgency collection that was organised and paid for by the Central Intelligence Agencies". The informant also mentioned that less formal sources, such as personal letters that candidly discuss political views and repression written by Virchow, were not available in English, further limiting access to these perspectives, stating:

> But the most important work was not translated, especially the articles on the typhus epidemic, letter to parents, and then the collective works were also not translated. These works were subsequently published in English translation. I was lucky because I studied German in high school and did it as a language requirement in Graduate School. So, I was actually able to read it in the original, which is again a tremendous experience and I read in-depth his letters to his parents. (Participant I)

This account illustrates how restricted certain theoretical fields are, especially when they go against hegemonic ideas of the state and its political economy. Without access to historical texts, how can we know? Academics like me take such barriers for granted.

Another participant discussed an example of East and West Germany and the fall of the Berlin Wall to demonstrate how understanding past events can help avoid repeating mistakes. Participant C noted:

> And we felt we could still learn from the past and in a funny way, as I talk with you, it comes to me because the ideologies that many of us worked with at the time, partly in too extreme a manner. But they came from the 19th century. [...] That was just it, and many of us were, for example, then interested in Marx and Engels. But, we definitely weren't very interested in Lenin and Stalin. *So the past also in some cases seems safer than the present.* We had enormous debates coming from Germany having two Germany's, one being defined as socialist communists and there was this constant debate, for example, which of the two Germanies has the better health system. And of course, when the Berlin Wall fell, we found out how data had been falsified. [...] supposedly there was no alcoholism in communism. So in a different way we're confronted with, let me say, the *beauty of the ideas and the ugliness of reality*. People from my generation took different parts. But what I'm trying to express is that there was our feeling that *there's something we can learn there [from the past], there's something we can have to bring back into the debate*. (Participant C, the emphasis is mine)

As illustrated by the interviewees, conducting historical analysis is complex. It requires an understanding of the historical context, the individuals and their time and space. Study informants stressed that carefully understanding both historical and contemporary context is critical when examining historical figures and their relevance to present public health discourse, warning against presentism and the distortion of historical contexts. The importance of critical engagement with history was discussed, and informants emphasised the need to recognize historical continuities and discontinuities in intellectual thought. One of the informants highlighted how hegemonic ideologies reinforced through institutional power and control over knowledge makes some histories unavailable, whether it is through physical access or inability to understand the original language of publication. And lastly, another informant underscored how history can be seen as a safe place for exploration of the triumphs and failures of specific ideologies.

7.4 Motivations for Evoking Historical Figures and Their Ideas

This section provides examples of the motivations interviewees discussed for evoking the historical figures. A few of the participants stated that it was important to "remember the grandparents" and the "ideological forbearers", using their works in a way that pays tribute to the historical figures as well as helps to assert that analysis of health inequalities is not new. Another participant stated that these figures are part of the "standard public health history". Yet another stated that the works of Marx and Engels specifically are the only place to go for critical analysis.

A number of participants discussed how they became familiar with the critical works of Engels and Virchow through their student activist activities. Additionally, the works of Engels serve as a "good introduction" to analysing how health and politics are related. And one of the participants described being drawn to the power of the polemic as a motivation for evoking Engels. While others described a sporadic and unintentional introduction to historical figures and learning about them through other critical public health works such as that of Salvador Allende.

Interviewed academics provided a number of reasons for evoking historical figures. One of which was to establish historical continuity in public health approaches in order to ground their work in past social theories, Participant E stated:

> Remembering the grandparents is the important factor here. I mean, if we are looking to find an answer in history, you know the old cliché, "the price to pay for not learning history is to repeat it" well is another one from my friend and theoretical mentor Anwar Shaikh the price of not having learned theory is to have to reinvent it.
>
> And so, we don't need to reinvent this kind of public health. We need to remember who began it and then see its progressive evolution. Which it certainly has, I mean, Nancy Krieger and Vicente Navarro know exactly where they came from in terms of people that are contributing to the advance of this kind of perspective. In some ways, how do you continue without remembering the past and where we've learned these things from. (Participant E)

A few others mentioned student activism as a motivation for engaging with the work of the three historical figures along and exposure during academic studies, below are the excerpts from two interviewees:

> When I started my MA & PhD journey I had always been interested in the works of Engels, even before I did my MA, just because of my orientation. And I encountered some of these works, including Marx's works. So, although I hadn't fully read the works of Engels on the working conditions at that time, I later read it twice, cover to cover, when I was doing PhD, trying to figure what it was about. And of course, I encountered Chadwick and Virchow through [course] readings. Among these three, who really motivates me is Engels, because of the way he described the working conditions of the working class in England: it is very vivid, and the language is very accessible. I think it surely aligns with my background as a former student activist. And I think our problem, really, then and now, is the capitalist system. [...] Engels feeds my thoughts. I always refer back to his works. (Participant F)

> [...] part of it stems from my own undergraduate training but especially doctoral training. [...] as a scholar I wanted to ground my activism in crucial social and theoretical debates and forces, and that includes not only the three you mentioned [...] And of course, these are all very germane to my work, and my dissertation work, and later my first book. (Participant A)

Participant G noted that their introduction to the three historical figures was sporadic and sometimes unintentional. The informant's socialist background and early involvement in public health in the 1970s, coupled with influences from medical sociology and peace activism, shaped their ideological orientation:

> I've been a socialist since before I came into public health, and I came into public health in 19xx and I did my masters in 19xx. [...] . I'm not a social scientist or a political scientist. I'm a medical doctor who has never done any further studies in politics or sociology although I was enormously influenced by studying medical sociology within

> my public health masters, which was in 19xx, and in fact that did more than anything else really. I've been in the peace movement [...] since I was a young teenager. I joined what in Britain is called the Campaign for Nuclear Disarmament in about 1960. So I've been a peace activist and a pacifist you know for over 60 years. But it was only really when I engaged with medical sociology that I had my awareness raised about inequality and the dimensions of inequality, if I can put it that way and it was only really after that I brought my socialism to bear in public health and at the same time, when I did my masters, I was on a training program for public health which had regular meetings once or twice a year with all the national trainees in public health. In those days, it was only doctors. Medical doctors, because it wasn't until the 90s in this country that you could train in public health if you were a non-medic. So we used to get together a couple of times a year [...] those of us who were on the left, and those of us who were feminists, and so on and pacifists. (Participant G)

Participant I shared their journey to discovering Engels and Marx through primary texts of Salvador Allende, which later led them to discover untranslated texts of Virchow. The ideological restrictions of the academy in the USA created barriers to accessing information deemed communist or socialist. Writing about Chadwick was a lot more common and accessible, which speaks to the politically non-threatening public health strategies utilised by Chadwick. Participant I shared:

> [...] it started with Allende. [...] So at the time of the military coup and Chile. 9/11/1973 I was a resident in internal medicine at Stanford. And I was very, very influenced by what was happening to it. And I'd hope to go there after my residency and contribute in some small way.
>
> I started to explore some of the influences on Allende and then came up with Engels. [...] the main work that I read was *The Condition of the Working Class in England* in 1844. Again, which was a mind-blowing experience for me because while I was at Stanford in my residency, we had a big strike and it was organised by the hospital workers union, and we organised a study group to support our political education during and after the strikes.

> Basically, all I know in depth about Marxism, Lenin, modern Marxist theory and practices I got from that study because when I was in college and medical school, all that stuff was blacklisted essentially. When I was in college, there was not a single course in which I could learn anything at all about Marx, and this was at Harvard.
>
> So Engels was tremendously important, and it was actually through reading Engels and about Eagles that I became aware that Virchow was influenced by Engels.
>
> Now, as far as Chadwick is concerned, I've read Chadwick, here and there, mostly because he's cited as having an important role in public health, mainly through hygienic intervention, sewage water borne diseases, and Chadwick's reformism. (Participant I)

Informant C discussed their interdisciplinary orientation in sociology and political science which broadened their understanding of public health. Their primary motivation for evoking the three historical figures stemmed from a need to establish a sense of historical continuity and context in public health approaches, moving away from a medicalized approach towards understanding how health is influenced by social and political structures. They discussed that during the Nazi rule, many of the historical figures that focused on public health were forgotten, and in a way were rediscovered after World War II. Additionally, this informant emphasised the importance of looking to past public health figures as ideological forebears who advocated for social and political solutions to health issues. They state:

> I'm a sociologist and political scientist. And so of course based on that I had more of a link into history and theory more than colleagues of mine who were epidemiologists or health educators or medics for that matter.
>
> [...] a lot of the German public health tradition around Virchow for a long time was forgotten, and also because there's practically no public health person that was more political than Virchow. Because of the Nazi period, public health was totally dismantled [...] [what] dreadful history. So it was also a kind of rediscovery.

> And we also looked [for] support verification. [...] we were very young people developing health promotion all in our 30s and 40s. So we said, are there any grandfathers out there that we can refer to now in English and with my UK colleagues, that was relatively easy because of course the first thing you get is the Broad Street pump and John Snow and then of course, from a more political angle, again you had Webbs and that whole idea of a different society that promoted health and well-being. And then, you had Chadwick, who was more on the conservative side, but made an enormous difference. [...] trying to understand where our forebears actually said no, the solution is not medical. The solution is social and political. And of course, many of these, both on the conservative and on the revolutionary side, ie Engels and others believed in data, and used evidence. [...] I had to go back to the German tradition and there Virchow stood out, [...] he was a revolutionary, he was a politician and he particularly stood for that political dimension of health. Later we called it the political determinants. (Participant C)

When discussing their motivation for evoking Engels and Virchow in their work, Participant J chose to reference these historical figures to illustrate that concerns about social organisation, societal conditions, and health disparities are not new and have been documented in the past. Virchow, known for his expertise in pathology as well as his social critiques – particularly his work on the typhus epidemic in Upper Silesia – is evoked to connect with health care providers and align biomedical perspectives with broader social analyses. Engels on the other hand is used to situate contemporary discussions about the social determinants of health within a more radical tradition, aligning it with Marxism and socialism in a way that is accessible to those unfamiliar with these ideas. Participant J stated:

> [...] to convey that thinking about social organisation, social conditions and health and injustice are not new topics [...] people have been talking about them for a long time. And I think using those two people [Engels and Virchow] are both historically accurate but also [...] strategic in that, oftentimes I'm writing for a health care audience, like health care providers [...] and so I think Virchow is helpful because he was this famous pathologist but also had this kind of social critique and analysis.

> [...] I think evoking Virchow is strategic in the sense that he wrote extensively and interestingly, but also somebody working from a biomedical perspective and coming from a professional background. Oftentimes that's the audience that I'm writing for and people I'm engaging with. And then Engels, part of the motivation of using Engels is: one [...] his work in, particularly *The Condition of the Working Class* book is accessible. It doesn't sound all that different from writing about social determinants of health today. [...] it connects those discussions to a more radical tradition, hinting at its relationship to things like Marxism and socialism without necessarily saying it outright, which can be helpful among an audience that is unfamiliar or uncomfortable with those topics. [...] you don't begin with the history of political movements of the last few hundred years but it connects it to those traditions, and makes health - maybe in the minds of the audience - relevant to discussions of politics and political movements and political ideologies, so those are reasons why I felt compelled to write about those people in particular. (Participant J)

Participant K discussed their motivation to reference Engels in their work, because of powerful language used by Engels, specifically the concept of "social murder" that they first encountered through a third-hand quotation. This term became an important part of their future analysis and understandings about the nature of capitalist modes of production. By situating workplace accidents within broader societal, political and economic issues, the informant was able to honour the dignity of those affected by workplace injuries and fatalities. Participant K states that Engels's work, particularly *The Conditions of the Working Class* resonated and affected them. It provided historical and analytical depth that enriched their understanding of the systemic health and safety issues present in many US workplaces.

> I used the phrase social murder in my work before I knew it was Engels's phrase. So I was drawn to the power of the language of the phrase because I heard it quoted third hand and I wrote a dissertation on workers compensation laws in the United States. And then I wrote a book based on the research for the dissertation. And one of the things that I did in

the book is I wanted to really draw out the moral stakes and the larger political analysis because [...] my first priority was figuring out empirically what actually happened [...].

I was writing about patterns of people getting their fingers torn off and people being burned alive in workplaces, and it was horrifying, and it began to feel to me like the accidents weren't accidents. They were predictable accidents, the only randomness was when and where. On a regular basis, someone's going to die at work. It's not accidental. And as a writer, I felt a strong moral impulse to honour that and treat that with dignity, and I needed to say somehow [...] that this is not accidental. I felt the responsibility to equip my readers, many of whom I know would be undergraduates [...] to understand this stuff.

And I've been a Marxist since the late 90s. I was politicised during the anti- globalisation movement in the late 90s. [...] Even though I had read *Capital* in the early 2000s, I finally read that [*Conditions*] book in late 2019 or early 2020. And I was so, so struck by what a great book it is, just as a piece of writing and how powerful it was. And how it spoke directly to my concerns with workers compensation laws, and I wished I'd read it sooner.

My motivation was the evocative literary power of the term [social murder] fit for the kind of moral stakes of the importance, and that there's an implied analysis already just in those terms.

I think that the terms spoke to my moral imagination about why this stuff mattered, and it spoke to my political imagination trying to understand what was happening and I wanted to know more about both. I was drawn to the concept before I knew it was Engels, and then once I read Engels's analysis, which is incredibly powerful and it continued to speak to both my moral imagination about the human stakes and my political imagination because I think it does genuinely explain the world. (Participant K)

Participant D spoke of the three historical figures as "standard public health history" and that "[...] it would be an incorrect history of epidemiology and public health not to discuss them".

The interviewee further elaborates on the importance and relevance of the three figures to contemporary times, they stated:

> [...] it's not just that they're evoked by contemporary people, that's part of it. It's that some of the same economic and social conflicts, contradictions and tensions are present now that were present back then and current forms in relation to current policy. I mean, the world has changed in many ways, but there are still fundamental questions of how political economy for good or for bad ends up impacting people's health. (Participant D)

Moreover, Participant D discussed the Spirit of 1848 caucus of the American Public Health Association, and the reasons for why it is called the spirit of 1848 – a time in history characterised by significant social, political and economic changes – perhaps a time out of joint. This they argued embodies multiple movements:

> So in recounting the history of why the Spirit of 1848 causes is not named after anyone, group or anyone movement or any one thing, but understand it was a commonality of many of the groups, there were the abolitionists, there were the working class groups, and the revolutionary groups. There were people fighting for sovereignty in different kinds of ways. There were people that were fighting for women's suffrage and women's reproductive rights and all the rest. I mean, you name the struggle and they were quite active in 1848. The Spirit of 1848 evokes that kind of spirit that cuts across many different, often more single issues or more narrowly defined movements and so again in that context - you have to talk about all three of those people. They're part of history and what the Spirit of 1848 recounts. (Participant D)

Lastly, Participant H, stated that Marx and Engels are key figures for examining health inequalities under capitalism:

> Intellectually and scientifically, there aren't that many places to go, and Marxian tradition and Engels in particular for health, are certainly the best origins, intellectually, of a

> tradition that questions capitalism, not on a moral ground, but on scientific ground as well. (Participant H)

Overall, the interviewees evoked historical figures like Engels, Chadwick and Virchow for several reasons. Some saw it as a way to honour "ideological forbearers" and situate health inequalities analysis within a longstanding tradition. Others viewed these figures as seminal to epidemiology, public health history and critical theory. Some participants became familiar with their works through personal activist experiences or second-hand accounts. For most, the three historical figures and their ideas have influenced and helped expand the interviewees' scholarship on health inequalities.

7.5 Ideas on Main Contributions to Promoting Public Health

A number of commonalities arose from participant responses on the main contributions of each of the historical figures to promoting public health. The main concepts that arose were the influence of social and economic conditions on health, politics and public health, and Engels's contribution to the critique of capitalism. Participants also discussed ideological differences of the three historical figures and divergent views on public health goals.

Participant B drew attention to the fact that some of the most influential works for which the three figures are remembered were published within a couple of years of each other, they state "They're all published within three or four years of each other. I think that's important.". They then bucket Engels and Virchow together and situate Chadwick in another bucket stating "Chadwick [...] is a better example of what we want to avoid, right. I think Engels and Virchow are a better example of things that I think can guide us in thinking about the ethics of public health practice and especially priorities. One of my views about public health ethics in general is that it's fundamentally about priority setting." and to do that "we have to find a way of prioritising what matters most, and that's an ethically fraught question." they continue:

> For example, everybody in public health is really focused on equity or they say they are. But how do you know which inequalities matter most? That's a complicated question, as it turns out, it's not simple to answer. And so I really think that Engels and Virchow together, they give us a really good idea, a basis, a foundation for thinking about what

matters and why in particular. Engels [...] concept of social murder [...] is really helpful because it really pushes the analysis upstream to what some people call fundamental causes. [...] The idea of what's really going on and what's really overwhelmingly the determinant of health and its distribution in the population is structural violence. And that's it! It's oppression, it's politics, it's power, it's capital. I mean, that's what it is and Engels makes that very clear [...]

[...] then Virchow's report is also very helpful, especially for health professional students. I use that with medical students quite a bit because Virchow is a physician. And so it's the idea that Virchow was looking at unequal distributions of typhus. It's very clear what he prescribes, he doesn't prescribe medicine or medical care. And it's not because he doesn't think that medical care is important, clearly he does. But he prescribes politics, and I think that that's eye opening [...] especially for medical students and health professional learners who are used to thinking of the hammer and nail problem.

As for Chadwick, Participant B stated:

Chadwick is the other way. [...] Chadwick is a [...] hygiene reformer who cleaned up [...] filthy tenements and other kinds of things and [...] paved the way for modern public health, and of course, anybody who's read Chadwick knows anything about the history, knows that [...] Chadwick was a deep class conservative and the only reason he wanted to do these things was so that the lower classes wouldn't revolt [...].

Speaking about Chadwick's contributions to public health, Participant B adds "We're more like Chadwick than we should be". For example, "accusations of feigned illness" and "accusations of malingering and health policy" is where we can really see Chadwick's influence:

[...] in the US in particular [...] where we are determined to make access to whatever meagre social benefits we actually provide, which is almost nothing, [...] to make it so miserable for people, that only the people who we judge as most deserving, are willing to

> go through what we put people through to access the meagre social benefits, the welfare regime that we actually have in US. That's Chadwick. That's straight Chadwick.
>
> Chadwick's whole intention was to make all these [poor] houses as awful as possible, so that no one would use them other than the absolute most destitute people who had no other choice. That's what we do. We're still doing it basically in terms of welfare, we're not doing anything different in the US as far as I'm concerned, in general, at least on a national and in many cases on the state level, different states are different. But at the state level [...] I don't think we need to learn much from Chadwick, because I think we're already learned what we need to learn, and we've internalised it in the US. So, I think the real question is, do we want to do something different, than what Chadwick was recommending. Too often, that answer seems to be no. (Participant B)

For participant C, Engels's main contributions to public health revolved around his data analysis and early epidemiological work, however they also pointed to the fact that Engels often gets marginalised because of his association Marxism, communism and socialism. They stated:

> His contribution was really trying to work with data [...] to sort of paint a comprehensive picture and really trying to show the enormous poverty, the great social exclusion [...] it [*Conditions*] is a fascinating piece of social science in a way and epidemiology before it really existed. [...] Some of this work has not been used as much as it perhaps could or should be. Of course, it also doesn't have a link into the medical world at all, [...] a step removed from the health and medical literature [...]. Then even famous people with some of their other contributions, like Engels [...] gets lost because one looks at it through a specific perspective, so if a Marxist writes that kind of book [*Condition*], can you trust it? (Participant C)

Similarly Participant E drew attention to Engels's groundbreaking work in *Condition* comparing his epidemiological work to that of McEwen 100 years later, which is suggested is quite limited in scope, they stated:

> Engels did groundbreaking empirical work in Manchester, which he gives no credit for." on the other hand "McEwen [...] looked at Scotland and England and looked for enough income for 2000 calories a day. And decided that that was the single variable with the 100% coefficient that was going to create and limit an epidemic constitution for infectious diseases. Well, Engels did this in a more robust way, 100 years earlier looking at Manchester and looking at the working and living conditions, and referred to it as social murder. I mean, why wouldn't people have enough of the economic output in order to live, and so Engels in some ways is way ahead of McEwen but McEwen, of course, was while a critic of mainstream medicine he was perfectly consistent with the very conservative view that economic growth is the answer to reducing infectious disease mortality. (Participant E)

Participant E, referred to Engels's work on political economy, Chadwick's work on public health and Virchow they argued is "both", as well as a "first-rate scientist". "They're all making arguments that the [...] way to get to health is not defined in the laboratory, although laboratories are necessary. But to make it in the political realm.".

Speaking about Virchow and Engels's contributions to public health, participant J noted the moral dimensions of their work, which amplified their analytical contributions:

> [...] both of them provide us with, at least in modern times, an early analysis of the relationship between politics, social conditions and population health outcomes. [...] they have slightly different analyses and they're writing for different audiences [...] I'd add justice as well, they both had a kind of moral message, not just an analytic framework, some kind of structural analysis, but also a moral interpretation as well. (Participant J)

Participant K examined the contested nature of public health and its embeddedness in a capitalist system that needs a certain level of public health to keep the economy stable and productive. They stated:

> [...] public health is a contested term. [...] I think public health is like democracy, it is sort of pulled in a less robust, less positive direction toward managing harm and the effects of harm and keeping the level of harm low enough that it doesn't become economically

> disruptive. I think that Engels makes a profound contribution to making visible, in a democratising way, or potentially democratising way, all of these harms and wrongs, and he helps us see them and fight against them. (Participant K)

Participant A brought up an example of an article that examined "what was left out in terms of theoretical and historical grounding of" the Commission on the Social Determinants of Health 2008 WHO report which evoked Villermé, Chadwick and Engels to "share, this really important notion that three different ideologically distinct observers and thinkers could certainly comment, as many do today on inequality, poverty, etc, and yet have remarkably distinct approaches to addressing them." Participant A continued:

> And, so I found comparisons across these three approaches from the first half of the 19th century to be incredibly illuminating about how, what happens when there are very distinct traditions and ideological factors. [...] It was a trichotomy, if you will. Villermé, who basically said, with the exception of child's work capitalism could continue as is - via reform. Chadwick argued most of all for sanitary cleanup, while (Marx and) Engels championed revolution. (Participant A)

Participant G described the contributions of the three figures, Chadwick was regarded for this work to establish a public health, Virchow for his work in pathology and medicine, and Engels for his work his contributions to communism, socialism and social democracy through ideological webs of influence. They stated, "I see Chadwick as having made a vast contribution to the establishment of public health within the global health medicine discourse." Virchow "he was a doctor who discovered politics through medicine. In that sense, he's a kind of role model, even to people who don't share his ideology". Speaking about Engels, they continued:

> Engels obviously is massively important; he has made both - what I chose to call- the latent and the manifest contributions. And obviously if you asked me to kind of quantify those, I would say no way can I quantify them, because when you're talking about historical and contemporary webs of influence, you can't quantify them.

> [...] just think of a little kind of network, the contributions of communism to socialism to social democracy, to health and safety throughout the world, for example, we can trace those back to Engels, among others, of course and obviously I'm talking networks, not a single causal chain. I'm talking as spiders web. (Participant G)

Participant F discussed the contributions of the three figures, stating that Chadwick wanted to address changes in sanitary conditions, housing conditions "within the capitalist system in fact, he said that all the changes can be done in the legislative halls of power". Whereas Virchow was regarded for his focus on education, housing, and wages. "But I think it's only Engels who said explicitly that the problem is class relations, and that is the balance of class forces between the capitalist class and the working class in the two broad camps, not counting the other classes" And it was Engels who "[...] said, with all the evidence, that it's capitalism that is the main problem. So, if capitalism is the main problem, then we must address capitalism as it is; we must replace capitalism".

Speaking about Engels and Virchow, Participant H stated:

> [...] I think, they are the only major figures in the socialist revolutionary tradition – especially Engels, because Virchow was a little bit more contradictory, especially at the end of his career – that can be used as a reference for addressing social inequalities in health.

They further elaborated on the role of Marx in public health and social determinants of health field, stating:

> So this is paradoxical to me that historians of public health had not paid more attention to the joint work of Marx and Engels, as father figures of this tradition of social determinants, social inequality in health, and health equity." [...] They are seen more like venerable academics that are dead and that should be looked at in a mausoleum, it's not their political fight that inspires most researchers. It's more their intellectual insights and tradition." (Participant H)

Commenting on the contributions of the three historical figures, Participant D elaborated on each figure beginning with Chadwick, they stated:

> [...] Chadwick was key in sanitation and key in the first Public Health Acts in Great Britain. But he also was horrible in many other ways in his role in the Poor Law. And his view was that immorality led to both poverty and poor health and that it wasn't government policy that created poor health.
>
> [...] he was actually quite moralistic and conservative, and yes, he got sanitation going, but the idea behind that was that if you ended up with sanitation, you'd have fewer poor people and maybe less of a drag on the economy. So he was completely pro- free market, and completely pro-capitalism. [...] Total free market fundamentalist kind of pro-capitalist.
>
> [...] he was a pure civil servant. He got into public health because it was there, not because he was called to public health. His role in the Poor Law role before that was again, purely administrative. [...] He was an administrator keen on cutting expenses for the state. (Participant D)

Discussing Engels, Participant D stated:

> Engels wrote extraordinarily, in particular *Condition of the Working Class* on the health impacts of the current industrial and capitalist system, and it needs to be both because there were also the ruinous effects which he observed [...] But he also did specifically look at what was going on with the growing new urban cities and the urban proletariat. And so that book remains [...] one of the best descriptions of working-class life in Europe at that time.
>
> [...] But he wasn't really a public health person. He didn't identify as being a public health person. People on public health certainly picked up on what the importance of his work was, but he wasn't a public health servant. He was the son of an industrialist who

> got involved in revolutionary politics and then published a lot. And was the key person for making sure that Marx's manuscripts went from obscurity and to some recognition. So it's not like he was specifically working on a particular public health campaign, but he understood that the conditions he was describing and the economic and political underpinnings of those conditions were crucial to shaping people's health and lack thereof. And that's very different than somebody like Virchow, who was a physician, [...] an anthropologist, [...] a statesman. [...] And the pamphlets that he put out in 1848, those were written as a physician, and that's where he came up with his ideas of physicians being attorneys of the poor. He got sent to investigate this Upper Silesian typhus epidemic precisely because he was a physician, not because he was a muckraking journalist or correspondent. (Participant D)

Together the data from interview participants provides detailed description of the contributions of the three historical figures. They pointed to the multidisciplinary influence of each of the historical figures, Virchow is regarded for his medical expertise and political reform contributions. Chadwick is remembered for his sanitary efforts, notes of his conservatism and pro-capitalist nature were made by many informants. Engels's contributions in political economy and his influence on public health were discussed. Participant D provides a succinct summary of the contributions of the three historical figures, stating:

> So you have someone who is a civil servant bureaucrat, penny pinching administrator. You have someone who is a revolutionary with a lot of thoughts and observations in the world and is enabled to do that by virtue of being the son of an industrialist, and you have someone who is an actual physician whose eyes are open by seeing the kinds of people and the conditions in which they lived that he was taking care of, who worked in labs and who also became involved more and more, and his politics changed some overtime, but he brought in knowledge from other disciplines, of all three he was the most scholarly.
>
> [...] what's important about all three is they were very specific, they described the conditions of their times, and they talked about underlying economic conflicts and tensions behind them" (Participant D)

7.6 Perspectives on Contemporary Implications for Action

When discussing contemporary implications for action made by the three historical figures, Engels and Virchow are highlighted for their focus on identifying the root causes of poor health and health inequalities, such as social and economic conditions, where Chadwick on the other hand, is portrayed as a figure who advanced public health reforms, particularly in sanitation, without challenging existing power structures. Engels and Virchow were discussed as advocates for addressing these fundamental issues, which are often linked to broader social and political problems. However, one participant raised a concern about whether it is the responsibility of public health professionals to address these issues directly. Engels and Virchow's work is seen as a guide for prioritising actions that address the most critical determinants of health, urging a focus on systemic change rather than superficial solutions. Chadwick is seen as maintaining social hierarchies while still improving public health. The interviews emphasise the need to critically evaluate whether current public health efforts, like Chadwick's, are merely addressing symptoms without tackling the underlying power dynamics that cause health inequalities. The key takeaway is the choice between maintaining the status quo or addressing deeper structural issues that lead to health inequalities and inequities.

Participant C provided a succinct statement on the contemporary implications for actions stating that:

> [...] Engels outlined all the key social determinants, Virchow outlined that [...] these social determinants need to be addressed politically, and Chadwick showed that [...] you need an implementation system [...] where you need laws, [...] regulations, [...] public health systems, [...] sanitation. (Participant C)

Participant B discussed "taking beneficial public health action" with Chadwick's approach which the state avoids "actual power relations and power dynamics, in and as a way of sort of preserving hierarchy, which we [...] do a lot in contemporary public health practice". When discussing contemporary priority setting, Participant B stated:

> What are we really focused on? Is it [...] destabilising particular class and power dynamics that animate structural violence and then almost certainly are the prime causes

> of population health and inequality, or are we just focused on little things that may actually be of service, I'm not saying they won't help people maybe they actually will help people, but that leaves those class and power dynamics intact. That's our choice and Chadwick was one of the pioneers of making that choice. And that's why I talk about and introduce Chadwick in that way. (Participant B)

Participant B discussed the works and ideas of Engels and Virchow as "helping us identify the most important factors in the causal chain that lead to poor health, poor population health overall, and that leads to health inequalities. Virchow and Engels are very helpful in telling us what's really causing what we see in public and population health and what are the most important causes." Engels in particular was described as "telling us what are the most important things we should be focusing on in public health now" which are class and power dynamics. However, this participant also pointed out that there are public health professionals:

> [...] who are fully on board with what Engels and Virchow are arguing, what they say is it is not the job of public health officials and leaders to solve those problems. These are much larger social and political problems. They are human rights problems. They absolutely are the priority. But they are not the ambit of the public health workforce in particular. I don't agree with that, but it is a credible argument. (Participant B)

While discussing priority setting further, Participant B drew attention to the question of "which" priorities to set and "why", suggesting that you can improve health with Chadwickian reforms but without addressing the fundamental causes, they stated:

> So, there is room to disagree with whose responsibility is it to address the fundamental causes that Engels and Virchow are telling us about? [...] Are we really going to focus on things that are just preserving class and power hierarchies and structures because if we are, it's probably not going to have the impact on public health that we want, but [...] Chadwick actually [...] showed [that] you can improve people's health even if you are unwilling to destabilise class and power dynamics. So which of those are you going to choose and why? (Participant B)

When discussing contributions of the three figures, Participant A emphasised the significance of political context in applying the thoughts of Engels, Chadwick, and Virchow today particularly during periods of crisis such as lockdowns and confinement. They highlight how these moments offer opportunities for heightened attention to social justice issues. The ideas of these thinkers were discussed as being "absolutely crucial", "Unfortunately, I think some of these ideas are also either eschewed or co-opted, and watered down so [...] it really depends on the level and context of political mobilisation.". Participant A cautioned that Virchow "[...] in many ways [serves as a] cautionary story of what some might call a reality test of how these issues then get transformed in day-to-day politics." (Participant A)

Participant K raised examples of public health officials in USA such as John Walensky and Ashish Jha, and the most recent CDC director as "people at the top of the public health field do serious harm by minimising or denying the harms of COVID and promoting policies that result in more infections." for whom Engels should:

> [...] serve as a kind of a conscience and a critical sensibility for people in the field to say, [...] these patterns are baked into the machinery of society you're pushing against, you're really pushing uphill, so to speak. You're pushing against these underlying deep social patterns, and some of the authorities in the field of public health are apparently at least equally comfortable aiding those patterns as in the case of John Walensky [...] (Participant K)

Speaking about the role of citizenship in protecting people against harm, but not for people with disabilities from workplace injuries, Participant K states that many view citizenship as a "bulwark against waves of harm", however:

> [...] when a wave of harm rolls [...] people who get hurt end up pushed into a status as second-class citizens. And so it's not that citizenship means I'm protected, it's that I haven't been harmed yet. [...] And I think Engels is fairly clear on this - that you're basically on your own or all of us are basically on our own, which is why we need to network together and organise together. [...] I think that's a very important contribution.

Participant K further noted that:

> [...] relying on state institutions that we believe to be benevolent is just inaccurate, and it's a mistake that has really high consequences and that those institutions mostly only work when they're under tremendous external pressure to work well. [...] I think Engels helps with that. I think that's also a lesson that lots of movements for health justice have had to learn over and over again.

Interviewee K argues that another lesson from Engels is that "[...] these struggles are all connected so that a person dying from an untreated HIV infection and a person crushed to death in a mine collapse [...] are in fact generated by the same social processes and there is actually a common condition there [...]. That's not rhetorical, that's objectively the case. These are folks harmed by the same basic social processes, and so when people perceive that accurately, then people can start to knit together collectivities in different ways."

The last and very important contribution from Engels, as per Participant K is that Engels's contributions help us see the:

> [..] the need to continue to fight for a socialist society, a fully democratic socialist society, because anything short of that has a really high body count [...] the history of capitalism is a blood stained one. We are saying there's a certain level of body count that will just say is politically acceptable. And I think part of the force of Engels's analysis is to say there is no acceptable body count. A murderous society is absolutely unacceptable. We have to move to a genuinely non murderous kind of society. That's a long-term contribution and it hasn't worked yet. (Participant K)

Speaking about Virchow, Participant I noted that later in his career Virchow favoured reform instead of revolutions or fundamental social change "whether he intrinsically did that or did it because of political oppression that he experienced, still isn't clear". However, Virchow's contributions to the establishment of the field of social medicine are paramount:

> [...] Virchow is huge worldwide as [...] essentially the founder of social medicine. But, when you [...] go to the Charité Hospital museum in Berlin, where Virchow spent most of his career, there are probably 20 rooms devoted to his work in pathology, and half of one room devoted to social medicine. (Participant I)

This speaks to the areas of Virchow's work that are most pertinent to mainstream health discourses.

For Participant I Engels's work helps to think about: "What needs to be done is the transition beyond capitalism, beyond racial capitalism. [...] structural racism and capitalism have been intertwined since the beginning, and I think it's more helpful to describe it that way." However, this is "the big intellectual and strategic question of our age" because "it's easy to imagine the end of the world - climate collapse, nuclear war - what's really difficult is to imagine the end of our economic system. But worldwide, more scholars and activists now are taking responsibility for this task of imagination and linking that to concrete struggles for social transformation." (Participant I). Participant I further elaborated:

> So how to get from A to B? From where we are now, to where we need to get in order to change the social determination of illness and early death? That's the question! And it's not a question of minor reforms in public health or deliberative health services. Which isn't to say some of that isn't impor
> tant, but those reforms never are going to accomplish the goal of confronting and ameliorating the social causality of ill health and early death related to structural inequalities and inequities.
>
> So what I and a whole worldwide network of people whose praxis rarely make it into the hegemonic media. That praxis focuses on the development of the post-capitalist solidarity economy locally.

For example:

> [...] one of my major commitments is to a group of really wonderful, idealistic young people. When I was in the Rust Belt, specifically, Northern Illinois [...], they recruited me as one of five people over 28 years old. It's called the [...] Horizontal Stateline Autonomous Region (https://horizontal-stateline.org/). What we're trying to do is to develop a non-capitalist way of life, [by] withdrawing our consent from capital. It's amazing how much you can do when you decide you want that with a number of other people who don't see a lot of options at their young ages because they're mostly from working-class and minority backgrounds. But they're brilliant, and they easily could get scholarships [...] but they realised if they did, they'd wind up at the other end as wage slaves, like everybody else, just with a bigger debt. [...] so they're really excited about this and it's a lot of fun [because] there's so much doom and gloom these days, but the reality is that everywhere you go worldwide, this kind of organizing is going on to build solidarity economies. So that's a brief answer [...] [the contemporary implication for action is that] you go back to Engels to directly change the social conditions that led to those problems. (Participant I)

Participant F argued that the approaches proposed by Virchow and Chadwick such as "housing, education, wages and labour" are reflected in contemporary discourses on ways to solve health inequalities, however they are limited and do not address the root causes of health inequities. They stated:

> [...] the same way that many of us colleagues in the social determinants of health are proposing to address working conditions, employment and income, housing and so on, and so forth. [...] I believe those are concrete solutions to inequalities in health and health care and social inequalities [...] but I don't agree with them. I don't have any problems with these kinds of approaches. But what I'm stressing is that those are very limited. (Participant F)

Participant F used an example from Canada's social and public housing strategy which they argue is "socialised housing" based on socialist ideals were "suddenly cut, stopped, or terminated" however now "[...] we have the National Housing Strategy Act in 2019. But those policies can be easily reversed and modified. [...] So, I'm not saying that those are bad policy solutions, but I'm just saying that those policies, [like] socialised housing are good, but within the capitalist system, they are very limited.". Participant F furthers this critique to public health, which they also state is a "socialist idea" which is "being eroded within a capitalist system [...].", they stated:

> So that's why I always return to Engels because he said, look, we need to replace capitalism so that all these socialist-related policy ideas can remain intact and be sustained, but it will not happen within the capital realms. We must go beyond capitalism to sustain all this, because in socialism or beyond capitalism, the world that we are envisioning is [where] the means of production are owned by the people themselves, along with the communities and their state. And the planning will be done by the people and the workers and the masses all together working for the common good, [...] these things cannot happen within the capitalist system because capital prioritises profit accumulation, profit before health. Capital accumulation and reinvesting all this capital for further profits in an endless loop. (Participant F)

Participant D stated that Chadwick advocated for a funded, economically efficient public health infrastructure which would include people, facilities and laboratories. However, Chadwick "would continue to be critical of social welfare spending." as well as policies such as tax credits, but not government payouts. Participant D argued that in contemporary times Chadwick would be "very struck by [...] all the non-productive people." and that "he would be probably involved in the fights about increasing the age of retirement. [...] And I'm sure the answers wouldn't be pretty [...]".

Discussing Engels, if he was alive today in the USA context, Participant D argues that Engels would "have been [...] part of the Green New Deal and pushing it further and he would also [...] [considering what he saw in his lifetime and what has happened since then] realise [that] it's not so simple to overthrow capitalism." Virchow "in US context, would be very big in

positions for a National Health program and arguing for health care as a human right and doing that more globally." As well as calling for a meaningful engagement with critical anthropology. For Participant D, "both Engels and Virchow would be dealing more with histories of racism and colonialism than they did in their writings at the time. And also, obviously decolonization logics and rhetoric. And I'm sure Chadwick would pay no attention to any of that." (Participant D)

As for contemporary implication for actions for Participant E they stated that proposals of revolution as envisioned by Engels would not be possible now, however Engels's legacy can be used to "promote economic equity, and environmental rules". "In fact, I would go much further, like Engels I wouldn't let Exxon run our energy industry, I would nationalise it. I would also nationalise the banks because they're the ones who often fund the worst kind of economic and environmental outcomes."

Speaking about agriculture, taxation and health, Participant E argued that understanding capitalism helps to "understand why some people are healthy and others are not" for example "the agricultural disaster, tied to the production of livestock" discussed in the "new 400-page Lancet piece" which concludes "[...] that a significant contribution to global warming would also make a significant contribution to human health and that would be rooted in plant based diets." For example, in the EU:

> [...] a number of the countries are now taxing unhealthy foods using fiscal policy. Union of Concerned Scientists in the United States argue that [...] the subsidies for the livestock and other sources of unhealthy foods have to be shifted to subsidising the healthiest foods [...]" and "over time, you're going to shift their preferences, and this isn't a behavioural thing, it's a political economy thing, in the sense that it's the state paying subsidies for the least healthy foods. That's political economy, not behaviour. You change behaviour by changing, in this case, fiscal policy and choices you make. (Participant E)

Although Nordic countries are not doing well in terms of agricultural policies, they are more successful at keeping people healthy through regulation, taxation and nationalisation of specific industries and "[...]provide opportunities for people to become healthier structurally." (Participant E)

Participant J discussed their thoughts on Virchow stating that in contemporary times his recommendation aligns him with Social Democratic ideologies with a focus on "[...] democracy, giving regular, everyday working people a voice in politics and the decisions that affect their lives." Issues like "[...] social support, workplace protections, a degree of equality in society, political representation, kind of generally leftist, progressive perspectives on these topics." follow from Virchow's work and ideas. Additionally, Participant J discussed how Virchow called for:

> [...] being involved beyond the boundaries of the health care system and institutional public health and instead involved in politics and political movements to bring about health-relevant social change: social supports, a degree of equality, state provision of services, like housing and food and education, particularly for people who otherwise don't have access to them. (Participant J)

As for the revolutionary ideas of Engels, Participant J argues that Engels and Virchow both have "parts [...] where they sound much more like Social Democrats and liberal reformers; there's a lot of 'reform talk' that you can find in Engels, and Marx, and Virchow. They're not necessarily calling for the overthrow of capitalism or imagining a new kind of utopia, but there are much more 'every day' changes that all of these thinkers would agree with" such as electoral reform, meaningful political representation, and non-discrimination.

In summary, the discussion among participants around the contributions and contemporary relevance of the three historical figures to public health was multidimensional. Chadwick was recognized for work in implementing public health systems that improved health without challenging existing power structures. Virchow's work was noted for establishing social medicine and emphasising reform, though some argued that his focus might not address deeper societal problems. Participants highlighted Engels's emphasis on class and power dynamics as fundamental causes of health inequities, advocating for a transition beyond capitalism to address these root issues. When thinking through how these ideas apply today, some participants advocated for radical change and others focused on practical reforms within current public health systems. The debate over whether public health should address structural inequalities directly or operate within existing political frameworks, reflecting broader tensions between reformist and

revolutionary approaches to social change is still very much present today as it was over 170 years ago.

7.7 Barriers to Action in Public Health

The key barriers to implementing the actions proposed by Chadwick, Virchow and Engels revolve around entrenched power structures, capitalist interests, and ideological constraints. Engels's revolutionary ideas face significant obstacles due to the entrenched power of capital, the influence of big business, and societal structures that resist changes to existing hierarchies and economic systems. Chadwick's approaches were criticised for perpetuating a system that prioritises economic efficiency over social welfare, reflecting a deep-seated reluctance to destabilise established power dynamics. Virchow's reformist ideas also encounter resistance, particularly from ideological forces that prioritise individual freedom and minimal regulation over collective well-being. Across the discussions, a common theme is the overwhelming influence of capitalism, which shapes societal institutions, media, and public perceptions, creating significant challenges to achieving meaningful change in public health and social equity.

Participant E identified the first barrier as power, speaking about the USA context specifically, they stated:

> [...] the business roundtable, the American Legislative Exchange Council, the national Chamber of Commerce, all have a huge amount of power. And the state is, of course, autonomous in some ways [...] if the power that capital has the over the economy in terms of whether or not people are going to have jobs, whether there's going to be tax revenue, investment all these things as long as you – here's Engels again – as you permit capitalist property rights to dominate the economy, it's going to be a struggle, so they have to be contested and countries with high union density have a much different outcome in terms of how the state operates. [...] the important thing is recognizing the power of big business to influence the outcomes that are going to affect people's health based on class, racism, and gender. (Participant E)

In order to overcome this barrier Participant E discusses moving consumption away from animal products towards plant-based products "the plant-based diet [...] and I'm referring to that because there's some potential there in terms of public health aspects because they are recognizing the power of capital, in terms of the food industry and they're challenging it and saying we can't allow them to continue." Advocating for plant-based diets can help mitigate global warming by reducing methane derived from livestock farming and reduce the risk of heart disease and cancer was described as a way of doing activism. "I'm part of that, I teach it and I do the best I can to be politically active with respect to issues like equity and transforming agriculture."

Participant H discussed media as a barrier to action, they stated:

> [...] society is controlled by the media that's in the interest of the capitalist class or the new techno neo-Feudal class - de facto, they are interconnected, as [...] in the case of Jeff Bezos or Elon Musk. The schools, the TV, everything tends to repeat the same ideology, and that's the major barrier because when people go to the university, they already have a world view and they are not exposed to anything that challenges it.
>
> And not to put down what's going on in the humanities, because sometimes that's where new ideas are coming, say the new attention to colonialism. But on the other hand, they don't approach it in a scientific way that I think would give it the most relevance socially. [...] this is a big barrier, the ideological, attitudinal in our worldview that is controlled by the new masters, new feudal lords of the platforms and the web on one side and the other is the traditional communication.
>
> [...] I think it was Lenin who said that "you could do as much harm with the media as with a gun". I think we are living it now with the narratives that are available through X, or TV channels, or Facebook. (Participant H)

When speaking about barriers to action, Participant G drew similarities between barriers to action and barriers to revolutions, and fostering revolutionary thinking, they stated:

> [...] the barriers to health equity defined as I define it (as 100% socially constructed) are identical to the barriers to revolution, bearing in mind the fact that revolution can be non-violent and is therefore eminently achievable, as shown by [...] the civil rights and the women's movement and countries like South Africa. [...] and that doesn't mean that my way to advocate for health equity means that I use revolution or social murder in every sentence. It means that I use whatever I regard as the best methods in a particular context to foster revolutionary thinking. (Participant G)

Participant A discussed barriers in the academy and larger society, stating that we need a "a new era of solidarity" and a good place to begin these conversations are academic institutions where the three historical thinkers and others like them can be incorporated in curricula. Overall, Participant A argued that "[...] continuing struggles on all fronts is absolutely crucial, and this particular juncture, whether you're talking about militarism, or war, or relentless extractive capitalism, is profoundly supported by the state. These nefarious forces are on steroids. [...] we are in a situation where it is very difficult and challenging to manoeuvre alternatives." However Participant A notes that they try to maintain hope stating that "radical localism combined with transnational social and political movements could be transformative" to remove structural barriers to action.

Participant B noted that the barriers to action are very much present in Engels and Virchow's works which help us understand the "roots of the problem" in public health which "we've understood for centuries", however, there is the "unwillingness to destabilise hierarchies, entrenched interests, flows of power, money and capital and lack of political will", as well as "racial and gender-based oppression." Participant B stated:

> [...] at a very basic level, it's always about do we have the political will to actually do anything about it? Are we willing to cede power and make enormous sacrifices from the wealthy to the poor to actually change things in our world and our society? Consistently the answer is no. We're not willing to do those things.

> I don't have a real good answer for how you actually change structures of political economy, domestic and international political economy [...] given the weight of the histories and the resources and the capital, and the money, and the power and the racism and the oppression [...] that are so deeply entrenched in our past. (Participant B)

Participant C identified power, resources and money as barriers. Drawing on their experiences of the creation of the Ottawa Charter they state that "[...] you need action on other levels, you need to act against financial and other interests. You need to put health first. People have a right to health and everything that follows from it." However, they also urge to be mindful of context and "peacetime pressures" and used contemporary Germany as an example of where the government "wanted to invest in social measures and in environmental policies but is now confronted with the war industry" for "production of ammunition for Ukraine." Although "You have these periods where there seems to be more space to actually do it, but I think right now the situation is very difficult." Participant C noted:

> [...] as countries face inflation, economic crises, greater social divide, that will make keeping trust and a certain amount of peace within societies also very difficult. And of course, that's interesting if we take these three great men. I mean, all of them were also acting and writing in periods of great social disruption. [...] there were social movements and there were counter movements and capital was exploding and exploitation was at its height" and in contemporary times "after this relatively quiet post 1989 period after the Cold War, when everyone thought globalisation would solve everything we're back in a global social crisis that will make many of these things very difficult. (Participant C)

Participant D discussed entrenched power, institutions, money, divisions in society, violence and ideology as barriers to action. Expanding on ideology Participant D stated:

> [...] there's been a vast success in individual consumerism and lifestyle as a way to self actualize, and that the new social media is only doing that much more of a job as far as I'm concerned, brainwashing, [...] more younger generations where everyone is an influencer and selling themselves and commodities that the mystification of commodities

> is as bad as ever, there's a ton of work that's really good that's going to challenge this, [...] but it's not to overthrow capitalism as opposed to [...] come up with a different form or versions of what might be called social and economic democracy. And that you can see in many places, and I think people even in Kerala wouldn't say they overthrew capitalism. (Participant D)

Giving a word of caution, Participant D notes that revolutions are often turbulent, and although there are many groups that define themselves as revolutionary today, they are complicit with capitalism:

> And so [...] it's not going to just be a simple revolution, [...] but the power fights and the death and mayhem for trying to move to more equitable economic and social systems, as climate crisis expands. It's going to be interesting to see how it plays out, but it's just impossible not to look around the world at the many mercenary groups that are fine with capitalism, they may call themselves some revolutionary, that's a debatable proposition. (Participant D)

Turning the topic upside down, Participant K humorously states "I think a shorter list would be where are there no barriers? Because in a way almost every facet of our lives in this society consists of a barrier." They further elaborate "The various institutions of the state are all aligned toward reproducing capitalism in some form, and all of the institutions that exist have to be made compatible." Participant K uses examples of institutions like universities and hospitals which must produce good workers or healthy citizens in order to remain functionable and not go into crisis, they state "[...]everybody has to keep the gears to the death machine turning in some ways and all the ways that we're tied to those gears are relative obstacles."

Participant K furthers the discussion by explaining a lack of organisation among the working class, they state:

> [...] there's a tremendous lack of organisation that has clarity on these issues for various reasons, [...] more so in the United States than in Canada and the United Kingdom, [...] in all three of those places, there's a lot of pressure for the labour movement to become

> much more than something that's focused on the short term well-being of working class people, which is of course important but does not have a lot of room for a longer term, bigger picture analysis, and I don't think that's primarily ideological. I think that's baked into the structures of industrial relations.
>
> [...] you go up for contract negotiation and you want workers to get as much money as they can. Now, there's not a lot of room in there to build in a strategy toward ending capitalism because you're just trying to keep workers' retirement pay and you're trying to keep people safe. (Participant K)

They further described the "siloed off" working-class groups who are subdivided based on their grievances be it "a retired coal miner" who can access a specific fund or legal proceedings because of "concrete circumstances" that affect them but not other working-class groups. So rather than seeing the working class as a "proletariat harmed by the exploitation" of capitalism, the proletariat is "segmented off". Participant K used a boxing match analogy to exemplify their point, they state that for every win that the proletariat gets, capitalism follows up with a counter punch "that silos people off from a more universal class wide perspective".

Another obstacle discussed was a "loss of a robust imagination" and a "big ideological vacuum" which followed the breakdown of the Soviet Union and the breakdown of "myths around the Soviet Union, [...] carried their aspirations for a better society and a better world" but were "inaccurate" and "false". Participant K elaborate:

> I think there's been a condition since the 90s and earlier of a kind of loss of a robust imagination. [...] we're talking at the beginning about Fukuyama [...] there's a lot of people who [...] are sort of Fukuyamaites that [feel] we've reached the end of history, and it's just hard to imagine an alternative outside of the individual. (Participant K)

Furthermore, Participant K described a certain lack of a widespread ideology "it's hard to get by in this world for a lot of people", they described life course events such as having kids, or having to work in order to live as part of the obstacle to a widespread ideology. Many of us are too busy to be full-time advocates "there are real material processes that tend to continue to

divert us." Participant K states "[...] we need a widespread idea, I don't think it has to be Marxist, but I think it has to be able to do what Marxism can do [...], that can account for all the kinds of things that are raised in a Marxist criticism" they elaborate:

> [it is] clear that all forms of capitalism will kill people and [...] that the social determinants of health, even in the best capitalism, will still operate negatively, to the detriment of a lot of people.
>
> [...] the problem is capitalism. The problem is not primarily neoliberalism, or which political party is in office. Things like that can dramatically intensify the tendency to harm, and there's a lot of individual politicians, a lot of individual employers who have tremendous amounts of blood on their hands, and they should absolutely be held to account for that. But the problem is not one of bad doctrine, bad individuals or politicians. This is what this society does, and even the best form of this society is still going to hurt a lot of people.
>
> And so I think that's also an important contribution of helping make clear that of course, in the short term, you need to fight for your own safety and the safety of your loved ones and your community and so on. But in the long term people who are really serious about opposition to these harms have to become socialists, and we have to figure out how to end capitalism because until we do harm like this will keep happening to people. (Participant K)

Participant J described barriers as being capitalist class, entrenched corporate actors, private industry such as the pharmaceutical industry, and the Hospital Association as well as physician groups "all of them for different reasons, mostly having to do with profit, would push back quite hard, quite strongly against" redistributive policies and expansion of the welfare state. In general, "[...] people who are benefiting from the current organisation of society will push back against [...] progressive reforms that would be redistributive and that would expand access to services and improve the quality of those services.". Participant J elaborates:

> But getting there, getting past the barriers that we discussed in terms of entrenched industries and entrenched interests will require alternative forms of social organisation, which to me you can't really have at scale without the labour movement and much higher union density than we currently have in the United States. (Participant J)

When discussing taxation, specifically capital gains tax, Participant J states "we tax it at a much lower rate than income." This is "one other way in which the tax code reinforces and reproduces social inequities."

Participant I spoke about the fear of institutional retaliation through termination of employment and academic repression, they stated "[...] I've actually been fired, officially once and unofficially another time over these same issues, for caring about these problems." Discussing Virchow who succumbed to the same fate, Participant I stated:

> [...] as a revolutionary he basically did get fired from his Berlin job, had to go into the boondocks, and then he became "liberal", which in that setting meant Social Democratic. At that point he favoured reformism rather than revolution and fundamental change in the society. Whether he intrinsically did that or did it because of political oppression that he experienced, still isn't clear [...]
>
> So there's a lot about oppression, academic repression, and marginalisation that Virchow wrote about honestly with his parents. That viewpoint doesn't appear anywhere else in his work, or his political career in the Reichstag because [...] who knew that he actually viewed himself as marginalised and suffering from repression through almost his entire career. (Participant I)

Participant F argued that:

> [...] many of us are afraid. You're afraid that it will damage our reputation or career, especially if you are in early career or even if you are already a full time Professor, you are still afraid of confronting capitalism because these people are powerful and

> influential, [...] they control everything. They are in the academic world, they are everywhere. So, people are afraid. (Participant F)

A few of the participants spoke about overcoming barriers to action, as "Marx once said, the object is not simply to understand the world, but to change it." (Participant E) For example Participant J described their hope for a "kind of nascent revitalization of the union movement in the United States." through "increasing unionisation among all sorts of workers and ensuring building up [of] those coalitions" so that "the unions are committed to a progressive politics is one way of being involved in the political process, apart from elections." Unions can help achieve "universal health care", "universal childcare", and "the energy transition [...] and moving to alternative forms of energy, green energy" — perhaps like redistributive policies, expansion of the welfare state. Participant J elaborated on the need for "countervailing forces":

> [...] we've had a number of really important movements, the me-too movement, feminist movements, Black Lives Matter movement" which "bring about really important social change. [...] all of those movements need to be in conversation with each other. But I think taking on these kinds of big issues with really entrenched material interests are not unrelated to other social inequities, along the lines of race, along lines of gender, along lines of sexuality. But I do think it involves kind of class formation around [...] our understanding of each other as working people with shared interests when it comes the basic provisions of life and basic everyday needs of food and shelter and work safety and childcare and health care, things that can get a lot of people on board and that have a lot of popular support. (Participant J)

Participant I spoke about "tax resistance" and "[...] moving investments from capitalist places" such as "retirement funds, to non-capitalist places that emphasise housing and food" because "as far as the US is concerned, if it weren't for US taxpayers, this [the war] wouldn't be happening now in Palestine. The only reason it's happening is because we US based people consent to [...] Israel's role in genocide."

Participant F provided a candid response stating that the capitalist system does "not prioritise people and the planet" as such:

> [...] this capitalist system must be eradicated, especially now that we are facing multiple crises: ecological, institutional, cultural divide, political crisis, health crisis, recurring epidemics and pandemics. [...] I'm not saying that Chadwick and Virchow are incorrect. It's just that their proposals are limited. [...] they want reforms within the system they don't want, but they don't want to replace the system that is causing all these inequities.
>
> We need to go beyond that to address all the inequities in health and health care. That's the only way out, and that's why Engels is correct in saying that we must replace capitalism to address all these issues. [...] public policies are very limited in the capitalist system, [public policies] cannot do nothing about [...] the fundamental cause and so, it must be eradicated [...]. (Participant F)

In summary, the primary barriers to implementing the actions proposed by Chadwick, Virchow, and Engels are rooted in entrenched power structures, capitalist interests, and ideological constraints. The overwhelming influence of capital over the economy, reinforced by the power of big business and property rights, present significant resistance to change. The media, controlled by capitalist interests, shapes societal narratives that maintain the status quo, making it difficult to challenge existing power dynamics or imagine different futures. These barriers are further perpetuated by academic institutions and societal structures, which resist destabilising hierarchies and lack the political will to drive substantial reform.

Ideology, particularly consumerism and individualism, reinforces capitalist frameworks, complicating efforts toward systemic change. Additionally, the alignment of state and academic institutions with capitalist interests and the segmentation of the working class hinders collective action. Other barriers include taxation policies that favour the capitalist class, the need for stronger unionisation, and the fear of institutional retaliation and academic repression. Despite these challenges, there are calls for increased activism, unionisation, and the amalgamation of social movements to counter the dominant capitalist framework to promote public health and health equity.

7.8 Health Promotion Through Evocation

The following section describes participants' thoughts on whether evocation of historical figures like Chadwick, Virchow, and Engels can improve health equity and health promotion efforts. The limitations of Chadwick's approach were examined, which some participants view as overly individualistic and insufficient for addressing structural issues. In contrast, the ideas of Engels and Virchow were presented as still resonant, though participants noted the need to adapt these ideas to contemporary contexts and integrate insights from modern thinkers, such as Silvia Federici, Indigenous activists, and Black scholars. Interviewees also discussed the importance of placing health issues within their historical context to understand their continuity and evolution, while recognizing the gaps in these figures' contributions to modern challenges like anti-racism and gender equity. The overall consensus among participants is that evoking these historical figures can indeed promote public health, but it requires a careful and thoughtful application that considers the complexities of current societal challenges.

Speaking about Chadwick, Participant A notes that "we've seen Chadwick's echoes in the way health promotion has unfolded in recent decades, highly individualised and barely paying attention to structural issues. [...] we've already seen the dangers of the Chadwickian approach" On the other hand the ideas of Engels and Virchow "still absolutely resonate" however Participant A argues that we need to renew, adapt and built on these key bases, but also integrate:

> [...] Black radical historians like Walter Rodney or Andaiye, or many others. [...] It's kind of trying to create that synergy in our era to understand who is left out and how we might deeply consider the key thinkers whose ideas have been widely influential even silenced (Participant A)

Participant B reiterated that all three historical figures are "important in almost any kind of historical context, history of public health, not being an exception here - what is new is old." because:

> There aren't new problems, there are only old problems now, they look different, [...] but the root structure of the social problems we have that are responsible for the immiseration

> of the least well off in health and its distribution, [...] these root structures are pretty much the same. [what has changed are the] specifics and the structures in the way they operate [...] which is part of the reason you can't just take people talking about this from one context and just throw them into another because the specifics of it are going to vary quite a lot, actually, and the specifics matter because we need to be able to intervene in certain ways in certain times and places. (Participant B)

For Participant B, Engels can be evoked to help us "think through the social roots, social and political roots of population health problems in general" "or fundamental causes" and "priority setting". Virchow helps us understand "fundamental causes [...] especially as it connects to an outbreak or a specific health problem" or "outbreak analysis" as well as thinking about "particular outbreaks of infectious disease [in specific] and time and space" and "priority setting". And Chadwick helps us think through "what we ought to do or not to do [...] at the very least for people who disagree with me, framing the question of our choices - what do we want to do [...] what kind of public health people do we want to be". Participant B states that evoking these three historical figures can promote public health, whether it actually will is a different question.

Participant D spoke about teaching stating that situating issues such as poverty and its ill effects on health in historical context is helpful because it's "been known for millennia", "what did those people say in the times that they were; in what way did their arguments resonate with arguments that are today and in what ways are they different" evoking historical figures is:

> […] useful to understand both the continuities and the discontinuities and that understanding of who they were historically and what it was for them to do the kinds of science and policy and advocacy in their times - does that provide any insights into the kinds of tensions for people doing it now.

So yes, "getting people to put their work in historical contexts can be very helpful" however we also must understand that these three figures "not all of it. There's a lot of other history." For example "you'll get very little that's immediately and directly and obviously relevant to some of the anti-racist struggles that exist right now" Engels did not provide

wholesome critiques of slavery or the Cotton Empire, neither did Virchow (aside from his anthropological work on different races), and "you'll see none of that with Chadwick", the same can be said for "gender issues" or sexuality. "All three can be brought into discussions" on the "fundamentals around political economy" and "the role of the state or not in protecting and promoting the health of people versus of private corporations." Participant D reminds us that "they're not of all-purpose utility" but they are useful for "recognizing that what we have now [...] comes out of what's preceded us."

Participant E stated that "[...] we stand on the shoulders of giants. And people like Rockefeller and Carnegie "understood the implications of those kinds of arguments" but they "chose allopathic medicine" as "a magic bullet solution" that would not require a "redistribution of income and resources, more democracy" or "transform the political economy". Using the example of upstream and downstream responses to health, Participant E stated:

> And then of course the famous quotes from the Doctor - there I am, pulling patients out of the water and resuscitating them over and over again. I'm so busy doing that I can't see who the hell is upstream pushing them all in. And so Engels, Chadwick and Virchow, these are the people who got it all started and the fact that they are minor figures in history is representative of the calamitous alternatives we've gotten from mainstream medicine. [...] so for murder, massive amounts of unnecessary morbidity and mortality that mainstream medicine cannot fix. (Participant E)

Participant F argued that we can promote the ideas of Engels through publications, and "not being afraid to talk about these issues" they argued that "it is just ethical and right to publish the result, no matter what happens, because we do not invent results" and "one way of promoting ideas, first and foremost, is to really not be afraid to challenge capitalism, because we cannot promote the ideas of Engels, if we are afraid".

Participant G discussed that invocation of the three historical figures can "definitely" promote public health however how it is done is just as important. Is it "name dropping" or is it discussing "the concepts and the discourses to which they gave rise," such as "social murder" or more palatable terms such as "structural violence"? Participant G elaborated:

> I've used terms like political manslaughter to describe the way in which the UK government in my view caused hundreds of thousands of deaths from COVID through deliberately choosing inadequate control policies regarding COVID.
>
> [...] I'm saying that concepts like social murder can be reinvented [to terms like] political manslaughter [which] is something I could use on Twitter and get away with. So, in a way that could be said to be evoking Engels [...]. (Participant G)

Participant H mentioned that understanding how evocations of the three historical figures would make an excellent empirical study and would help understand the pattern of where and how evocations change over time. Since there are no such studies to date, they based their answer on personal impressions. Engels and Virchow were regarded as " [...] the major figures in the socialist revolutionary tradition [...], especially Luxemburg and Engels, although his sexism in dismissing Jane Addams was a big mistake, because Virchow was a little bit more contradictory especially at the end of his career, that can be used as a reference for addressing social inequalities in health, in addition to their counterparts in Latin America (e.g. Allende, Guevara) and other parts of the world I may not be aware of." Evocations of Marx are also "peppered" with "what we would call social determinants of health". They elaborate:

> For example, in *Capital*, when he writes about the production and conditions of work, he clearly links the use of alcohol to working conditions. He has even writings on suicide and [...] patriarchy. So, he has work that would be qualified as one of the "fathers" of the social determinants of health, even if he is less known. Because he doesn't have a single work like Engels. [...] but one can see many examples that are hypotheses in this field that have been confirmed, and a level of sophistication in the theory that still hasn't been matched. (Participant H)

Discussing terms such as commercial determinants of health, Participant H argued that such terms:

> [...] ignore the economic determinants of health that include production and ownership and what happens at work and makes the contribution of economy just a question of market exchanges and the harm of the products and influence of corporations and politics. What is ignored completely is the world of class in the mode of production that really determines all the rest (including trade wars that are class wars). These emissions to me are non random. It's clear that the commercial centres of exchange deliberately exclude everything related to production, ownership and distribution in the realm of class. (Participant H)

Participant J states that evocations of the three historical figures "can promote public health" especially when thinking about Engels and the perspectives from *Conditions*. They pointed to the fact that many scholars come across these historical figures by reading other people's work or selections from their works. They discussed their "choice of quotes and things that we take from these people", for example Virchow's famous dictum "politics is medicine on a grand scale" which helps to clarify "the relationship between politics and health", and Engels's concept of "social murder" "which speaks to me because I came to public health through the work of Paul Farmer, who writes about structural violence, and those terms are related to thinking about social organisation - not as a neutral thing - but giving it agency and recognizing its health effects on people." Participant J clarified that "structural violence is a nicer way of saying social murder." because "social murder is a little charged." whereas structural violence is "perhaps more palatable" even though "they're mostly saying the same thing.":

> I think too, you could say "according to Engels, social murder…", or you could say, "according to Paul Farmer, structural violence…", and you can finish those sentences the same way, you're saying the same thing. However, depending on the audience, some would find the work of Paul Farmer much more palatable, I'll say, even though their respective analyses have a lot in common, and even overlap in important ways. (Participant J)

Participant K stated that evoking Engels can help us think through the "harms in the workplace" due to long working hours, unguarded machinery, fast pace of work, crowding, and

unhealthy working conditions. Engels along with Marx lay out “concrete domains of social life that are especially injury generative” their work helps us “make interventions”. In particular:

> The social murder analysis can help movements and people who are harmed to realise that we need to fight against those tendencies and that fight can generate those mitigating state institutions [such as CDC or OSHA] and [create] funds that repay [for workplace harms done by uranium or asbestos]. And [...] it can also keep them accountable to actually work. [...] the social murder analysis can help make clear the need to demand action and to know that no one is coming to help us unless there’s a lot of ruckus raised. (Participant K)

Participant C noted that in their area of work, Virchow is very prominent, especially during the time of the pandemic which helped sink “in how political public health [...] one of the slogans I invented that are being used at the World Health Organization is “health is a political choice” which comes from Virchow’s thinking”. Participant C described the need of trying to keep Virchows “breakthrough idea [...] of putting health in the political arena but doing it then with a slightly different language so that it sticks with people”. Elaborating on this Participant C stated:

> [...] this phrase of “health is a political choice” has been quite successful. And it is also linked to this notion that you need political choices in other areas than health to actually create health, be it workplaces, be it education, be it food policies.
>
> And that’s what people are really grappling with now is how everything is so interlinked. But of course, if you read those early pioneers, they also draw attention to the fact how everything is interlinked. [...] so it’s not that new really, but every generation for itself, [it] defines its challenges as if they had never been there before. (Participant C)
>
> Lastly, Participant B’s observations are important to note, they stated:
>
> I think it’s also useful to ask people how many people study pathology in medical school, and it’s 100%. And then I asked them how many people study social medicine in medical

> school, because Virchow is the father of both of them, and only one of them is very well represented and we need to think about what that means and why? (Participant B)

In summary, interview participants discussed the relevance of evoking historical figures like Chadwick, Virchow, and Engels in contemporary health promotion efforts. Participants highlighted the limitations of Chadwick's individualistic approach, advocating for the inclusion of modern thinkers like Silvia Federici, Indigenous activists, and Black scholars to address broader social issues. Others emphasised that while historical figures are important, the context has changed, requiring adaptations in how their ideas are applied. A number of participants discussed the importance of situating health issues within historical contexts to understand their continuity and evolution, though noting that these figures did not address all issues, such as anti-racism or gender equity. Although these issues were of concern to some 19th century activists from privileged backgrounds, such as John Brown and William Lloyd Garrison who were widely respected in Black communities in North America, for example. The discussions also touched on the importance of challenging capitalism and the selective use of historical quotes to resonate with different audiences. Overall, the consensus was that while evoking these figures can promote public health, it must be done thoughtfully, adapting their ideas to address current societal challenges and context.

7.9 Meeting Expectations Through Evocation

When discussing whether evocations of the three historical figures are meeting expectations, Participant A noted that there is an opportunity for:

> […] remarkable learning from Collective Health in Brazil, which very much seeks to disentangle health activism and health justice from the role of the state, especially during periods of repressive government, dictatorship and so on, but without rejecting the importance of the state and its actual and potential role in redistributing social resources and progress. (Participant A)

Participant B noted that as an educator and an active researcher, their role as a director of education within their centre requires them to be a "builder" of "lectures, sessions, courses, programs and curricula." As such they reframed the question about expectations, stating:

> Does thinking and teaching about these things in terms of Engels and Virchow and Chadwick, meet educational or learning objectives that I have and that we have collectively as teachers and learners, collaborative learning, co-learning with each other? And there I would say the answer is, yes, definitely. I have learning objectives in my courses and then we talk about Engels, Virchow, and Chadwick. Does that conversation and that work help push us to our actual learning objectives? And I think the answer is yes it does. (Participant B)

However, Participant B also noted that if the question is posed on whether their expectations are being met in a larger context of their local public health department in terms of outcomes, interventions or policy approaches the answer is "no, well, maybe, but I have no evidence of that at all." They noted that asking public health professionals to change the outcomes in a local department is a lot to expect and it may not be a "fair standard".

Participant D explained that it is "too general" to answer in a "real way". They advised to think about the people who are reading the texts of Chadwick, Virchow, and Engels. Is the work of the three figures being discussed by "people who are actually historians, [or] they're being discussed by people who are drawn to their ideas or are drawn to opposing their ideas".

Participant D elaborated that the works of the three figures might be read by those working in "history of public health, and history of science" or those with "left inclinations", but "it isn't by people in public health per say, and certainly I doubt it's read much by anybody in policy." Figures like Chadwick and Engels are "geared to a pretty small public health and medical audience." Virchow has a "much broader scholarship". Participant D urged to be mindful of discipline, for example Virchow is often evoked in pathology, however all three figures are often noted in "editorial opinion category, where their names are mentioned to evoke a kind of spirit [...]" Furthermore Participant D stated that:

> I think you have to actually engage with the ideas and similarly right now, just as I teach students, just because people say social determinants of health or they say health equity, unless you actually know what they're really talking about, you don't know, and there are many that pushback about the depoliticization of social determinants health that they're just broadly describing conditions, but they don't describe who is doing the determining, and they don't describe the exploitation and oppression.
>
> I think to engage with critical thought, you actually have to have concrete information. It's not enough to wave some names or some flags around. (Participant D)

Discussing whether their evocations are meeting expectations, Participant E stated that it would be "abstract, it would be at a distance". However, they can see traces of Engels and Virchow in those promoting plant-based diet business, and environmentalists who advocate for tapping trade or taxing carbon, as well as more aggressive policies such as banning chemicals, or nationalising natural resources like hydro energy.

> There are all kinds of environmental movements which I would argue are consistent with the health aspects of Virchow and Engels who are trying to constrain if not take over the environment from the business class. Not much, but some of that's going on." (Participant E)

Participant F stated that they were satisfied with the impact Engels has had on their scholarship and research:

> I'm happy and satisfied referring back to Engels and always connecting my works to him because I'm always using a critical political economy lens [...] as well as historical materialism and historical development analytical tools [...]. They state that they are also happy to refer back to reformist approaches of Chadwick and Virchow to "lobby for public policies that will address social and public health problems" albeit such analysis is "limited in a capitalist system and it will always be subjected to policy reversals.

Participant F further argued that if our research doesn't:

> […] explicitly mention social relations of power among class and other social forces, the study is very limited and all those studies" that focus on "biomedical, lifestyle and behaviour without dealing with the social relations of power that are shaping health, are not really doing good to public health. (Participant F)

In addition, Participant F noted that:

> [...] sometimes it's discouraging, researchers like us also want some reassurance that what we're doing is okay and is making an impact. But it's quite difficult because for example, very few journals accept when you talk about the works of Engels, but the works of Chadwick and Virchow, are more acceptable in many journals.

Moreover they noted that explicit critiques of capitalism and discussions of socialism tend to remain at the margins of public health discourses.

Participant G noted that " While the centre of epistemological gravity has shifted substantially leftwards during my adult lifetime, in the desired direction, the outcomes which many would associate in their minds with such a shift have not in any way been achieved." this is because concepts such as equity are taken on board by neoliberalism "[...] to the extent that just about every government in the world, including the most right-wing governments' claim that they wish to reduce and even sometimes eliminate [...] health inequalities." For example:

> CDC was saying it wished to eliminate health inequalities which you and I know is the literal impossibility within a capitalist society, which is intrinsically based on inequality and can't exist without inequality, including health inequality, so through hegemony [...] society takes people like - Raphael, Navarro, Krieger, Waitzkin, Whitehead, Bambra, Kickbusch - and pats them on the head and incorporates their language into common usage and into government strategies which have never have the slightest intention of achieving equality. (Participant G)

Participant G further elaborated:

Because they [the government] never in any way problematize what Link & Philan [...] call the fundamental causes of health inequalities [...] such as inequalities in power, income and wealth, knowledge and what they call beneficial social connections.
But particularly where power - the key root cause, power inequalities and obviously the beneficial social connections that go with power inequalities are concerned - no government or other agency has ever problematized - seriously - those roots of inequality. (Participant G)

Participant H noted that:

[...] the ideas of Marx and Engels have never been so contemporary. That capitalism is leading us to extinction, which is maybe the worst development ever in the history of humanity, is proof of that, and there are quite a few of elements of ecology within Marx that make him realise that resources were not infinite." and "the nuclear threat between warring capitalist powers. This time with the type of arms that will destroy the whole humanity. And undone damages to rights of the dictatorship autocracy, and new right-wing nationalism.

Participant H further elaborated:

So, it's a huge paradox, and anybody who wants to find something to lead us towards more equality must go through [...] the Indigenous movement, the LGBTQ movement. [...] But often they also embrace a political economy that comes from the socialist tradition more than before, or something of that kind. Transcending capitalism [...] is the only hope, and being part of it there's a certain resurgence of unions in different places, like we've seen in the US recently. I find that even if the odds are against, there is still enough activity of resistance and transcending capitalism to envision a possible solution to the problems of extinction to which capitalism's new feudalism are leading us. (Participant H)

Participant I was optimistic "partly because I've been on the planet a while, the people that I'm connected with are around the world, and for instance what's going on in social medicine in Latin America continues to be just amazing." For example, the people who publish in:

> […] a bilingual journal [...] *Social Medicine, Medicina Social* [...] are living their lives dedicated to these efforts. So obviously we're still dealing with the enormously powerful, but very small group, less than 1%, that are responsible for the continuation of social origins [of disease]. But that doesn't mean that the whole world is living like 1%. You don't read about it in the New York Times, but it's actually what's happening. Over the last year, I actually have felt more optimistic than I ever have before. It's hard to interact with these young folks and not feel optimistic because of their tremendous insight [...] I don't feel discouraged at all. There is a possibility of course that the world will end in the way we learn to expect, but in the meantime, there's going to be a lot happening in this other realm. (Participant I)

Participant K discussed two reasons why they felt that evocations of Engels are meeting their expectations. First, because:

> […] it's just an accurate analysis. Once I read Engels and started to think more about it and to read more scholarship that was explicating it, and then I wrote my own, I see the world more clearly than I did before. I have a more accurate grasp of social reality [...] on things that are very morally pressing. (Participant K)

Speaking about two separate but related groups, long COVID sufferers and immunocompromised who are struggling to not get COVID, for whom Participant K "puts stuff out" using the term social murder.

> [...] and people are finding this term and this analysis in various ways, and it's having the effect for them of what it has had for me, of making social reality more comprehensible,

and it's also giving people a common vocabulary to articulate their grievances and to start taking some level of action.

Participant K suggested that it is useful to think of the work of Engels as:

> [...] one tool in the toolbox of those networks, and it's certainly making a contribution, and I think as those movements grow and numerically mature and become more enriched with their own analysis and develop broader repertoires of tactics and action. If this analysis continues to spread, I think it'll continue to do good work. You know, historically movements need a common vocabulary to think together, and they need a common analysis in order to identify what their purpose is and their targets. And I think that's already happening somewhat with the kind of COVID disability rights. (Participant K)

This discussion raised diverse perspectives of participants on whether the teachings and ideas of historical figures like Chadwick, Virchow and Engels are meeting current expectations in the context of health activism, education, and public health. Brazil's Collective Health movement was highlighted as important to learn from, while another interviewee emphasised the educational value of discussing these figures but acknowledged limitations in influencing local public health outcomes. A couple of interviewees discussed the relevance of these figures in specific academic and environmental contexts, cautioning against superficial engagement with their ideas. Where a few others expressed both satisfaction and frustration with the impact of these historical figures on their research and public health discourse, noting that while some progress has been made, significant challenges remain. Another interviewee underscored the contemporary relevance of Marx and Engels, linking their ideas to current global crises, while Participant I remains optimistic about the ongoing efforts in social medicine, particularly in Latin America.

7.10 Filling the Gaps: Other Important Historical Figures

Interviewees consistently emphasised the importance of incorporating diverse perspectives in research and learning from past experiences in public health and epidemiology.

The significance of other historical figures, such as Villermé, Farr, Du Bois Chad, Frank, Rousseau, Bismarck, John Snow, Rosa Luxembourg, Florence Nightingale, Olympe de Goug and more contemporary figures such as Salvador Allende, Silvia Federici, Gro Brundtland, and Paulo Freire were also noted. Below statements exemplify discussions on the importance of drawing from other theoretical backgrounds and knowledge holders:

> It […] can be problematic to only look at those. It's not that we reject them, but rather build on them, so having you know, incorporating some feminist philosophers like Silvia Federici and Indigenous scholar-activists such as Silvia Rivera Cusicanqui […] and many others is absolutely crucial and essential to addressing the just redistribution of resources and power, and really understanding the continuities of the colonial extractive enterprise, which of course intersects intimately with imperialism/capitalism. (Participant A)

> [...] we invoked in a way also other people, there were two very important influences, one was Ivan Illich with his critique of medicine, and of course the whole thinking of Foucault in terms of [...] the negative sides of the public health enterprise. (Participant C)

> But as Dubos would say, a lot of these things that are pathogenic become non-pathogenic, depending on the condition of the host. And that host, I would argue, is rooted in class, racism, and to some extent sexism. (Participant E)

7.11 Chapter Summary

Part three of this study's findings examine how the ideas and thoughts of historical figures Chadwick, Virchow, and Engels around health, approaches to health and reform are represented by contemporary scholars who evoke them. The chapter begins by examining how contemporary scholars evoke the ideas of Chadwick, Virchow, and Engels in their work. Specifically, Chadwick's contributions to sanitation and public health infrastructure, Engels's critique of capitalism and its effects on health, and Virchow's integration of social medicine into public health are all represented differently in modern discussions. Chadwick's ideas often surfaced in conversations about administrative efficiency and the need for public health systems,

while Engels's and Virchow's ideas are evoked in more critical discussions about social determinants of health and the need for systemic change.

Chadwick, Virchow, and Engels contributions are discussed in relation to how each had distinct world views that influenced their approach to health and society. Chadwick's work is said to reflect a conservative perspective that aims to manage health issues within the existing social order, emphasising hygiene and sanitation as tools to prevent social unrest. Engels, on the other hand, is discussed as presenting a critique of the capitalist system, arguing that the structure of society itself – marked by class struggle and exploitation – creates conditions that undermine public health.

Virchow's contributions and medical expertise was discussed together with his progressive understanding of how political conditions shape health, he is highly regarded for his contributions to social medicine, and advocacy for political and social reforms. These differing worldviews are mirrored in contemporary public health discourse. Chadwick's approach is often reflected in reforms around environments, settings, and public health strategies that focus on improving conditions within existing frameworks, while Engels's and Virchow's views are seen in calls for addressing the root causes of health inequities, such as class, power dynamics, and systemic oppression.

The chapter highlights the implications of these differing world views for promoting public health today. Engels's and Virchow's perspectives push for more transformative changes that address the underlying social and economic determinants of health, advocating for a public health approach that disrupts existing power structures. In contrast, Chadwick's approach, while still relevant and is often reflected in current public health approaches, is criticised for maintaining the status quo by addressing "symptoms" of capitalism.

In conclusion, the chapter demonstrates that while all three historical figures have influenced contemporary public health discourse, their ideas are evoked in different ways depending on the context, research areas, and arguments of those evoking them. Engels and Virchow's perspectives are particularly valuable for addressing the root causes of health inequities, making them highly relevant to current efforts to promote health equity in Canada and beyond. Chadwick's contributions, while foundational, are seen as more limited in their ability to address the deeper social and economic determinants of health.

SECTION 4: DISCUSSION, IMPLICATIONS AND CONCLUSIONS

CHAPTER 8:
FROM HISTORICAL INSIGHTS TO CONTEMPORARY HEALTH DISCOURSES

8.1 Introduction

This chapter discusses the findings extracted through historical analysis, the scoping review of contemporary literature, and interviews with scholars who have evoked any of the three historical figures in recent years. The chapter begins by revisiting the study's research questions which were set to explore the relevance and influence of Chadwick, Virchow and Engels on contemporary health discourses, health promotion and health equity, and the distribution of the social determinants of health. Drawing on historical analysis and Derrida's philosophical concepts of spectre and trace, along with critical materialist political economy framework, this chapter synthesises the study's findings to offer a novel understanding of how these historical perspectives continue to inform public health discourses and approaches. By weaving together the threads of historical continuities and discontinuities, this multidisciplinary analysis situated within the fields of history, public health and philosophy offers a new perspective on how historical figures and their spectres continue to influence contemporary discourses around health and means of promoting it. The chapter concludes by discussing study limitations and future research directions.

8.2 Revisiting the Research Problem and Questions

The main focus of this study is to critically examine the contributions of three historical figures in public health, Edwin Chadwick, Rudolf Virchow and Friedrich Engels to contemporary thought. These Victorian-era thinkers are often hailed as the founders of public health and each offers unique insights into the social determinants of health and the structural factors – such as political, economic and social conditions – influencing health outcomes and public health approaches to resolving public health issues. The research problem at the heart of this study is the relevance of their ideas in contemporary public health discourse, particularly in the context of ongoing health inequities and the challenges posed by modern-day neoliberal capitalism. To address study research questions, a bridge between three distinct traditions –

history, philosophy, and health studies – was created. Utilising historical analysis, along with Derrida's philosophical concepts of spectre and trace, and critical materialist political economy of health lens, this research seeks to understand the complex relationship between the past and present, between how meaning is created and reinterpreted, and how social structures passed on to us from those before us continue to shape health, health discourses and public health approaches.

The primary research questions guiding this study are as follows:

1. How are Chadwick, Virchow, and Engels's ideas and thoughts around health and reform represented in contemporary public health discourse?
2. How did their understanding represent their world views concerning the nature of society and its effects upon health? Do these differing world views manifest in contemporary discourse around public health and means of promoting it?
3. What are the implications of these differing world views for promoting public health in the contemporary era? Which are most useful for promoting the health of present-day Canadians?
4. If our goal is promoting health equity by improving quality and equitable distribution of the social determinants of health, through public policy, what does each thinker offer to assist in this task?

By revisiting these research questions, this chapter aims to synthesise the study's main findings, situating them within the broader context of historical and contemporary public health discourse. The goal is to weave the threads of historical continuities and discontinuities and offer a novel understanding of how the ideas of the three historical figures continue to influence and inform current public health discourses, policies, practices and approaches.

This study began with the sensitising concepts which served as a departing point of this inquiry. The sensitising concepts that inform this work are: *At what level – individual, community, or societal – do these historical figures consider health and its determinants?*; *How do these three figures see the nature of society shaped by social, political and economic factors?* And *to what extent do we see the seeds of contemporary approaches for promoting health equity developed by Mantoura and Morrison (2016) of settings and environment, health promoting public policy, and political economy approaches in these earlier writings?* While these concepts

laid the foundation of this study and informed the overall research problem, additional themes and concepts emerged during data collection and analysis such as motivations for evoking historical figures or barriers to action.

8.3 Key Findings and Their Implications

This study explored how the ideas and thoughts of Chadwick, Virchow and Engels concerning health are represented in contemporary public health discourse on the nature of society and inform current public health practices and the promotion of health, and health equity, particularly within the context of improving the working and living conditions of present-day Canadians.

Representation of Historical Ideas in Contemporary Public Health Discourse

The study reveals that the ideas, works, and historical figures themselves continue to hold significant influence in contemporary public health discussions around health promotion, health equity, and the social determinants of health. These thinkers are frequently cited in literature exploring the historical roots of public health, emphasising how their analyses of poverty, working conditions, and social inequality laid the groundwork for modern understandings of health inequalities and health inequity.

Chadwick's work is often referenced in discussions around sanitary reform, environments and setting, public health infrastructure, emphasising his contributions to the development of public health systems that focus on sanitary reforms and interventions, and government responsibility for the health of citizens. However, his approach has also been critiqued for maintaining social order rather than addressing the structural root causes of health inequities. Although for the most part Chadwick was often referred to as a hero or a pioneer in contemporary literature, interviewed scholars highlighted important critiques of Chadwick's approaches which they saw as doing little to promote public health, but rather preserving political, economic and social forms of inequality in favour of the capitalist system.

Virchow's influence is most prominent as was illuminated by the review of literature which gathered twice as many articles as those for Chadwick and Engels. Virchow's influence is present in discussions that merge the fields of medicine, social science, and politics. His dictums of "medicine is a social science" and "physicians are the natural attorneys of the poor"

underscore his belief that health and medicine cannot be separated from social, political, and economic conditions. This idea is frequently referenced in contemporary health scholarship, especially in discussions advocating for political action to address social determinants of health and their distributions. Virchow's status as a medical professional is often used as a credibility check for evoking his ideas in health discussions. This reinforces the dominant ideology that medical professionals, not social scientists are best equipped to deal with health inequities. And although it is hard to critique Virchow's influence, it must be noted that his political advocacy for revolutionary reform was dampened by his exile from Berlin, during which he agreed to not speak out on political matters, but rather focus on medical advancements. One must wonder how Virchow's views and approaches would have changed had he not been silenced through exile.

Engels is mostly referenced for his critique of capitalism and its impact on the health of the working-class population. His analysis of the political economy and the increasingly evoked concept of "social murder" resulting from continued exploitation and oppression of workers continues to resonate in discussions about the social determinants and social determination of health, disability activism, occupational health, critiques of capitalism and ways to move beyond the capitalist economic system. In the literature Engels was not hailed as a hero, but rather used to point out that the same forms of exploitation and oppression from over 170 years ago since his writing of *Condition* exist today. Contemporary scholars that were interviewed were drawn to Engels morals and saw it as an ethical responsibility and a moral obligation to point out the structural issues at the root of health inequities.

World views and their Influence on Contemporary Health Discourses

Chadwick, Virchow, and Engels each brought very distinct world views to their understanding of health and society, consequently influencing the approaches they believed were best suited to address health inequities, promote health, and address the distribution of health determinants. Interestingly, these divergent approaches manifest in contemporary discourse around public health and means of promoting it and fit within the major approaches to health – settings and environments; public policy; and critical political economy – as described by Mantoura and Morrison (2016) which will be discussed in greater detail in the next section.

Chadwick, influenced by Jeremy Bentham's utilitarian philosophy, viewed public health through a utilitarian lens, focusing on technical solutions like sanitation, and management of the

poor to improve health outcomes. His world view was rooted in a belief of administrative efficiency and the power of government intervention in improving public health. He saw sanitary reform as a way to maintain social order and prevent disease, reflecting a conservative perspective that aimed to manage health inequalities within existing social structures. His reforms of the Poor Law had severe consequences for the poorest members of Victorian society and have been compared to the approaches used by the contemporary liberal state governments in the provision of social welfare and disability benefits. A number of interviewed contemporary scholars noted that our system is more Chadwickian than it should be.

Virchow's world view was shaped by his upbringing in Prussia which was characterised by rigid social class structures, a bureaucratic state and a period of poor harvests called the "hungry forties" about which Virchow remarked that "a harvest too can be a political event" (McNeely, 2002, p. 13). Virchow's exposure to social issues such as poverty, hunger, and the general decline of the health of the working-class populations had a significant influence on his understanding of the relationship between medicine and politics.

Furthermore, his participation in the 1848-49 uprising helped fuel his quest for political reform and the development of principles associated with classical liberalism, i.e., embracing democracy, pluralism, rational education, secularism, and other liberal values (McNeely, 2002). Virchow's liberalism was intertwined with his medical views rooted in empirical analysis. He believed that a liberal state should empower individuals and ensure well-being of the working-class through individual freedoms. As such, Virchow's liberal ideology was based on a balance between state interventions and preservation of individual liberties, constituting a moderate yet progressive approach to reform which would avoid revolutionary upheavals that could destabilise society. However, Virchow's left leaning liberalism and belief in democracy was uncommon for his time. Evoking Virchow without acknowledging the limitations – then and now – of liberalism may be problematic, because true democracy was not, and still is not, the main component of liberal ideology which prioritises political and economic free-market ideology rather than the meeting of social needs (Freeden, 2015; Harvey, 2007; Macpherson, 1964/1992).

Limited by the threat of becoming a political pariah in Prussia, Virchow advocated for progressive social and political reforms as essential to improving public health. In contemporary health discourses, Virchow is hailed a hero. He is regarded for his contributions by social

scientists (whether they fall within the critical or non-critical tradition), medical professionals, and politicians. Virchow's belief in progressive policy reform and preservation of individual freedoms is embodied by most contemporary scholars who advocate for health promoting public policies. Most interviewees, even though subscribing to a Marxists analysis of the distribution of the social determinants of health would also subscribe to much of Virchow's vision of society.

Engels's world view was shaped by an early introduction to Hegel's dialectical process, which he and Marx built on to create their framework on historical materialism. Engels was also significantly influenced by the ideas and thoughts of Marx. Engels's concerns emphasised the role of capitalist modes of production and worker exploitation in creating socio-economic inequalities and poor health outcomes for the working-class. Engels's world view helped build the foundation for social justice, worker emancipation, and human rights among other movements. His critique of capitalism supports contemporary approaches that seek structural changes, which some contemporary scholars believe to be needed to move our society beyond capitalism. Thus, his work stretches far beyond health discourses, rather it helps root critical health discourses that seek change beyond band-aid public health reforms and solutions.

The presence of these differing world views in contemporary discourses highlights the ongoing relevance of historical debates about the causes of health inequities and the most effective means of promoting public health. Understanding these world views allows public health professionals to draw from a diverse range of strategies, depending on their own world view, understanding of reality and solutions they deem best fit to address health issues.

Implications for Promoting Public Health in the Contemporary Era

The implications for promoting public health in the contemporary era are significantly different for each of the historical figures and their approaches to improving health fall within three distinct pathways described by Mantoura and Morrison (2016). Chadwick's approach supports the continued development of public health infrastructure focusing on settings and environment strategies led by the government. Engels's critique of capitalism suggests that addressing economic inequities is critical for improving health outcomes, creating a worker led coalitions, governance and solidarity economies, thus situating him within the critical political economy tradition. Virchow's advocacy for political reform and social medicine underlines the

importance of integrating social justice into health approaches, situating him within a progressive policy reform tradition.

Chadwick's focus on setting and environments is reflected in the settings model (Mantoura & Morrison, 2016), which ignores issues of redistribution of resources needed for health or the social structures that shape them. This model directs attention away from the processes and structures that threaten health, and promotes a depoliticised view of health, reinforcing individualism, lifestyle factors and environments as key to good health, while vailing the oppressive and exploitative nature of capitalism.

Virchow's advocacy for political and social reforms to address health inequalities continues to guide approaches that highlight the importance of social determinants of health. His focus on progressive reform situates him within the policy reform approaches described by Mantoura and Morrison (2016). Virchow is embraced by both mainstream and critical scholars, however some point out that his approach diverts attention away from the oppressive structure of contemporary capitalism. Considering the worsening state of health inequities, and the growing gap between the very rich and very poor, Virchow's approach may not be sufficient to overcome systemic oppression and exploitation of the neoliberal capitalist order.

Engels, by far the most critical scholar of the three historical figures, explicitly called for an end to capitalism and its modes of production. According to Mantoura and Morrison's (2016) framework, Engels would be situated within the critical political economy approaches. The sheer fact that negative health outcomes continue to disproportionately affect the working-class population is a sobering reminder that capitalism – as is or as was – is not good for the health of the working-class people. However as in the past this approach continues to be marginalised, especially within mainstream discourses. Some contemporary scholars who are "not afraid" to challenge capitalism fear repercussions, others have discussed using more palatable terms and concepts, while some see challenges to capitalism happening on the ground - however unpublicised they may be in the mainstream media and dominant health discourses.

Promoting Health Equity Through Public Policy

If the goal is to promote health equity by improving the quality and equitable distribution of the social determinants of health through public policy, based on the discussion so far it is fair to say that Chadwick's approach is least likely to produce meaningful change. As discussed by

one of the interviewees Chadwick can be useful in priority setting or addressing the midstream health issues, if the priority is to *improve* the quality and distributions of health determinants. The same can be said for Virchow's reformist approach, which is more aggressive than Chadwick's, but it would not address the root cause of the health inequity or the inequitable distribution of the social determinants of health. However, if the goal is to *eliminate* health inequities, and inequitable distributions of the social determinants of health then Engels's approach serves as the only viable solution to end exploitation and oppression under capitalism. In hindsight, it would have been useful to reframe this research question away from a passive language of improving to a more direct language of eliminating.

Achieving Health Equity in Liberal Democracies

Fundamentally, the liberal state system is designed to protect and promote a competitive free market where individuals are seen as owners of their labour who compete with each other to maximite economic, social and political gains and power (Townsend, 2019). While competition is meant to protect individual freedoms, in reality it reinforces inequalities and limits social solidarity and cooperation (Macpherson, 1964/1992). The liberal democracy as a system that stems from or is a "franchise" of the liberal state, is a system that is meant to maintain the power dynamics essential to a capitalist market society.

Of the three historical figures, Engels's critique of the capitalist system of production and labour relations between the working and the capitalist class shows that capitalism fundamentally changes the social determinants of health by concentrating wealth and power among a few select individuals, leading towards an analysis of social determination of health versus social determinants.

Although all three historical figures were critical of the government and health systems of their time, Chadwick's conservative and liberal ideologies did not seek to challenge relations of power or exploitation inherent to the liberal state itself, rather his ideologies confined him to address environments and settings within which oppression and exploitation took place. Chadwick like many contemporaries of his time would not support a truly democratic rule where the common people – the plebeians rule, for him as a "man of learning and substance" this was not acceptable (Macpherson, 1964/1992, p. 7). Virchow's liberalism grounded in key liberal tenets of democracy, education, secularism, individual liberty and pluralism led him to advocate

for empowerment of the working-class through political reforms. Additionally, Virchow had not only many issues to raise in Prussia regarding basic tenets of liberalism that were lacking but also had room to suggest ways to reduce their harmful effects. The situation, in 21st century Canada and elsewhere suggest that while basic rights that Virchow raised regarding free speech, democratic elections, and education among others have at face value been addressed, the ability to address social inequalities that were available to Virchow seem at times to be very much reduced in the contemporary phase of the neoliberal capitalism. Engels, of course, saw the inherent inequalities of the liberal democratic state, and pointed towards the very essence that makes the liberal state – competition and inherent inequality – as the culprit of early mortality and ill health among the working-class. Engels describes the competition among the working-class as the catalyst of deepening social division, exploitation, and the further weakening and fragmenting of collective worker solidarity. This division ultimately benefited the capitalist class by maintaining a social divide among and between workers.

A critical materialist political economy perspective lands a useful lens in understanding how health equity, social determinants of health, and health promotion can or cannot be achieved in a liberal democratic state. Macpherson's critique of the liberal state underscored the need to critically analyse political, economic and social structures that shape health. The ideological tenets of liberalism which promote individual liberties, and protection of private property – are so appealing – that even the most progressive public health pioneers like Virchow do not account for how these ideologies end up serving the interests of the capitalist class. Thus, health equity remains an elusive hope – promoted by most and co-opted by those in power – may be unachievable within a system built on the principles of competition, exploitation and inequality. As such, public health, health promotion, and the redistribution of the social determinants of health cannot be realised without an analysis of the impact of political economy on health and its determinants.

The influence of the new version of liberal democracy, neoliberalism, on health has been documented as exacerbating health inequities and further aggravating the health threatening effects of the capitalist system on the working-class (Bryant & Raphael, 2020; Labonte & Stuckler, 2016; Navarro, 2020; Schrecker, 2016). To this day reforms concentrated on commodity prices, company behaviours, and improvement of living conditions (Friel et al., 2024) continue to dominate mainstream health discourses as the way forward, however these do

not account for a system built on inequality and exploitation. The very system that is meant to allow individuals to compete on "equal terms" is an illusion because, according to Macpherson (1964/1992), it is meant to protect those with power and capital, while providing no pathways for equality or equity in distribution of resources needed for health, health promotion, and health equity.

8.4 Interpreting Study Results: Insights and Implications

The Spectral Presence of Historical Figures in Contemporary Health Discourse

Derrida's concepts of spectre and trace illuminate how the past informs the present and future of public health discourse. The analysis of Chadwick, Virchow's and Engels's contributions to public health through the lens of Derrida's concepts illustrates how these historical figures for better or for worse, continue to influence contemporary public health discourses. The spectral presence of these historical figures in contemporary health literature reminds us that the fundamental challenges – the social, economic, and political structures shaping population health – remain deeply entrenched in our society and addressing them is just as challenging and important as it was two centuries ago.

These figures, although long gone, exert a ghostly influence, shaping how we understand and address health equity, health promotion, and the distribution of the social determinants of health today. Derrida's concept of hauntology, which suggests that the past continuously haunts the present, is evident in contemporary literature and scholarly perspectives. The three historical figures' thoughts on sanitation, social programs, social determinants, and the political, economic and social transformation continue to be evoked in current debates and will do so for an unforeseeable future, or for as long as change is needed.

To understand the meaning that academics ascribe to these historical figures, their ideas and works, a conversation needed to be had. Although participants often raised similar points, their understanding of the historical figures' works was based on the context within which the scholars conduct their work, underscoring the importance of context, time, space and place. Moreover, individual interpretations of each thinker's ideas were evident in participant responses which were quite divergent at times, for example in discussion of critiques of Chadwick's work, or the reformist ideas of Virchow.

Derrida suggested that spectres appear during times of great injustice – when time is out of joint. Considering the contemporary issues facing our species such as the looming environmental catastrophe (Carroll, 2021), the possibility of increasing armed global conflicts, growing inequality (Das, 2022; Raphael & Bryant, 2022; 2023), and the morphing of neoliberal capitalism into techno-feudalism (Muntaner & Benach, 2024), it is fair to say that time is really out of joint. As such the three historical spectres continue to be evoked through contemporary literary traces of their textual legacies. Interestingly and perhaps not surprisingly, the ideas of Engels and Virchow are more prominent than they were two decades ago, whereas Chadwick's work, although relevant, has shown to be less prominent in recent years. To me this speaks to the growing societal distress, and the need of academics to refer to the works of past thinkers to understand how we got here, and what we need to do to survive.

Implications for Promoting Health Equity

The study's findings suggest that contemporary approaches to health as outlined by Mantoura and Morrison (2016), are traces of past discourses which offer frameworks for addressing the distributions of the social determinants of health. To promote health equity in contemporary society, particularly within the context of improving the living and working conditions of present-day Canadians, it is essential to remove the barriers to meaningful action. Some of the barriers identified in interviews are: entrenched corporate power, capitalist interests, social power structures or existing hierarchies, hegemonic ideologies, influence of big business, the economic system, social institutions that reinforce the current power structures, media, and capital or money. To mitigate these harmful barriers to health equity, addressing settings and environments will definitely not suffice, trying progressive political reform might yield some progress but it will not eliminate health inequities, suggesting that the only viable approach to removing barriers to health inequities lies in worker emancipation and coalition, and moving beyond capitalism towards a fair, just and equitable political, social and economic system.

The Role of Historical Consciousness in Public Health

By evoking Derrida's concept of the trace, the study highlights how the ideas of Chadwick, Virchow, and Engels persist in public health discourses, influencing both theory and approaches to health inequalities, and the distribution of the social determinants of health. These

traces represent the lingering influence of their thoughts, which continue to shape how public health is understood and health issues addressed. The presence of these traces and the spectres themselves in contemporary discourse calls for a critical engagement with history, acknowledging how past ideas continue to inform present and future discussions on health equity, health promotion, and the distribution of the social determinants of health. As such historical consciousness and awareness is critical for developing an understanding of public health, health determinants, health equity and means of promoting health. By following the textual traces left by Chadwick, Virchow, and Engels in contemporary health discourses, public health professionals can better understand the complexity of health challenges and develop approaches that are informed by both historical insights and contemporary conditions. Sadly, as one of the informants stated, those on the left will read Engels, some within public health might as well, but those within public policy will likely not be exposed to his ideas. This is similar to the way that another participant described the fact that Virchow's work in social medicine, in which he was and continues to be monumental, has very limited presence in spaces that honour his work.

Motivations and Evocations: History, Health, and the Continued Struggle for Equity in a Liberal State

For many interview participants the key motivations for evoking Chadwick, Virchow and Engels included a desire to establish historical continuity, as well as paying homage to ideological forbearers, and providing foundational history in public health and epidemiology.

Another key motivation for scholars evoking these historical figures was to highlight how each of them offered very different solutions to issues such as poverty, working and living conditions, food insecurity, and access to clean water and sanitation, many issues which continue to haunt working-class communities today. Chadwick's authority in sanitation and work on the establishment of the very first Public Health Act was mentioned as the most frequent reason for evocation. However, scholars also critiqued Chadwick's approaches for being complicit with the exploitations inherent to the liberal state. Virchow, on the other hand, was often evoked because of his tremendous medical achievements and expertise, coupled with lauded support for democracy and education. Virchow's progressive perspective on liberalism made him an outlier in his time, and a hero in ours. By appealing to both mainstream and critical medical audiences,

Virchow's legacy continues to be a bridge between mainstream biomedical and more progressive approaches to public health and policy.

Contemporary scholars referred to Engels, in particular, to demonstrate that systemic oppressions and exploitation of the working-class as deeply embedded in the very fabric of capitalism and can only be addressed through transformation of the political and economic order. Interviewed scholars emphasized that advocacy and resistance efforts are rooted in the historical writings of Engels, and especially Marx, and serve as a moral compass and an ethical framework for thinking about exploitation and oppression of the working-class. One participant discussed how Engels fueled their moral and political imagination when thinking about workplace injury and disability.

Although anger arousal was not discussed by interview participants, it has been documented as a possible strategy to engage the broader population in the struggle against capitalist oppression (Raphael et al., 2023). The poor working and living conditions that perpetuate harm and health inequities among the working-class remain ongoing, while those in positions of power continue to exploit political, economic and social systems for their own benefit.

Perhaps reference to these historical figures and their works can also serve as a "distancing", "alienation" or "making strange" effect used by Bertolt Brecht (1898-1956) to highlight how "societal superstructures and disparities in power - all rooted in a specific social order and stage in history - make injustices and inequalities appear to be part of the natural state of affairs." (Kumagai et al., 2014, p. 973). Brecht used the alienation effect to promote a reflection, questioning and a critical gaze in his audiences in order to open a dialogue about taken-for-granted assumptions or perspectives, and to inspire social change. By challenging our taken-for-granted perceptions, we can escape the poverty of imagination imposed on us by the superstructure, while discovering new ways of thinking and perceiving the world, ourselves, and others, and expanding our moral and political imaginations.

8.5 Addressing Study Limitations

While this study provides valuable insights into the enduring influence of Chadwick, Virchow and Engels on contemporary public health discourses, it is important to acknowledge the limitations that have shaped the scope and findings of this research. These limitations are

inherent in the methodological approaches, theoretical frameworks, and contextual boundaries within which the study was conducted.

One of the primary limitations of this study lies in the historical and contextual differences between the Victorian-era and the present day. Although Chadwick, Virchow, and Engels's ideas remain influential, their work was deeply rooted in the specific socio-political and economic contexts of the 19th century. The study attempts to bridge these historical contexts with contemporary public health discourse, however, the transposition of these ideas across time periods may not fully capture the nuances of their original intentions or the complexities of current health challenges. As such, the study's reliance on historical figures from the past introduces a degree of interpretative subjectivity when applying their ideas to contemporary contexts.

A methodological limitation of this research is that it employs qualitative research techniques, which utilise triangulation of methods and data derived through historical analysis, a scoping literature review, and in-depth interviews. While these methods provide a rich, multifaceted understanding of the subject, they also introduce certain limitations. For instance, historical analysis depends on the availability and interpretation of historical documents, which may be influenced by past as well as my own bias. Similarly, the scoping literature review, though comprehensive, is constrained by the selection of specific journals potentially overlooking other relevant literature. Additionally, the interviews, while insightful, represent the perspectives of a very select group of academics, which may not capture the broader view of the public health community.

Additionally, the study's use of Derrida's concepts of spectre and trace provides a novel lens for understanding the influence of historical figures in contemporary discourse. However, the application of these complex philosophical concepts to public health may not resonate with all readers, particularly those less familiar with postmodern and deconstructive theories. The abstract nature of these concepts might limit their application in developing public health policies or interventions.

Lastly, the scope of the study, while intentionally focused on the legacies of important public health figures, Chadwick, Virchow, and Engels, excludes other significant historical individuals and contemporary voices in public health, as was mentioned by study informants.

This focus may limit the study's ability to fully capture the diversity of thought and practice in the field.

Nonetheless, it is important to recognize that this study serves as a stepping stone for further research upon the influence of Victorian-era public health figures on contemporary discourse.

8.6 Recommendations for Future Research Directions

Despite study limitations discussed above, the study provides valuable insights into the spectral legacy of Chadwick, Virchow and Engels on contemporary public health, health equity, and health determinants discourse. Thus, building on the findings and limitations of this study, several pathways for future research can be recommended in order to expand our understanding of the influence of historical ideas on contemporary public health discourse.

It is possible to build on the findings of this study by expanding the historical scope to include voices, like those of women, Indigenous knowledge keepers, Black scholars, and those from other backgrounds. Additionally, exploring broader scholarly perspectives by extending the literature review to major health databases, and gathering perspectives from a wider academic community may assist in tracing the continuities and discontinuities of spectral figures and their legacies. Lastly, it would be interesting to examine the practical application of Derrida's philosophical concepts in health studies.

8.7 Conclusions and Final Reflections

It is without a doubt that historical perspectives continue to shape modern public health discourses. The ideas of Chadwick, Virchow, and Engels remain relevant, and continue to be evoked in contemporary contexts. The reverberations of the ideas of these past thinkers continue to echo within the corridors of contemporary public health, manifesting both overtly and subtly across policies, academic discourse, and health approaches. Their contributions, though rooted in the 19th century, have shown to transcend temporal boundaries, shaping modern understandings of health determinants, health equity, and the role of societal structures in influencing health outcomes. Historical analysis can serve as a mirror, reflecting the evolution of ideas, the successes and failures of past interventions, and the socio-political contexts that have shaped health outcomes over time.

Engaging with the past offers more than mere academic exercise, it provides a rich tapestry of insights, cautionary tales, and foundational principles that inform contemporary approaches to health equity, health promotion, and the distribution of the social determinants of health. Engaging with the past can also be traumatic, and we must be aware of the histories which lay forgotten – the histories of Indigenous cultures, Black activists, people of colour, and histories of women as well as those from other groups. The newest generations are cautious about speaking to spectres who are "white" and precede our time because their ideas and thinking are often viewed as irrelevant or inapplicable to contemporary challenges faced by Indigenous communities, communities of colour, or those of diverse genders and sexualities, among others.

However, this study illuminates the need for a *critical* historical awareness in public health, health policy, and the need for carrying on an *informed and critical* dialogue between the past and present. This study demonstrates that although it may be challenging to marry distinct disciplines such as philosophy, public health and history, it is also fruitful to build bridges that have not been constructed before. This interdisciplinary lens offers new perspectives on how spectral figures and their ideas influence contemporary health discourses, and it may be what is needed to understand what it is we, as a society, and public health scholars need to do when time is out of joint.

While the ideas of Chadwick, Virchow, and Engels provide valuable guidance, they must be critically examined to understand their relevance to contemporary and future challenges. The legacies of these historical spectres continue to haunt public health, because each one of them speaks to the present day thinkers on ways we can reduce health inequalities and create a society where health equity is not simply addressed on paper – as described by Virchow in a letter to his father – but becomes part of revolutionising the systems that creates health inequalities and untimely death among the working-class.

8.8 Chapter Summary

In conclusion, this chapter illustrates the lasting impact of Chadwick, Virchow and Engels on contemporary public health discourses, highlighting the ways in which their ideas continue to inform and shape current approaches to health equity, health promotion, and the social determinants of health. Through the application of historical analysis, Derrida's

philosophical concepts of spectre and trace, and a critical materialist political economy perspective, the study reveals that the ideas of the three Victorian-era thinkers are not just historical artefacts that belong behind a glass pane in a museum, but active traces that continue to influence modern public health approaches, health promotion efforts and pathways for the distribution of the social determinants of health.

The chapter demonstrates that while Chadwick's utilitarian approach to sanitation and public health infrastructure still finds resonance in discussions about government-led health interventions, it is increasingly critiqued for its failure to address the deeper social inequalities that underpin health inequities. Engels's critique of capitalism remains highly relevant in critiques of the systemic economic, political and social forces that perpetuate health inequities, particularly among the working-class. Virchow's integration of social reform with medical practice continues to guide contemporary efforts to address health inequities through political and social action, though his influence is often seen through the lens of medical authority, potentially overshadowing the broader social implications of his work.

The differing world views of these historical figures provide diverse pathways for addressing contemporary public health challenges, from settings and environment improvements to political and economic restructuring, and progressive political reform. The chapter argues that while each thinker offers valuable insights, Engels's critique of capitalism may offer the most useful framework for addressing the root causes of health inequities in the contemporary era of unbridled neoliberal capitalism.

References

Acheson, D. (1998). *Independent inquiry into inequalities in health report*. The UK Stationery Office.

Ackerknecht, E. (1953). *Rudolf Virchow: Doctor, statesman, anthropologist*. Stratford Press.

Ackerknecht, E. H. (2016). *A short history of medicine*. JHU Press.

Aggleton, P. (1990). *Health*. Psychology Press.

Alderson, P. (2021). "Health and illness research: value-free or value-laden?". In P. Alderson (Ed.), *Critical realism for health and illness research* (pp. 95-126). Bristol Policy Press.

Archiv fiir pathologische Anatomie und Physiologic und fiir Klinische Medizin (known since 1903 as *Virchow's Archiv*), vol. CLXVII (1902), pp. 182

Arias Valencia, M. M. (2022). Principles, scope, and limitations of methodological triangulation. *Investigacion y Educacion en Enfermeria, 40*(2).

Arias, E., Tejada-Vera, B., Kochanek, K. D., & Ahmad, F. B. (2022). Provisional life expectancy estimates for 2021. *Centres for Disease Control*. Retrieved from https://stacks.cdc.gov/view/cdc/118999.

Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology*, *8*(1), 19-32.

Armstrong, P., Armstrong, H., & Coburn, D. (2001). *Unhealthy times: Political economy perspectives on health and care*. Oxford University Press.

Ashton, T. S. (1948). *The Industrial Revolution, 1760-1830*. Oxford University Press.

Atlas.it. (2024). *White paper data security and privacy compliance*. Retrieved from https://atlasti.com/legal/atlas-ti-web-white-paper-gdpr

Bambra, C. (2011a). Health inequalities and welfare state regimes: Theoretical insights on a public health 'puzzle'. *Journal of Epidemiology and Community Health, 65*(9), 740-745.

Bambra, C. (2011b). Work, worklessness and the political economy of health inequalities. *Journal of Epidemiology & Community Health, 65*(9), 746-750.

Bambra, C., Smith, K. E., Garthwaite, K., Joyce, K. E., & Hunter, D. J. (2011). A labour of Sisyphus? Public policy and health inequalities research from the Black and Acheson Reports to the Marmot Review. *Journal of Epidemiology and Community Health, 65*(5), 399-406.

Battersby, S. (2017). Duncan of Liverpool: The first Medical Officer of Health. In J. Stewart (Ed.), *Pioneers in Public Health* (pp. 56-65). Routledge.

Baquero, O. S. (2021). One health of peripheries: biopolitics, social determination, and field of praxis. *Frontiers in Public Health*, *9*, 617003.

Bayoumi, A.M., Guta, A. (2012). Values and social epidemiologic research. In O'Campo, P., Dunn, J. (Eds.), *Rethinking Social Epidemiology* (pp. 43-65). Springer.

Baum, F. E., Bégin, M., Houweling, T. A., & Taylor, S. (2009). Changes not for the fainthearted: reorienting health care systems toward health equity through action on the social determinants of health. *American Journal of Public Health, 99*(11), 1967-1974.

Becker, A., Al Ju'beh, K., & Watt, G. (2009). Keys to health: Justice, sovereignty, and self-determination. *The Lancet, 373*(9668), 985-987.

Berggren, K. (2014). Sticky masculinity: Post-structuralism, phenomenology and subjectivity in critical studies on men. *Men and Masculinities, 17*(3), 231-252.

Benach, J. (2021). We must take advantage of this pandemic to make a radical social change: The coronavirus as a global health, inequality, and eco-social problem. *International Journal of Health Services, 51*(1), 50-54.

Bentley, M. (1997). *Companion to historiography*. Routledge.

Bernard, H. R. (2013). *Social research methods* (2nd ed.). Sage Publications.

Berridge, V. (1999). History in public health: A new development for history? *Hygiea Internationalis, 1*(1), 23-35.

Bezruchka S. (2012). The hurrider I go the behinder I get: The deteriorating international ranking of U.S. health status. *Annual Review of Public Health, 33*, 157–173.https://doi.org/10.1146/annurev-publhealth-031811-124649

Bezruchka, S. (2022). *Inequality kills us all: COVID-19's health lessons for the world*. Routledge.

Bhandari, S., Thomassen, Ø., & Nathan, R. (2022). Causation, historiographic approaches and the investigation of serious adverse incidents in mental health settings. *Health*, 27(6), 1019-1032.

Birn, A. E. (2005). Gates's grandest challenge: Transcending technology as public health ideology. *The Lancet, 366*(9484), 514-519.

Birt, L., Scott, S., Cavers, D., Campbell, C., & Walter, F. (2016). Member checking: A tool to enhance trustworthiness or merely a nod to validation?. *Qualitative Health Research*, *26*(13), 1802-1811.

Black, J. (2009). *War in the nineteenth century: 1800-1914* (Vol. 1). Polity Press.

Blaxter, M. (2010). *Health*. Polity Press.

Bloy, M. (2000). Edwin Chadwick 1800-1890. *The Victorian Web.* Retrieved from https://victorianweb.org/history/chad1.html

Borras, A. M. (2021). Toward an intersectional approach to health justice. *International Journal of Health Services, 51*(2), 206-225.

Borras, A. M. (2023). The Challenge of exposing and ending health inequalities through social and policy change: Canadian experiences. *International Journal of Social Determinants of Health and Health Services, 53*(2), 130-145.

Bowen, G. A. (2006). Grounded theory and sensitizing concepts. *International Journal of Qualitative Methods, 5*(3), 12–23. https://doi.org/10.1177/1609406906005003

Bowleg, L. (2017). Towards a critical health equity research stance: Why epistemology and methodology matter more than qualitative methods. *Health Education & Behavior*, *44*(5), 677-684.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101.

Braveman, P. (2006). Health disparities and health equity: Concepts and measurement. *Annual Review of Public Health*, *27*(1), 167-194.

Braveman, P. (2014). What are health disparities and health equity? We need to be clear. *Public Health Reports, 129*(2), 5-8.

Braveman, P., & Gruskin, S. (2003). Defining equity in health. *Journal of Epidemiology & Community Health*, *57*(4), 254-258.

Breilh, J. (2021). *Critical epidemiology and the people's health*. Oxford University Press

Brock, T., D. (1843/1988). *Robert Koch. A life in medicine and bacteriology*. American Society for Microbiology.

Brown, T. M., & Fee, E. (2006). Rudolf Carl Virchow: Medical scientist, social reformer, role model. *American Journal of Public Health*, *96*(12), 2104-2105.

Brown, P., Lyson, M., & Jenkins, T. (2011). From diagnosis to social diagnosis. *Social Science & Medicine, 73*(6), 939-943.

Bryant, T. (2013). Policy change and the social determinants of health. In M. Hajer & H. Wagenaar (Eds.), *Health promotion and the policy process* (pp. 63-81). Sage Publications.

Bryant, T. (2015a). Implications of public policy change models for addressing income-related health inequalities. *Canadian Public Policy, 41*(Supplement 2), S10-S16.

Bryant, T. (2015b). Parameters of public policy change. *International Journal of Child, Youth and Family Studies, 6*(2), 295-307.

Bryant, T. (2016). *Health policy in Canada* (2nd ed.). Canadian Scholars' Press.

Bryant, T., Raphael, D., Schrecker, T., & Labonte, R. (2011). Canada: A land of missed opportunity for addressing the social determinants of health. *Health Policy, 101*(1), 44-58.

Bryant, T., & Raphael, D. (2020). *The politics of health in the Canadian welfare state*. Canadian Scholars' Press.

Bryant, T., & Raphael, D. (2023). The modern welfare state and the post-pandemic world. In *Post-Pandemic Welfare and Social Work* (pp. 28-38). Routledge.

Cameron, R. (1982). The industrial revolution: A misnomer. *The History Teacher, 15*(3), 377-384.

Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council. (2018). *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans*.

Cassidy, C., Goldberg, L., & Aston, M. (2016). The application of a feminist post-structural framework in nursing practice for addressing young women's sexual health. *Journal of Clinical Nursing*, *25*(15-16), 2378-2386.

Carpenter, M. W. (2009). *Health, medicine, and society in Victorian England*. Bloomsbury Publishing

Carroll, W. K. (Ed.). (2021). *Regime of obstruction: How corporate power blocks energy democracy*. Athabasca University Press.

Carter, E. D. (2023). *In pursuit of health equity: A history of Latin American social medicine*. UNC Press Books.

Carter, N., Bryant-Lukosius, D., DiCenso, A., Blythe, J., & Neville, A. J. (2014). The use of triangulation in qualitative research. *Oncology Nursing Forum*, *41*(5), 545-547.

Chadderton, C. (2013). Towards a research framework for race in education: Critical race theory and Judith Butler. *International Journal of Qualitative Studies in Education*, *26*(1), 39-55.

Chadwick, E. (1843). *Report on the sanitary conditions of the labouring population of Great Britain: A supplementary report on the results of a special inquiry into the practice of interment in towns. Made at the request of Her Majesty's principal secretary of state for the Home department.* W. Clowes and Sons.

Charmaz K. (2003). Grounded theory: Objectivist and constructivist methods. In Denzin N. K., Lincoln Y. S. (Eds.), *Strategies for qualitative inquiry* (2nd ed., pp. 249–291). Sage.

Chaufan, C., & Saliba, D. (2019). The global diabetes epidemic and the nonprofit state corporate complex: Equity implications of discourses, research agendas, and policy recommendations of diabetes nonprofit organizations. *Social Science & Medicine, 223*, 77-88.

Chernomas, R., & Hudson, I. (2010). Inequality as a cause of social murder. *International Journal of Health Services, 40*(1), 61-78.

Chernomas, R., Hudson, I., & Chernomas, G. (2018). Can neoliberal capitalism affect human evolution? *International Journal of Health Services, 48*(1), 166-188.

Chilton, M., & Jones, S. (2020). The rights of nature and the future of public health. *American Journal of Public Health, 110(*4), 459-460.

Crinson, I., & Yuill, C. (2008). What can alienation theory contribute to an understanding of social inequalities in health? *International Journal of Health Services, 38*(3), 455-470.

Coburn, D. (2000a). Phases of capitalism, welfare states, medical dominance, and health care in Ontario. *International Journal of Health Services, 29*(4), 833-851.

Coburn, D. (2010). Health and health care: A political economy perspective. In T. Bryant, D. Raphael, & M. Rioux (Eds.), *Staying alive: Critical perspectives on health, illness, and health care* (2nd ed., pp. 59-84). Canadian Scholars' Press.

Cohen, D., & Crabtree, B. (2006). *Qualitative research guidelines project*. Red Wood Johnson Foundation.

Colditz, G. A. (2001). Cancer culture: epidemics, human behavior, and the dubious search for new risk factors. *American Journal of Public Health, 91*(3), 357.

Connor J. T. H. (1999). Medicine and management in modern warfare: An introduction. In R. Cooter, M. Harrison, & S. Sturdy (Eds.), *Medicine and Modern Warfare* (pp. 29-58). Rodopi Press.

Cooper, R. S., Ordunez, P., Iraola Ferrer, M. D., Munoz, J. L. B., & Espinosa-Brito, A. (2006). Cardiovascular disease and associated risk factors in Cuba: prospects for prevention and control. *American Journal of Public Health, 96*(1), 94-101.

Corbett, S. (1999). Public health and social justice in the age of Chadwick Britain 1800–1854. *Health Promotion International, 14*(4), 381-382.

Côté, D., & Raynault, M. (2013). *Scandinavian common sense: Policies to tackle social inequalities in health*. Baraka Books of Montreal.

Costa, D. M., & Magalhães, R. (2020). Evaluation of health programs, strategies, and actions: a dialogue with critical realism. *Saúde em Debate, 43*, 189-203.

Cranston, M. (1991). *Jean-Jacques: the early life and work of Jean-Jacques Rousseau, 1712-1754*. University of Chicago Press.

Creaven, S. (2003). Materialism, realism and dialectics. In S. Creaven (Ed.), *Critical realism and Marxism* (pp. 131-154). Routledge.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage Publications.

Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage Publications.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage Publications.

Creswell, J., & Plano, C. (2011). *Designing and conducting mixed method research* (2nd ed.). Sage Publications.

Creswell, J. W., & Poth, C. N. (2016). *Qualitative inquiry and research design: Choosing among five approaches*. Sage Publications.

Cunningham, F. (2020). Interview with CB Macpherson on the Covid-19 Pandemic. *The Socialist Project*. Available at: https://socialiststudies.com/index.php/sss/article/view/27304

de Camargo Jr, K. R. (2009). A hard rain's a-gonna fall. *American Journal of Public Health, 99*(10), 1735-1735.

De Maio, F. (2010). From Engels and Virchow to Wilkinson: An analysis of research on health inequities. *Radical Statistics, 101*, 3-9.

De Maio, F., & Ansell, D. (2018). "As natural as the air around us": On the origin and development of the concept of structural violence in health research. *International Journal of Health Services, 48*(4), 749-759.

Dahlgren, G., & Whitehead, M. (1991). *Policies and strategies to promote social equality in health.* Institute of Future Studies.

Dangerfield, K. (2023). Life expectancy in Canada fell for the 3rd year in a row. What's happening?. Global News, November 27. Retrieved from https://globalnews.ca/news/10116838/life-expectancy-decrease-canada-stat-can/

Das, R. J. (2022). *Marx's Capital, Capitalism and Limits to the State: Theoretical Considerations*. Routledge.

Davis, C. (2005). Hauntology, spectres and phantoms. *French Studies, 59*(3), 373-379.

Davies, S. C., Winpenny, E., Ball, S., Fowler, T., Rubin, J., & Nolte, E. (2014). For debate: a new wave in public health improvement. *The Lancet, 384*(9957), 1889-1895.

Denzin, N. (1970). *The research act in sociology*. Aldine.

Denzin, N. K., & Lincoln, Y. S. (Eds.). (2011). *The Sage handbook of qualitative research*. Sage Publications.

Derrida, J. (1982). *Différance*. In J. Thompson (Ed.), *Twentieth Century Theories of Art* (pp. 467-469). McGill-Queen's University

Derrida, J. (1988). *Limited Inc*. Northwestern University Press.

Derrida, J. (1994/2012). *Specters of Marx: The state of the debt, the work of mourning and the new international*. Routledge.

Derrida, J. (2016). *Of grammatology*. John Hopkin's University Press.

Dissmann, W., & de Ridder, M. (2002). The soft science of German cardiology. *The Lancet, 359*(9322), 2027-2029.

Donohoe, M. (2003). Causes and health consequences of environmental degradation and social injustice. *Social Science & Medicine, 56*(3), 573-587.

Doyle, L., & Pennell, I. (1979). *The political economy of health.* Pluto Press.

Dunn, L. (2016). *Rudolf Virchow: Four lives in one.* AbeBooks.

Edgley, R. (1990). Dialectical materialism. *Marxian Economics*, 115-120.

Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing, 62*(1), 107-115.

Engels, F. (1845/2009). *Condition of the working class in England.* Oxford University Press.

Engels, F. (1888). Ludwig Feuerbach and the end of classical German philosophy. In *Marx & Engels Collected Works* (pp. 353–398). Lawrence & Wishart.

Epp, J. (1986). Achieving health for all: A framework for health promotion. *Health Promotion International, 1*(4), 419-428.

Ervin, A. and Raphael, D. (2025). Liberal versus materialist approaches to addressing social and health inequalities: Education versus income as the primary social determinant of health. Article under review.

Esping-Andersen, G. (1990). *The three worlds of welfare capitalism*. Princeton University Press.

European Union Agency for Fundamental Rights. (2024). *GDPR in practice – Experiences of data protection authorities.* Retrieved from https://fra.europa.eu/en/publication/2024/gdpr-experiences-data-protection-authorities

Evans, R. J. (2000). *In Defence of History*. W. W. Norton & Company.

Fabris, F. (2021). Conrad Hal Waddington (1905–1975). In L.N. de la Rosa, G. B. Muller (Eds.), *Evolutionary developmental biology: A reference guide* (pp. 299-313). Springer International Publishing.

Farmer, P. E., Nizeye, B., Stulac, S. & Keshavjee, S. (2006) Structural violence and clinical medicine. *PLoS Med, 3*, e449.

Federici, S. (2012). *Revolution at Point Zero: Housework, Reproduction, and Feminist Struggle.* PM Press.

Federici, S. (2018). *Re-enchanting the world: Feminism and the politics of the commons.* PM Press.

Fee, E., & Brown, T. (1997). Editorial: Why history? *American Journal of Public Health, 87*(11), 1763-1764.

Ferry, S. (2001). Dangerous sexualities: Medico-moral politics in England since 1830. *Bulletin of the History of Medicine, 75*(2), 324-325.

Finer, S. E. (2016). *The life and times of Sir Edwin Chadwick.* Routledge.

Fisher, M. (2012). What is hauntology? *Film Quarterly, 66*(1), 16-24.

Fisken, T. (2011). The spectral proletariat: The politics of hauntology in The Communist Manifesto. *Global Discourse, 2*(2), 17-31.

Flynn, M. B. (2021). Global capitalism as a societal determinant of health: A conceptual framework. *Social Science & Medicine, 268*, 113530.

Forbes, A., & Wainwright, S. P. (2001). On the methodological, theoretical and philosophical content of health inequalities research: a critique. *Social Science & Medicine*, *53*(6), 801-816.

Fox, N. J. (2024). The critical (micro) political economy of health: A more-than-human approach. *Health, 28*(1), 22-39.

Fraser, S., & Treloar, C. (2006). 'Spoiled identity' in hepatitis C infection: The binary logic of despair. *Critical Public Health*, *16*(2), 99-110.

Freeden, M. (2015). *Liberalism: A very short introduction*. OUP Oxford.

Freudenberg, N., Lee, K., Buse, K., Collin, J., Crosbie, E., Friel, S., ... & Zenone, M. (2021). Defining priorities for action and research on the commercial determinants of health: A conceptual review. *American Journal of Public Health, 111*(12), 2202-2211.

Freudenberg, N. (2021). *At what cost: Modern capitalism and the future of health*. Oxford University Press, USA.

Friel, S., Schram, A., Frank, N., Arthur, M., Townsend, B., & Gajurel, H. (2024). Financialisation: a 21st century commercial determinant of health equity. *The Lancet Public Health, 9*(9), e705-e708.

Fuchs, C. (2022). Foundations of critical theory media, communication and society. *Routledge.*

Fuchs, C. (2024). Critical theory foundations of digital capitalism: A critical political economy perspective. *TripleC: Communication, Capitalism & Critique*, *22*(1), 148-196.

Garraghan, G. J., Delanglez, J., Delanglez, J., Garraghan, G. J., & Delanglez, J. (1946). *A guide to historical method.* Fordham University Press.

Garbois, J. A., Sodré, F., & Dalbello-Araujo, M. (2014). Social determinants of health: The "social" in question. *Saúde e Sociedade*, *23*, 1173-1182.

Gavey, N. (2013). Feminist poststructuralism and discourse analysis. In N. Gavey (Ed.), *Toward a new psychology of gender* (pp. 49-64). Routledge.

Gibbs, G. (2007). *Analyzing qualitative data.* Sage Publications.

Gilgun J. F. (2002). *Some notes on the analysis of qualitative data*. Retrieved from http://ssw.che.umn.edu/img/assets/5661/Data%20analysis%2010-02.pdf.

Gill, G. (2000). Cholera and the fight for public health reform in mid-Victorian England. *Historian*, (66), 10.

Gilligan, J. (2000). Violence in public health and preventive medicine. *The Lancet, 355*(9217), 1802-1804.

Glendinning, S. (2011). *Derrida: A very short introduction*. Oxford University Press.

Golden, T. L., & Wendel, M. L. (2020). Public health's next step in advancing equity: re-evaluating epistemological assumptions to move social determinants from theory to practice. *Frontiers in Public Health, 8*, 131.

Goldberg, D. S. (2012). Against the very idea of the politicization of public health policy. *American Journal of Public Health, 102*(1), 44-49.

Gottschalk, L. R. (1969). *Understanding history: A primer of historical method.* (2nd ed.). Knopf.

Govender, P., Medvedyuk, S., & Raphael, D. (2022). Mainstream news media's engagement with Friedrich Engels's concept of social murder. *TripleC: Communication, Capitalism & Critique, 20*(1), 62-81.

Govender, P., Medvedyuk, S., & Raphael, D. (2023). 1845 or 2023? Friedrich Engels's insights into the health effects of Victorian-era and contemporary Canadian capitalism. *Sociology of Health & Illness, 45*(8), 1609-1633.

Grauer, A. L. (2018). A century of paleopathology. *American Journal of Physical Anthropology, 165*(4), 904-914.

Grever, M., & Adriaansen, R. J. (2019). Historical consciousness: The enigma of different paradigms. *Journal of Curriculum Studies, 51*(6), 814-830.

Griffin, J. P. (2008). Changing life expectancy throughout history. *Journal of the Royal Society of Medicine, 101*(12), 577-577.

Grinin, L. (2022). The European revolutions and revolutionary waves of the 19th century: Their causes and consequences. In J. A. Goldstone, L. Grinin, A. Korotayev (Eds.), *Handbook of Revolutions in the 21st century: The new waves of revolutions, and the causes and effects of disruptive political change* (pp. 281-313). Springer International Publishing.

Hamlin, C. (1998). *Public health and social justice in the age of Chadwick: Britain, 1800-1854.* Cambridge University Press.

Hanson, S. (2014). *Small towns, austere times: The dialectics of deracinated localism.* John Hunt Publishing.

Haug, F. (2015). Gender Relations & The Marx Within Feminism. In S. Mojab (Ed.), *Marxism and Feminism* (pp 33–101). Zed.

Halpern, R. (2013). *Marxist Shakespeares*. Routledge.

Han, G. S. (2000). Traditional herbal medicine in the Korean community in Australia: A strategy to cope with health demands of immigrant life. *Health, 4*(4), 426-454.

Harvey, M. (2021). The political economy of health: Revisiting its Marxian origins to address 21st-century health inequalities. *American Journal of Public Health, 111*(2), 293-300.

Harvey, D. (2007). *A brief history of neoliberalism*. Oxford University Press.

Hart, J. T. (2008). Worlds of difference. *The Lancet, 371*(9627), 1883-1885.

Hartwell, R. M. (1961). The rising standard of living in England, 1800-1850. *The Economic History Review*, *13*(3), 397-416.

Hederman, M. P. (1982). Paulo Freire's" Pedagogy of the Oppressed". *The Crane Bag*, *6*(2), 58-63.

Hendricks, J., & Powell, J. L. (2009). The welfare state in post-industrial society: The lay of the land. In J. L. Powell & J. Hendricks (Eds.), *The welfare state in post-industrial society* (pp. 3-19). Springer.

Himmelstein, D. U., & Woolhandler, S. (2023). Corporate efforts to adopt and distort the social determinants of health framework. *International Journal of Social Determinants of Health and Health Services, 53*(3), 249–252.

Hobsbawm, E. J. (1963). The standard of living during the Industrial Revolution: a discussion. *The Economic History Review*, *16*(1), 119-134.

Holloway, I., & Todres, L. (2003). The status of method: Flexibility, consistency and coherence. *Qualitative Research, 3*(3), 345-357.

Hyman, S. E. (1962). A neglected masterpiece. *Centennial Review*, 52–63.

Hunt, T. (2009). *The frock-coated communist: The revolutionary life of Friedrich Engels.* Penguin UK.

Ibrahim, S. A., Thomas, S. B., & Fine, M. J. (2003). Achieving health equity: An incremental journey. *American Journal of Public Health, 93*(10), 1619-1621.

Inhorn, M. C., & Whittle, K. L. (2001). Feminism meets the "new" epidemiologies: toward an appraisal of antifeminist biases in epidemiological research on women's health. *Social Science & Medicine, 53*(5), 553-567.

Johansson, M., & Partanen, T. (2002). Role of trade unions in workplace health promotion. *International Journal of Health Services, 32*(1), 179-193.

Katznelson, I. (2003). Periodization and preferences: Reflections on purposive action in comparative historical social science. In J. Mahoney & D. Rueschemeyer (Eds.), *Comparative Historical Analysis in the Social Sciences* (pp. 270–302). Cambridge University Press.

Kawachi, I., Subramanian, S. V., & Almeida-Filho, N. (2002). A glossary for health inequalities. *Journal of Epidemiology & Community Health, 56*(9), 647-652.

Kelly, C., Tumblety, J., & Sheron, N. (2016). Histories of medical lobbying. *The Lancet, 388*(10055), 1976-1977.

Kickbusch, I. (2003). The contribution of the World Health Organization to a new public health and health promotion. *American Journal of Public Health, 93*(3), 383-388.

Kim, D., Baum, C. F., Ganz, M. L., Subramanian, S. V., & Kawachi, I. (2011). The contextual effects of social capital on health: a cross-national instrumental variable analysis. *Social Science & Medicine, 73*(12), 1689-1697.

Kimchi, J., Polivka, B., & Stevenson, J. S. (1991). Triangulation: Operational definitions. *Nursing Research, 40*(6), 364-366.

Koltai, J., Varchetta, F. M., McKee, M., & Stuckler, D. (2020). Deaths of despair and Brexit votes: cross-local authority statistical analysis in England and Wales. *American Journal of Public Health, 110*(3), 401-406.

Kondrat, D. C., & Teater, B. (2012). The looking-glass self: Looking at relationship as the mechanism of change in case management of persons with severe mental illness. *Families in Society, 93*(4), 271-278.

Krieger, J., & Higgins, D. L. (2002). Housing and health: Time again for public health action. *American Journal of Public Health, 92*(5), 758-768.

Krieger, N. (2024). *Epidemiology and the people's health: Theory and context*. Oxford University Press.

Kynoch, K., Ramis, M. A., Crowe, L., Cabilan, C. J., & McArdle, A. (2019). Information needs and information seeking behaviors of patients and families in acute healthcare settings: A scoping review. *JBI Evidence Synthesis, 17*(6), 1130-1153.

Kvæl, L. A. H., Debesay, J., Bye, A., & Bergland, A. (2020). The dramaturgical act of positioning within family meetings: Negotiation of patients' participation in intermediate care services. *Qualitative Health Research, 30*(6), 811-824.

Kumagai, A. K., & Wear, D. (2014). "Making strange": A role for the humanities in medical education. *Academic Medicine, 89*(7), 973-977.

La Berge, A. F. (1984). The early nineteenth-century French public health movement:

The disciplinary development and institutionalization. *Bulletin of the History of Medicine, 58*(3), 363-379.

La Berge, A. F. (1988). Edwin Chadwick and the French connection. *Bulletin of the History of Medicine, 62*(1), 23-41.

le Roux, G. M. (2005). "Whistle while you work": A historical account of some associations among music, work, and health. *American Journal of Public Health, 95*(7), 1106-1109.

Labonte, R. (1993). Community development and partnerships. *Canadian Journal of Public Health, 84*(4), 237-240.

Labonte, R. (2013). The art of medicine: Health activism in a globalising era: Lessons past for efforts in the future. *The Lancet, 381*(9884), 2158-2159.

Labonte, R., & Ruckert, A. (2015). Social determinants of health under Canada's neo-liberal capture. In S. McBride, R. Mahon, G. W. Boychuk (Eds.), *After'08: Social policy and the global financial crisis* (pp. 272-291). UBC Press

Labonté, R., & Stuckler, D. (2016). The rise of neoliberalism: How bad economics imperils health and what to do about it. *Journal of Epidemiology and Community Health, 70(*3), 312-318.

Lalonde, M. (1974). *A new perspective on the health of Canadians*. Public Health Agency of Canada. Retrieved from: www. phac-aspc. gc. ca/ph-sp/phdd/pdf/perspective

Lange, K. W. (2022). Rudolf Virchow as a pioneer of both biomedicine and social medicine. *Scandinavian Journal of Public Health, 50*(7), 873-874.

Lewis, G. K. (1978). *Slavery, imperialism, and freedom: Studies in English radical thought*. Monthly Review Press.

Lewis, T. (1996). The politics of "hauntology" in Derrida's Specters of Marx. *Rethinking Marxism, 9*(3), 19-39.

Lewontin, R. C., Rose, S., & Kamin, L. J. (1984). *Not in our genes* (p. 7). Pantheon Books.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry.* Sage Publications.

Lo, V., & Stanley-Baker, M. (2022). *Routledge handbook of Chinese medicine*. Taylor & Francis.

Loff, B., Burris, S., & Lazzarini, Z. (2001). Are human rights good for your health?. *The Lancet, 358*(9296), 1901

Lloyd, G. E. R. (1987). *The revolutions of wisdom: Studies in the claims and practice of ancient Greek science*. University of California Press.

Lloyd, G. E. R., & Sivin, N. (2002). *The way and the word: Science and medicine in early China and Greece*. Yale University Press.

Mackenbach, J. P., & Bakker, M. J. (2003). Tackling socioeconomic inequalities in health: Analysis of European experiences. *The Lancet, 362*(9393), 1409-1414.

Mackenbach, J. P. (2009). Politics is nothing but medicine at a larger scale: Reflections on public health's biggest idea. *Journal of Epidemiology & Community Health, 63*(3), 181-184.

Mackenbach, J. P. (2013). Political conditions and life expectancy in Europe, 1900–2008. *Social Science & Medicine, 82*, 134-146.

Macpherson, C. B. (1964/1992). *The real world of democracy*. House of Anansi.

Macpherson, C. B. (1977/2012). *The life and times of liberal democracy.* Oxford University Press.

Maclachlan, I. (2018). *Jacques Derrida: Critical thought*. Routledge.

Mahoney, J., & Rueschemeyer, D. (2003). Comparative historical analysis: Achievements and agendas. In J. Mahoney & D. Rueschemeyer (Eds.), *Comparative Historical Analysis in the Social Sciences* (pp. 3–38). Cambridge University Press.

Mallinson, S., Popay, J., Elliott, E., Bennett, S., Bostock, L., Gatrell, A., ... & Williams, G. (2003). Historical data for health inequalities research: A research note. *Sociology, 37*(4), 771-780.

Malat, J., Mayorga-Gallo, S., & Williams, D. R. (2018). The effects of whiteness on the health of whites in the USA. *Social Science & Medicine, 199*, 148-156.

Mann, K. (2016). The illegal slave trade and one Yoruba man's transatlantic passages from slavery to freedom. In P. Misevich & K. Mann (Eds.), *The rise and demise of slavery and the slave trade in the Atlantic world* (pp. 220-246). Routledge

Mansfield, C. J., Mitchell, J., & King, D. E. (2002). The doctor as God's mechanic? Beliefs in the Southeastern United States. *Social Science & Medicine, 54*(3), 399-409.

Mantoura, P., & Morrison, V. (2016). *Policy approaches to reducing health inequalities.* National Collaborating Centre for Healthy Public Policy.

Marmot, M. G., Kogevinas, M., & Elston, M. A. (1987). Social/economic status and disease. *Annual Review of Public Health, 8*(1), 111-135.

Marmot, M. G., Davey Smith, G., Stansfield, S. … Smith, G. D. (1991). Health inequalities among British civil servants: The Whitehall II study. *The Lancet, 337*(8754), 1387-1393.

Marmot, M., & Wilkinson, R., (Eds.) (2006). *Social determinants of health*. Oxford University Press

Marmot, M. (2006). Health in an unequal world. *The Lancet, 368*(9552), 2081-2094.

Marx, K. (1843). *A contribution to the critique of Hegel's philosophy of right: Introduction.* Retrieved from https://www.marxists.org/archive/marx/works/1843/critique-hpr/intro.htm#32

Marx, K. (1845). *Theses on Feuerbach*. Retrieved from https://www.marxists.org/archive/marx/works/1845/theses/

Marx, K. (1848). *The communist manifesto.* Retrieved from https://www.marxists.org/archive/marx/works/1848/communist-manifesto/ch01.htm

Marx, K. (1852). *The eighteenth brumaire of Louis Bonaparte.* Retrieved from https://revolution.chnm.org/items/show/304#:~:text=Men%20make%20their%20own%20history,the%20brain%20of%20the%20living.

Marx, K. (1867). *Das kapital.* Retrieved form https://www.marxists.org/archive/marx/works/1867-c1/

Mauthner, N.S., Doucet, A. (2003). Reflexive accounts and accounts of reflexivity in qualitative data analysis. *Sociology, 37* (3), 413-431.

McCann, G. (2019). *Theory and history: The political thought of E.P. Thompson.* Routledge.

McNeely, I. F. (2002). *" Medicine on a grand scale": Rudolf Virchow, liberalism, and the public health*. Wellcome Trust Centre for the History of Medicine at University College London.

Medvedyuk, S., Govender, P., & Raphael, D. (2021). The reemergence of Engels' concept of social murder in response to growing social and health inequalities. *Social Science & Medicine*, *289*, 114377

Medvedyuk, S., & Raphael, D. (2023). Defining health through a critical materialist political economy lens. *Global Health Promotion*, 17579759231194600.

Medvedyuk, S., & Raphael, D. (2025). Historical perspectives. In T. Bryant (Ed.), *The handbook for the social determinants of health* (pp. 13-26). Edward Elgar Press.

Medvedyuk, S., Govender, P., & Raphael, D. (2021). The reemergence of Engels' concept of social murder in response to growing social and health inequalities. *Social Science & Medicine, 289*, 114377.

Meili, R., & Hewett, N. (2016). Turning Virchow upside down: Medicine is politics on a smaller scale. *Journal of the Royal Society of Medicine*, *109*(7), 256-258.

Meltzer, B. N. (1994). Mead's social psychology. *Symbolic interaction: An introduction to social psychology*, 38-54.

Microsoft. (2024). *Transcribe your records.* Retrieved from: https://support.microsoft.com/en-us/office/transcribe-your-recordings-7fc2efec-245e-45f0-b053-2a97531ecf57

Mills, C. W. (1959). *The sociological imagination.* Oxford University Press.

Millen, N., & Walker, C. (2001). Overcoming the stigma of chronic illness: strategies for normalisation of a 'spoiled identity'. *Health Sociology Review*, *10*(2), 89-97.

Moore, S. (1971). Marx and the origin of dialectical materialism. *Inquiry*, *14*(1-4), 420-429.

Moran, J. (1997). The role of multimedia conglomerates in American trade book publishing. *Media, Culture & Society*, *19*(3), 441-455.

Morley, I. (2007). City chaos, contagion, Chadwick, and social justice. *The Yale journal of biology and medicine*, *80*(2), 61

Mousset, S. (2017). *Women's rights and the French Revolution: a biography of Olympe de Gouges*. Routledge.

Morrow, R. A. (2003). Critical theory, Gramsci and cultural studies: From structuralism to poststructuralism. In R.A. Morrow (Ed.), *Critical theory now* (pp. 37-79). Routledge.

Munslow, A. (2018). *Narrative and history.* Bloomsbury Publishing.

Muntaner, C. (2013). Democracy, authoritarianism, political conflict, and population health: A global, comparative, and historical approach. *Social Science & Medicine, 86*, 107-112.

Muntaner, C., & Benach, J. (2023). Why social (political, economic, cultural, ecological) determinants of health? Part 1: Background of a contested construct. *International Journal of Social Determinants of Health and Health Services, 53*(2), 117-121.

Muntaner, C., & Benach, J. (2024). Unveiling precarious employment: From the reserve army to Techno-Feudalism. *International Journal of Social Determinants of Health and Health Services, 54*(1), 5-6.

Naeem, M., Ozuem, W., Howell, K., & Ranfagni, S. (2023). A step-by-step process of thematic analysis to develop a conceptual model in qualitative research. *International Journal of Qualitative Methods, 22*, 16094069231205789.

Napier, A. D., Ancarno, C., Butler, B., Calabrese, J., Chater, A., Chatterjee, H., ... & Woolf, K. (2014). Culture and health. *The Lancet, 384*(9954), 1607-1639.

Navarro, V. (1980). Work, ideology, and science: The case of medicine. *International Journal of Health Services, 10*(4), 523-550.

Navarro, V. (2009). What we mean by social determinants of health. *International Journal of Health Services, 39*(3), 423-441.

Navarro, V. (2007). Neoliberalism as a class ideology or the political causes of the growth of inequalities. *International Journal of Health Services, 37*(1), 47-62.

Navarro, V. (2020a). The consequences of neoliberalism in the current pandemic. *International Journal of Health Services, 50*(3), 271-275.

Navarro, V. (2020b). Neoliberalism," globalization," unemployment, inequalities, and the welfare state. *The Political Economy of Social Inequalities*, 33-107.

Nettleton, S. (1997). Surveillance, health promotion and the formation of a risk identity. In A. Peberdy (Ed.), *Debates and dilemmas in promoting health* (pp. 93-110). Open University Press.

Norris, C. (2003). *Deconstruction: Theory and practice*. Routledge.

Norman, R. A. (2022). *Dr. Rudolph Virchow, the father of pathology.* Cambridge Scholars Publishing.

Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods, 16*(1), 1609406917733847.

Nutton, V. (2012). *Ancient medicine*. Routledge

Ollivier, R. A., Aston, M. L., & Price, S. L. (2020). Exploring postpartum sexual health: A feminist post-structural analysis. *Health Care for Women International*, *41*(10), 1081-1100.

Paluzzi, J. E. (2004). A social disease/a social response: Lessons in tuberculosis from early 20th century Chile. *Social Science & Medicine, 59*(4), 763-773.

Parenti, M. (1999). *History as mystery*. City Lights Books.

Patton, M. Q. (1999). Enhancing the quality and credibility of qualitative analysis. *Health Services Research, 34*(5 Pt 2), 1189-1208.

Patton, M. Q. (Ed.). (2015). *Qualitative research and evaluations methods* (Vol. 4). Sage Publications.

Perdiguero, E., Bernabeu, J., Huertas, R., & Rodríguez-Ocaña, E. (2001). History of health, a valuable tool in public health. *Journal of Epidemiology and Community Health, 55*(9), 667–673.

Pham, M. T., Rajić, A., Greig, J. D., Sargeant, J. M., Papadopoulos, A., & McEwen, S. A. (2014). A scoping review of scoping reviews: Advancing the approach and enhancing the consistency. *Research Synthesis Methods, 5*(4), 371-385.

Phelan, J. C., & Link, B. G. (1995). Social conditions as fundamental causes of disease. *Journal of Health and Social Behavior, 80-94*.

Phelan, J. C., Link, B. G., & Dovidio, J. F. (2008). Stigma and prejudice: One animal or two? *Social Science & Medicine, 67*(3), 358-367.

Phelan, M. (2019). The history of "History is written by the victors". *Slate.* Retrieved from https://slate.com/culture/2019/11/history-is-written-by-the-victors-quote-origin.html

Phelan, J. C., Link, B. G., & Dovidio, J. F. (2008). Stigma and prejudice: one animal or two?. *Social Science & Medicine, 67*(3), 358-367.

Piaget, J. (1970). *Structuralism.* Harper & Row.

Pilbeam, P. M. (2012). Introducing Europe in revolution and war. In P.M. Pilbeam (Ed.), *Themes in modern European history 1780-1830* (pp. 1-11). Routledge.

Pilgrim, D. (2016). The aspiration for holism in the medical humanities: Some historical and philosophical sources of reflection. *Health, 20(*4), 430-444.

Plato. (360 BCE/1871). *The laws*. In B. Jowett (Ed.), *The dialogues of Plato*. Clarendon Press. Retrieved from https://digitalassets.lib.berkeley.edu/main/b20762568_v_4_C063897870.pdf

Pollock, D., Peters, M. D., Khalil, H., McInerney, P., Alexander, L., Tricco, A. C., ... & Munn, Z. (2023). Recommendations for the extraction, analysis, and presentation of results in scoping reviews. *JBI Evidence Synthesis*, *21*(3), 520-532.

Pooley, S. (2013). Parenthood, child-rearing and fertility in England, 1850–1914. *The history of the family*, *18*(1), 83-106.

Potter, W.J. (1996). *An analysis of thinking and research about qualitative methods.* Lawrence Erlbaum Associates Inc.

Rainey, M. J., & Hanson, S. (2021). The double return of Friedrich Engels: Towards a dialectics of the trace. *Human Geography*, *14*(2), 264-274.

Raleigh, V. (2022). What is happening to life expectancy in England? *The King's Fund.* Retrieved from https://www.kingsfund.org.uk/insight-and-analysis/long-reads/whats-happening-life-expectancy-england

Raphael, D. (2009). Escaping from the Phantom Zone: social determinants of health, public health units and public policy in Canada. *Health Promotion International*, *24*(2), 193-198.

Raphael, D. (2010). Social determinants of health: Overview of concepts and issues. In T. Bryant, D. Raphael, & M. Rioux (Eds.), *Staying alive: Critical perspectives on health, illness, and health care* (2nd ed.). Canadian Scholars' Press.

Raphael, D. (2012). *Tackling health inequalities: Lessons from international experiences*. Canadian Scholars' Press.

Raphael, D. (2015). Beyond policy analysis: The raw politics behind opposition to healthy public policy. *Health Promotion International*, *30*(2), 380-396.

Raphael, D., & Bryant, T. (2015). Power, intersectionality and the lifecourse: Identifying the political and economic structures of welfare states that support or threaten health. *Social Theory and Health*, *13*, 245-266.

Raphael, D., & Bryant, T. (2019). Political economy perspectives on health and health care. *Staying Alive: Critical Perspectives on Health, Illness, and Health Care* (3rd ed.) (pp. 61-83). Canadian Scholars' Press.

Raphael, D., & Bryant, T. (2022). Emerging themes in social determinants of health theory and research. *International Journal of Health Services, 52*(4), 428-432.

Raphael, D., & Bryant, T. (2023). Socialism as the way forward: Updating a discourse analysis of the social determinants of health. *Critical Public Health, 33*(4), 387-394.

Raphael, D., Bryant, T., Govender, P., Medvedyuk, S., & Mendly-Zambo, Z. (2022). Desperately seeking reductions in health inequalities in Canada: Polemics and anger mobilization as the way forward?. *Sociology of Health & Illness*, *44*(1), 130-146.

Raphael, D., Bryant, T., Mikkonen, J. and Raphael, A. (2020). *Handbook on the Social Determinants of Health: The Canadian Facts*. Ontario Tech University Faculty of Health Sciences and Toronto: York University School of Health Policy and Management. Retrieved from https://thecanadianfacts.org/

Reaume, G. (2000). *Remembrance of patients past: Patient life at the Toronto Hospital for the Insane, 1870-1940.* University of Toronto Press.

Rendtorff, J.D. (2014). Structuralism, structural anthropology, and social theory. In *French philosophy and social theory* (pp. 121-147). Springer, Dordrecht.

Remais, J. V., & Eisenberg, J. N. (2012). Balance between clinical and environmental responses to infectious diseases. *The Lancet, 379*(9824), 1457-1459.

Rigby, S. (1995). Engels revisited. *History Today*, *45*(8), 10.

Rocha, P. R. D., & David, H. M. S. L. (2015). Determination or determinants? A debate based on the Theory on the Social Production of Health. *Revista da Escola de Enfermagem da USP*, *49*(01), 129-135.

Roller, M. R., & Lavrakas, P. J. (2015). *Applied qualitative research design: A total quality framework approach.* Guilford Publications.

Rosen, G. (1940). A theory of medical historiography. *Bulletin of the History of Medicine*, *8*(5), 655-665.

Rosen, G. (2015). *A history of public health*. John Hopkins University Press.

Rosenberg, C. E. (2007). Erwin H. Ackerknecht, social medicine, and the history of medicine. *Bulletin of the History of Medicine, 81*(3), 511-532.

Rosenberg, D. Y. (2018). Political economy of infant mortality rate: Role of democracy versus good governance. *International Journal of Health Services, 48*(3), 435-460.

Ross, R. J. S., & Trachte, K. C. (1990). *Global capitalism: The new leviathan.* State University of New York Press.

Royle, N. (2003). *Jacques Derrida.* Routledge.

Ruffin, J. (2010). The science of eliminating health disparities: Embracing a new paradigm. *American Journal of Public Health, 100*(S1), S8-S9.

Ruger, J. P. (2004). Health and social justice. *The Lancet, 364*(9439), 1075-1080

Salmon, P. (2020). *An event, perhaps: A biography of Jacques Derrida.* Verso Books.

Scambler, G., & Scambler, S. (2015). Theorizing health inequalities: The untapped potential of dialectical critical realism. *Social Theory & Health, 13,* 340-354.

Schipke, T. (2021). The chronic sick role: Its time has come. *OMEGA-Journal of Death and Dying*, *83*(3), 470-486.

Schneider, D., & Lilienfeld, D. E. (Eds.). (2008). *Public health: the development of a discipline*. Rutgers University Press.

Schultz, M. (2008). Rudolf Virchow. *Emerging infectious diseases*, *14*(9), 1480.

Schrecker, T., & Bambra, C. (2015). *How politics makes us sick: Neoliberal epidemics*. Palgrave Macmillan.

Schrecker, T. (2016). Neoliberalism and health: the linkages and the dangers. *Sociology Compass, 10*(10), 952-971.

Schreier, M. (2013). Qualitative content analysis. In U. Flick (Ed.), *The SAGE handbook of qualitative data analysis* (pp. 170-183). Sage Publications.

Shaffer, L. S. (2005). From mirror self-recognition to the looking-glass self: Exploring the Justification Hypothesis. *Journal of clinical psychology, 61*(1), 47-65.

Shilling, C. (2002). Culture, the 'sick role' and the consumption of health. *The British journal of sociology*, *53*(4), 621-638.

Sigerist, H. E. (1960). *On the history of medicine*. MD Publications.

Silverman, H. J. (Ed.). (2004). *Derrida and deconstruction*. Routledge.

Singh-Manou1, A., & Marmot, M. (2005). Role of socialization in explaining social inequalities in health. *Social Science & Medicine, 60*(9), 2129-2133.

Skocpol, T. (2003). Doubly engaged social science: The promise of comparative historical analysis. In J. Mahoney & D. Rueschemeyer (Eds.), *Comparative historical analysis in the social sciences* (pp. 407-428). Cambridge University Press.

Smith, A. (1776). *An inquiry into the nature and causes of the wealth of nations.* Methuen & Co., Ltd.

Smith, G. (2000). Learning to live with complexity: ethnicity, socioeconomic position, and health in Britain and the US. *American Journal of Public Health, 90*(11), 1694-1697.

Smith, H., & Carroll, B. (2000). *Women's Political and Social Thought: An Anthology*. Indiana University Press.

Springer, S. (2012). Neoliberalism as discourse: Between Foucauldian political economy and Marxian poststructuralism. *Critical discourse studies*, *9*(2), 133-147.

Solar, O., & Irwin, A. (2010). *A conceptual framework for action on the social determinants of health.* WHO Document Production Services. Retrieved from https://apps.who.int/iris/bitstream/handle/10665/44489/9789241500852_eng.pdf

St Leger, L. (2004). What's the place of schools in promoting health? Are we too optimistic?. *Health Promotion International*, *19*(4), 405-408.

Ştefan, G. M. (2015). European Welfare State in a Historical Perspective. A Critical Review. *European Journal of Interdisciplinary Studies*, *7*(1).

Stewart, J. (Ed.). (2017). *Pioneers in public health: lessons from history*. Taylor & Francis.

Strauss, A. & Corbin, J. (1990). *Basics of Qualitative Research: Grounded Theory Procedures and Techniques.* Sage Publications.

Stryker, S. (2013). Conditions of accurate role-taking: A test of Mead's theory. In *Human behavior and social processes* (pp. 41-62). Routledge.

Tajer, D. (2003). Latin American social medicine: Roots, development during the 1990s, and current challenges. *American Journal of Public Health, 93*(12), 2023-2027.

Tam, T. (2017). *The Chief Public Health Officer's report on the state of public health in Canada 2017: Designing healthy living.* Public Health Agency of Canada.

Taylor, R., & Rieger, A. (1984). Rudolf Virchow on the typhus epidemic in Upper Silesia: An introduction and translation. *Sociology of Health & Illness, 6*(2), 201-217.

Taylor, J. A. (1975). *The standard of living in Britain in the industrial revolution.* Methuen.

Teeple, G. (2000). *Globalization and the decline of social reform: Into the twenty-first century.* Garamond Press.

Teeple, G. (2005). *The riddle of human rights*. Garamond Press.

Thompson, E. P. P. (1978). *Poverty of theory.* NYU Press.

Tosh, J. (2015). *The pursuit of history: Aims, methods, and new directions in the study of history* (6th ed.). Routledge.

Tountas, Y. (2009). The historical origins of the basic concepts of health promotion and education: The role of ancient Greek philosophy and medicine. *Health Promotion International*, *24*(2), 185-192.

Townsend, P., Davidson, N., Black, D., & Whitehead, M. (1992). *Inequalities in health: The Black Report and the health divide.* Penguin Books.

Townshend, J. (2019). *CB Macpherson: and the problem of liberal democracy*. Edinburgh University Press.

Tracy, S. J. (2010). Qualitative quality: Eight "big-tent" criteria for excellent qualitative research. *Qualitative inquiry*, *16*(10), 837-851.

Tricco, A. C., Cardoso, R., Thomas, S. M., Motiwala, S., Sullivan, S., Kealey, M. R., ... &

Spiegel, J. M., Breilh, J., & Yassi, A. (2015). Why language matters: insights and challenges in applying a social determination of health approach in a North-South collaborative research program. *Globalization and health*, *11*, 1-17.

Straus, S. E. (2015). Barriers and facilitators to uptake of systematic reviews by policymakers and health care managers: A scoping review. *Implementation Science*, *11*(1), 1-20.

Tulchinsky, T. H., & Varavikova, E. A. (2014). *A history of public health.* Elsevier.

Thurmond, V. A. (2001). The point of triangulation. *Journal of nursing scholarship*, *33*(3), 253-258.

Unschuld, P. (2005). The doctor as a stranger in medicine. *Positioning*, *2*.

Usher, A. P. (1920). *An introduction to the industrial history of England.* Houghton Mifflin Company.

Varul, M. Z. (2010). Talcott Parsons, the sick role and chronic illness. *Body & Society*, *16*(2), 72-94.

Vasquez, E. E., Perez-Brumer, A., & Parker, R. G. (2019). Social inequities and contemporary struggles for collective health in Latin America. *Global Public Health*, *14*(6-7), 777-790.

Verdery, K. (1999). *The political lives of dead bodies: Reburial and postsocialist change.* Columbia University Press.

Virchow, R. (1848). In L. J. Rather (Ed.), *Rudolf Virchow: Collected essays on public health and epidemiology.* Science History Publications.

Waddington, K. (2003). " Unfit for human consumption": Tuberculosis and the problem of infected meat in late Victorian Britain. *Bulletin of the History of Medicine*, 636-661

Waitzkin, H. (2005). Commentary: Salvador Allende and the birth of Latin American social medicine. *International Journal of Epidemiology, 34*(4), 739-741.

Waitzkin, H. (2018). *Health care under the knife: Moving beyond capitalism for our health.* NYU Press.

Waitzkin, H. (2023). Post-pandemic capitalism: Reform or transform?: Comment on ensuring global health equity in a post-pandemic economy. *International Journal of Health Policy and Management, 12*.

Waitzkin, H., Pérez, A., & Anderson, M. (Eds.) (2020). *Social medicine and the coming transformation.* Routledge.

Walter, N., Bourgois, P., & Loinaz, H. M. (2004). Masculinity and undocumented labor migration: Injured Latino day laborers in San Francisco. *Social Science & Medicine, 59*(6), 1159-1168.

Watt, G., Giacaman, R., Zurayk, H., & Horton, R. (2014). Progress of the lancet Palestinian health alliance. *The Lancet, 383*(9914), e5-e6.

Weaver, L. T. (2010). 'Growing babies': Defining the milk requirements of infants 1890–1910. *Social History of Medicine, 23*(2), 320-337.

Whitehead, M. (1992). The concepts and principles of equity and health. *International Journal of Health Services, 22*(3), 429-445.

White, K. (2011). The sustaining relevance of W.E.B. Du Bois to health disparities research. *Du Bois Review: Social Science Research on Race, 8*(1), 285-293.

Whitley, R., & Prince, M. (2006). Can urban regeneration programmes assist coping and recovery for people with mental illness? Suggestions from a qualitative case study. *Health Promotion International, 21*(1), 19-26.

Wilkinson, S., & Wilkinson, C. (2020). Performing care: emotion work and 'dignity work'–a joint autoethnography of caring for our mum at the end of life. *Sociology of Health & Illness, 42*(8), 1888-1901.

Wilson, J. (1983). *Social theory.* Prentice-Hall Press.

Woodruff, W. (1956). Capitalism and the historians: A contribution to the discussion on the Industrial Revolution in England. *The Journal of Economic History*, *16*(1), 1-17.

World Health Organization. (1978). *Declaration of Alma-Ata* (No. WHO/EURO: 1978-3938-43697-61471). World Health Organization Regional Office for Europe.

World Health Organization. (1986). *Ottawa charter for health promotion* (No. WHO/EURO: 1986-4044-43803-61677). World Health Organization Regional Office for Europe.

World Health Organization. (2008). *Closing the gap in a generation: Health equity through action on the social determinants of health.* World Health Organization Regional Office for Europe.

World Health Organization. (2003). *Social Determinants of Health: The Solid Facts and the Commission on Social Determinants of Health.* World Health Organization Regional Office for Europe.

Woods, R., & Shelton, N. (2000). Disease environments in Victorian England and Wales. *Historical Methods: A Journal of Quantitative and Interdisciplinary History, 33*(2), 73-82.

Wohl, A. S. (1971). Octavia Hill and the homes of the London poor. *Journal of British Studies, 10*(2), 105-131.

Yach, D. (2014). The origins, development, effects, and future of the WHO Framework Convention on Tobacco Control: A personal perspective. *The Lancet, 383*(9930), 1771-1779.

Youngson, A. J. (2018). *The scientific revolution in Victorian medicine.* Routledge.

Zimmerman, A. (1999). Anti-semitism as skill: Rudolf Virchow's *Schulstatistik* and the racial composition of Germany. *Central European History 32*, 402-429

APPENDICES

Appendix A: Recruitment email

Dear (name of potential participant),

My name is Stella Medvedyuk, I am a Doctoral Candidate in the School of Health Policy, Management, specialising in Health Policy & Equity at York University, Toronto, Ontario, Canada.

I am writing to invite you to participate in an interview to discuss your knowledge and publications that evoke historical figures of Chadwick, Engels, and Virchow.

My dissertation will explore how contemporary scholars use historical figures and their ideas in modern day health and health promotion discourses. I am conducting this research under the supervision of Dr. Dennis Raphael. The York University Faculty of Graduate Studies Research Ethics Board has approved my research project.

I hope that your knowledge and expertise can be shared through an in-depth, semi-structured interview. The interview will take approximately 30-60 minutes of your time and will be conducted remotely, over the phone or on a virtual platform Zoom. Importantly, our conversation and your identity will be kept confidential, and you will describe you in general terms in the study, for example "academic specialising in XXX in XXX country" (unless you agree to have your name used). No identifying information will be attributed to you or your interview transcript in accordance with York University Research Ethics Guidelines.

Interviews will be scheduled at a time that is convenient for you, will be digitally recorded and stored in a password-protected folder on a computer. Participation in this research study is voluntary and you can withdraw consent to participate at any time.

If you have any concerns or questions, please feel free to contact me at stellam2@yorku.ca or my doctoral supervisor Dr. Dennis Raphael at draphael@yorku.ca and/or 416-736-2100. You may also contact the Graduate Program in Health at gradhlth@yorku.ca and/or 416-736-2100 ext. 22052.

I sincerely hope that you will consider taking part in this research. Your time and consideration in participating in this project would be greatly appreciated. Please contact me via email at stellam2@yorku.ca if you are interested in participating.

Thank you for your consideration.

With kind regards,

Stella Medvedyuk, MA, Doctoral Candidate

Principle Investigator

Health Policy and Equity

School of Health Policy, Management, York University

4700 Keele Street, Toronto, ON, M3J 1P3

Email: stellam2@yorku.ca

Appendix B: Informed Consent Form

Informed Consent Form Template

Date: ----------_____

Study Name: The Specters of Three Victorian-Era Giants are Haunting Public Health: The Relevance of Chadwick, Virchow, and Engels's Contributions to the Promotion of Public Health in the 21st Century.

Researcher name:

Principal investigator: Stella Medvedyuk (doctoral candidate), graduate program in Health Policy and Equity, School of Health Policy, Management, York University, Toronto, Ontario, Canada. Email address: stellam2@yorku.ca.

Purpose of the Research:

The three Victorian-era giants Edwin Chadwick, Friedrich Engels and Rudolph Virchow wrote about the social conditions that threaten or promote health, the conditions to which we now refer to as the social determinants of health These same characteristics are present today in ongoing debates about the determinants of health and how societies shape the quality and distribution of these social determinants of health.

Revisiting three giants Chadwick, Virchow, and Engels works through a critical materialist lens can assist our understanding of how the health issues they identified over 170 years ago continue to haunt present day society. It raises questions about why their findings continue to be ignored or promoted by the mainstream public health community and directs new attention to the politics of health and the role ideology plays in identifying, understanding, and responding to public health issues

This research will be conducted through in-depth, semi-structured virtual interviews. The interviews will be analysed utilising qualitative content analysis technique. This research is part of a dissertation research project and will be used for potential academic publications, presentations, and conferences.

What You Will Be Asked to Do in the Research:

Interview participants will be asked to discuss the use of historical figures and their ideas in contemporary publications that examine health, health promotion, and public health issues.

Interviewees will be asked to participate in one 30–60-minute virtual interview.

Risks and Discomforts:

We do not foresee any risks or discomfort from your participation in the research.

Benefits of the Research and Benefits to You:

This research will inform how and why contemporary academics are evoking historical figures and their ideas on health, and health promotion.

Voluntary Participation and Withdrawal: Your participation in the study is completely voluntary and you may choose to stop participating at any time. Your decision not to volunteer, to stop participating, or to refuse to answer particular questions will not influence the nature of the ongoing relationship you may have with the researchers or study staff, or the nature of your relationship with York University either now, or in the future.

If you decide to stop participating, you may withdraw without penalty, financial or otherwise, and you will still receive the promised inducement.

In the event you withdraw from the study, all associated data collected will be immediately destroyed wherever possible. Should you wish to withdraw after the study, you will have the option to also withdraw your data up until the analysis is complete.

Confidentiality:

Unless you choose otherwise, your answers will not be associated with identifying information. All information you supply during the research will be held in confidence and unless you specifically indicate your consent, your name will not appear in any report or publication of the research. Data will be collected through an online interview using Zoom, the interview will be audio and/or video recorded. Your data will be safely stored in a locked folder on a portable USB device and only the researcher (Stella Medvedyuk) will have access to this information. The data will be stored for the duration of the research project and will be destroyed upon dissertation completion in the Fall 2023. Confidentiality will be provided to the fullest extent possible by law.

The data collected in this research project may be used – in an anonymized form - by members of the research team in subsequent research investigations exploring similar lines of inquiry. Such projects will still undergo ethics review by the HPRC, our institutional REB. Any secondary use of anonymized data by the research team will be treated with the same degree of confidentiality and anonymity as in the original research project.

Questions About the Research? If you have questions about the research in general or about your role in the study, please feel free to contact me at stellam2@yorku.ca or my thesis supervisor, Dr. Dennis Raphael at draphael@yorku.ca and/or 416-736-5157. You may also contact the Program in Health Policy and Equity at gradhlth@yorku.ca and/or 416-736-5157.

This research has received ethics review and approval by the Delegated Ethics Review Committee, which is delegated authority to review research ethics protocols by the Human Participants Review Sub-Committee, York University's Ethics Review Board, and conforms to the standards of the Canadian Tri-Council Research Ethics guidelines. If you have any questions about this process, or about your rights as a participant in the study, please contact the Sr. Manager & Policy Advisor for the Office of Research Ethics, 5th Floor, Kaneff Tower, York University (telephone 416-736-5914 or e-mail ore@yorku.ca).

Legal Rights and Signatures:

I <<fill in participant name here>>, consent to participate in "The Specters of Three Victorian-Era Giants are Haunting Public Health: The Relevance of Engels, Virchow, and Chadwick's Contributions to the Promotion of Public Health in the 21st Century." conducted by Stella Medvedyuk. I have understood the nature of this project and wish to participate. I am not waiving any of my legal rights by signing this form. My signature below indicates my consent.

Signature _____ **Date** _____

Participant

Signature _____ **Date** _____

Principal Investigator

Additional consent (where applicable)

1. Audio recording

¨ I consent to the audio-recording of my interview(s).

In academic articles N Y

In print, digital and slide form	N	Y
In academic presentations	N	Y
In media	N	Y
In thesis materials	N	Y

Signature _____ **Date** _____

Participant Name:

2. Consent to waive anonymity

I, <<insert participants name>>, consent to the use of my name in the publications arising from this research.

Signature _____ **Date** _____

Participant Name:

Appendix C: Interview Guideline and Sample Questions

Interview instructions:

a) Thank the academic for their time and willingness to share their experiences.

b) Introduce myself and briefly describe what I am seeking to understand.

c) Remind the participant that their identity will remain confidential, voluntary & they have the option to withdraw from the study at any time.

d) Reassure the academic that they can skip any questions they are uncomfortable answering.

e) Inform the participant that the interview will take approximately 30-60 minutes and explain why it will be audio recorded.

f) Go over informed consent (electronic copy will be attained prior to the interview and will be shared with the participant). Remind the interview participant that my contact information is available on their copy of the form.

Potential interview questions:

- What were your motivations for carrying out your work?
- What do you see as the main contributions to promoting public health of each of these writers?
- How do these different perspectives map onto contemporary public health perspectives?
- Do you believe that these evocations can promote public health?
- What are the contemporary implications for action suggested by each of these perspectives?
- Which perspective do you think will be most useful in the short term? Long-term?
- How can we use these concepts and ideas to promote public health in our contemporary times?
- What are the barriers to such action and how can they be overcome?
- Is there any evidence that these evocations are meeting your expectations?

Appendix D: Chadwick Scoping Review of Literature Publications

Alborn, T. (2001). Insurance against germ theory: Commerce and conservatism in late-Victorian medicine. *Bulletin of the History of Medicine*, 406-445.

Arnold-Forster, A. (2020). Mapmaking and mapthinking: Cancer as a problem of place in nineteenth-century England. *Social History of Medicine, 33*(2), 463-488.

Ashe, M., Jernigan, D., Kline, R., & Galaz, R. (2003). Land use planning and the control of alcohol, tobacco, firearms, and fast food restaurants. *American Journal of Public Health, 93*(9), 1404-1408.

Awofeso, N. (2004). What's new about the "new public health"?. *American Journal of Public Health*, *94*(5), 705-709.

Barnett, R. (2016). Case histories: Cholera. *The Lancet, 387*, 211

Barreto, M. L., & Tei1eira, M. G. (2008). Dengue fever: a call for local, national, and international action. *The Lancet, 372*(9634), 205.

Baur, N. (2019). 'This weather always gets me down': A psychosocial perspective on mental illness. *Health*, *23*(2), 180-196.

Berridge, V. (2000). History in public health: who needs it?. *The Lancet, 356*(9245), 1923-1925.

Berridge, V. (2003). Public or policy understanding of history?. *Social History of Medicine, 16*(3), 511-523.

Borras, A. M. (2023). The challenge of exposing and ending health inequalities through social and policy change: Canadian experiences. *International Journal of Social Determinants of Health and Health Services*, *53*(2), 130-145.

Borras, A. M., & Mohamed, F. A. (2020). Health inequities and the shifting paradigms of food security, food insecurity, and food sovereignty. *International Journal of Health Services, 50*(3), 299-313.

Boyle, P. J., Norman, P., & Popham, F. (2009). Social mobility: Evidence that it can widen health inequalities. *Social Science & Medicine*, *68*(10), 1835-1842.

Breton, E., & De Leeuw, E. (2011). Theories of the policy process in health promotion research: A review. *Health Promotion International, 26*(1), 82-90.

Brewer, T., & Pringle, Y. (2015). Beyond Bazalgette: 150 years of sanitation. *The Lancet, 386*(9989), 128-129.

Brown, M. (2008). From Foetid air to filth: The cultural transformation of British epidemiological thought, ca. 1780–1848. *Bulletin of the History of Medicine*, *82*(3), 515.

Brown, T. M., & Fee, E. (2014). Social movements in health. *Annual Review of Public Health*, *35*, 385-398.

Bynum, B. (2000). Discarded diagnoses. *The Lancet*, *356*(9241), 1615.

Bynum, B. (2008). Roadmaps to health. *The Lancet*, *372*(9650), 1626-1627.

Carroll, P. E. (2002). Medical police and the history of public health. *Medical History*, *46*(4), 461-494.

Chantler, C. (2002). The second greatest benefit to mankind?. *The Lancet*, *360*(9348), 1870-1877.

Chernomas, R., & Hudson, I. (2009). Social murder: The long-term effects of conservative economic policy. *International Journal of Health Services*, *39*(1), 107-121.

Chernomas, R., & Hudson, I. (2010). Inequality as a cause of social murder. *International Journal of Health Services*, *40*(1), 61-78.

Clark, P. (2020). 'Problems of today and tomorrow': Prevention and the National Health Service in the 1970s. *Social History of Medicine*, *33*(3), 981-1000.

Cooter, R. (2007). After death/after-'life': The Social History of Medicine in post-postmodernity. *Social History of Medicine*, *20*(3), 441-464.

Corburn, J. (2004). Confronting the challenges in reconnecting urban planning and public health. *American Journal of Public Health*, *94*(4), 541-546.

Davidson, R., Kitzinger, J., & Hunt, K. (2006). The wealthy get healthy, the poor get poorly? Lay perceptions of health inequalities. *Social Science & Medicine*, *62*(9), 2171-2182.

Davies, S. C., Winpenny, E., Ball, S., Fowler, T., Rubin, J., & Nolte, E. (2014). For debate: a new wave in public health improvement. *The Lancet*, *384*(9957), 1889-1895.

Day, M., Shickle, D., Smith, K., Zakariasen, K., Oliver, T., & Moskol, J. (2012). Time for heroes: Public health leadership in the 21st century. *The Lancet*, *380*(9849), 1205-1206.

de Leeuw, E., & Sparks, M. (2016). The year urban health was r/deconstructed. *Health Promotion International*, *31*(1), 1-4.

Eisenberg, J. N., Trostle, J., Sorensen, R. J., & Shields, K. F. (2012). Toward a systems approach to enteric pathogen transmission: From individual independence to community interdependence. *Annual Review of Public Health*, *33*, 239-257.

Elliott, S. J. (2022). Global health for all by 2030. *Canadian Journal of Public Health, 113*(2), 175-177.

Etches, V., Frank, J., Ruggiero, E. D., & Manuel, D. (2006). Measuring population health: A review of indicators. *Annual Review of Public Health, 27*, 29-55

Fo1, D. M. (2001). The professions of public health. *American Journal of Public Health, 91*(9), 1362-1364.

Fo1hall, K. (2011). Fever, immigration and quarantine in New South Wales, 1837–1840. *Social History of Medicine*, *24*(3), 624-642.

Forbes, A., & Wainwright, S. P. (2001). On the methodological, theoretical and philosophical content of health inequalities research: A critique. *Social Science & Medicine, 53*(6), 801-816.

Freudenberg, N., Lee, K., Buse, K., Collin, J., Crosbie, E., Friel, S., ... & Zenone, M. (2021). Defining priorities for action and research on the commercial determinants of health: A conceptual review. *American Journal of Public Health, 111*(12), 2202-2211.

Gill, G., Burrell, S., & Brown, J. (2001). Fear and frustration—the Liverpool cholera riots of 1832. *The Lancet*, *358*(9277), 233-237.

Goldberg, D. S. (2012). Against the very idea of the politicization of public health policy. *American Journal of Public Health*, *102*(1), 44-49.

Granados, J. A. T. (2012). Economic growth and health progress in England and Wales: 160 years of a changing relation. *Social Science & Medicine*, *74*(5), 688-695.

Green, M. A., Dorling, D., & Mitchell, R. (2018). Updating Edwin Chadwick's seminal work on geographical inequalities by occupation. *Social Science & Medicine*, *197*, 59-62.

Hamlin, C. (2009). "CHOLERA FORCING" The myth of the good epidemic and the coming of good water. *American Journal of Public Health, 99*(11), 1946-1954.

Hancock, T. (2001). People, partnerships and human progress: Building community capital. *Health Promotion International*, *16*(3), 275-280.

Hancock, T. (2011). The Ottawa charter at 25. *Canadian Journal of Public Health*, *102*, 404-406.

Hanley, J. (2002). Edwin Chadwick and the poverty of statistics. *Medical History*, *46*(1), 21-40.

Hanley, J. G. (2006). Parliament, physicians, and nuisances: The demedicalization of nuisance law, 1831–1855. *Bulletin of the History of Medicine*, 702-732.

Hanley, J. G. (2007). Public health, London's levels and the politics of ta1ation, 1840–1860. *Social History of Medicine*, *20*(1), 21-38.

Harrison, M. (2015). A global perspective: Reframing the history of health, medicine, and disease. *Bulletin of the History of Medicine*, *89*(4), 639.

Hart, J. T. (2008). Worlds of difference. *The Lancet*, *371*(9627), 1883-1885.

Henry, W. S. (2016). Women searchers of the dead in eighteenth-and nineteenth-century London. *Social History of Medicine*, *29*(3), 445-466.

Horton, R. (2010). Offline: The hottest date in town. *The Lancet*, *375*(9710), 184.

Howden-Chapman, P. (2010). Evidence-based politics: How successful have government reviews been as policy instruments to reduce health inequalities in England?. *Social Science & Medicine*, *71*(7), 1240-1243.

Jones, K. R. (2022). Green lungs and green liberty: The modern city park and public health in an urban metabolic landscape. *Social History of Medicine*, *35*(4), 1200-1222.

Jones, R. K. (2004). Schism and heresy in the development of orthodox medicine: The threat to medical hegemony. *Social Science & Medicine*, *58*(4), 703-712.

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

Kelly, C., Tumblety, J., & Sheron, N. (2016). Histories of medical lobbying. *The Lancet*, *388*(10055), 1976-1977.

Kickbusch, I. (2003). The contribution of the World Health Organization to a new public health and health promotion. *American Journal of Public Health*, *93*(3), 383-388.

Koplan, J. P., Bond, T. C., Merson, M. H., Reddy, K. S., Rodriguez, M. H., Sewankambo, N. K., & Wasserheit, J. N. (2009). Towards a common definition of global health. *The Lancet*, *373*(9679), 1993-1995.

Krieger, J., & Higgins, D. L. (2002). Housing and health: Time again for public health action. *American Journal of Public Health*, *92*(5), 758-768.

Krieger, N. (2019). The US census and the people's health: Public health engagement from enslavement and "Indians not taxed" to census tracts and health equity (1790–2018). *American Journal of Public Health*, *109*(8), 1092-1100.

Lessard, R., & Raynault, M. F. (2009). Public health and poverty. *Canadian Journal of Public Health*, *100*(4), 247.

Li, S. J. (2010). Discovering 'The Secrets of Long and Healthy Life': John Dudgeon on Chinese hygiene. *Social History of Medicine*, *23*(1), 21-37.

Loh, L. C., & Harvey, B. J. (2013). A look to the past as we look ahead: The specialty of public health medicine in Canada. *Canadian Journal of Public Health*, *104*, e108-e110.

Lopez, R. P. (2009). Public health, the APHA, and urban renewal. *American Journal of Public Health*, *99*(9), 1603-1611.

Lopez, R. P. (2012). Posters for housing and health. *American Journal of Public Health*, *102*(8), 1473-1474.

Macintyre, S., Macdonald, L., & Ellaway, A. (2008). Do poorer people have poorer access to local resources and facilities? The distribution of local resources by area deprivation in Glasgow, Scotland. *Social Science & Medicine*, *67*(6), 900-914.

Macleod, J., Smith, G. D., Metcalfe, C., & Hart, C. (2005). Is subjective social status a more important determinant of health than objective social status? Evidence from a prospective observational study of Scottish men. *Social Science & Medicine*, *61*(9), 1916-1929.

Medvedyuk, S., Govender, P., & Raphael, D. (2021). The reemergence of Engels' concept of social murder in response to growing social and health inequalities. *Social Science & Medicine*, *289*, 114377.

Mukharji, P. B. (2018). Cat and mouse: Animal technologies, trans-imperial networks and public health from below, British India, c. 1907–1918. *Social History of Medicine*, *31*(3), 510-532.

Murphy, E. (2002). The lunacy commissioners and the East London guardians, 1845–1867. *Medical History*, *46*(4), 495-524.

Nathanson, C. A. (2010). Who owns health inequalities?. *The Lancet*, *375*(9711), 274-275.

Nathanson, C., & Hopper, K. (2010). The Marmot review–social revolution by stealth. *Social Science & Medicine*, *71*(7), 1237-1239.

Navarro, V. (2009). What we mean by social determinants of health. *International Journal of Health Services*, *39*(3), 423-441.

Oakes, J. M. (2004). The (mis) estimation of neighborhood effects: Causal inference for a practicable social epidemiology. *Social Science & Medicine*, *58*(10), 1929-1952.

Oerther, D. B., & Oerther, S. E. (2022). Improving interprofessional environmental health education using the leave no one behind framework. *American Journal of Public Health*, *112*(S3), S250-S252.

Palladino, P. (2001). Discourses of smoking, health, and the just society: Yesterday, today, and the return of the same?. *Social History of Medicine*, *14*(2), 313-335.

Razzell, P., & Spence, C. (2006). The hazards of wealth: Adult mortality in pre-twentieth-century England. *Social History of Medicine*, *19*(3), 381-405.

Remais, J. V., & Eisenberg, J. N. (2012). Balance between clinical and environmental responses to infectious diseases. *The Lancet*, *379*(9824), 1457-1459.

Shaw, M. (2004). Housing and public health. *Annual Review of Public Health*, *25*, 397-418.

Sheard, S. (2000). Profit is a dirty word: The development of public baths and wash-houses in Britain 1847–1915. *Social History of Medicine*, *13*(1), 63-86.

Singh-Manou1, A., & Marmot, M. (2005). Role of socialization in explaining social inequalities in health. *Social Science & Medicine*, *60*(9), 2129-2133.

St Leger, L. (2004). What's the place of schools in promoting health? Are we too optimistic?. *Health Promotion International*, *19*(4), 405-408.

Szczygiel, B., & Hewitt, R. (2000). Nineteenth-century medical landscapes: John H. Rauch, Frederick Law Olmsted, and the search for salubrity. *Bulletin of the History of Medicine*, *74*(4), 708-734.

Szreter, S. (2002). Rethinking McKeown: The relationship between public health and social change. *American Journal of Public Health*, *92*(5), 722-725.

Szreter, S. (2003). The population health approach in historical perspective. *American Journal of Public Health*, *93*(3), 421-431.

Tang, K. C., Ståhl, T., Bettcher, D., & De Leeuw, E. (2014). The eighth global conference on health promotion: Health in all policies: From rhetoric to action. *Health Promotion International*, *29*(suppl_1), i1-i8.

Te Hennepe, M. (2014). ‘To preserve the skin in health’: Drainage, bodily control and the visual definition of healthy skin 1835–1900. *Medical History*, *58*(3), 397-421.

Tomory, L. (2014). The question of water quality and London's new river in the eighteenth century. *Social History of Medicine*, *27*(3), 488-507.

Trivedi, L. (2021). Maternal care and global public health: Bombay and Manchester, 1900–1950. *Social History of Medicine*, *34*(1), 46-69.

Turbil, C. (2022). Towards a medical utopia: Medicine, politics and citizenship in post-unified Italy (1861–1910). *Social History of Medicine*, *35*(1), 121-143.

Whitley, R., & Prince, M. (2006). Can urban regeneration programmes assist coping and recovery for people with mental illness? Suggestions from a qualitative case study. *Health Promotion International*, *21*(1), 19-26.

Zweigenthal, V. E., Pick, W. M., & London, L. (2023). The speciality of public health medicine in South Africa: 1974–2021. *Social History of Medicine*, *36*(1), 164-189.

Appendix E: Virchow Scoping Review of Literature Publications

Adli, M., Kleinert, S., Lafont, A., Kahn, A., & Ganten, D. (2009). Shaping future health: Berlin evolution of medicine summit. *The Lancet, 373*(9663), 519-520.

Anderson, W. (2014). Making global health history: The postcolonial worldliness of biomedicine. *Social History of Medicine, 27*(2), 372-384.

Arah, O. A. (2004). Catastrophic failures of public health. *The Lancet, 363*(9420), 1551-1552.

Armelagos, G. J., Brown, P. J., & Turner, B. (2005). Evolutionary, historical and political economic perspectives on health and disease. *Social Science & Medicine, 61*(4), 755-765.

Aslam, F., & Qayyum, M. A. (2004). Catastrophic failures of public health. *The Lancet, 363*(9420), 1553.

Banerji, D. (2002). Report of the WHO commission on macroeconomics and health: A critique. *International Journal of Health Services, 32*(4), 733-754.

Banerji, D. (2004). The people and health service development in India: A brief overview. *International Journal of Health Services, 34*(1), 123-142.

Banerji, D. (2005). Politics of rural health in India. *International Journal of Health Services, 35*(4), 783-796.

Banerji, D. (2006). Serious crisis in the practice of international health by the World Health Organization: The Commission on Social Determinants of Health. *International Journal of Health Services, 36*(4), 637-650.

Banerji, D. (2012). Reconstructing the critically damaged health service system of the country. *International Journal of Health Services, 42*(3), 439-464.

Barnett, R. (2019). Thalassaemia. *The Lancet, 394*(10204), 1135.

Barnish, M. S., Tan, S. Y., Taeihagh, A., Tørnes, M., Nelson-Horne, R. V., & Melendez-Torres, G. J. (2021). Linking political exposures to child and maternal health outcomes: A realist review. *BMC Public Health, 21*(1), 1-16.

Barrett, F. A. (2000). August Hirsch: As critic of, and contributor to, geographical medicine and medical geography. *Medical History, 44*(S20), 98-117.

Baum, F. E., Bégin, M., Houweling, T. A., & Taylor, S. (2009). Changes not for the fainthearted: Reorienting health care systems toward health equity through action on the social determinants of health. *American Journal of Public Health, 99*(11), 1967-1974.

Baum, F. E., Legge, D. G., Freeman, T., Lawless, A., Labonté, R., & Jolley, G. M. (2013). The potential for multi-disciplinary primary health care services to take action on the social determinants of health: Actions and constraints. *BMC Public Health*, *13*(1), 1-13.

Baum, F., Narayan, R., Sanders, D., Patel, V., & Quizhpe, A. (2009). Social vaccines to resist and change unhealthy social and economic structures: A useful metaphor for health promotion. *Health Promotion International*, *24*(4), 428-433.

Beaglehole, R., Bonita, R., Horton, R., Adams, O., & McKee, M. (2004). Public health in the new era: Improving health through collective action. *The Lancet*, *363*(9426), 2084-2086.

Becker, A., Al Ju'beh, K., & Watt, G. (2009). Keys to health: Justice, sovereignty, and self-determination. *The Lancet*, *373*(9668), 985-987.

Bilal, U., Knapp, E. A., & Cooper, R. S. (2018). Swing voting in the 2016 presidential election in counties where midlife mortality has been rising in white non-Hispanic Americans. *Social Science & Medicine*, *197*, 33-38

Birn, A. E. (2005). Gates's grandest challenge: Transcending technology as public health ideology. *The Lancet*, *366*(9484), 514-519.

Bozorgmehr, K., Bruchhausen, W., Hein, W., Knipper, M., Korte, R., Tinnemann, P., & Razum, O. (2013). Germany and global health: An unfinished agenda?. *The Lancet*, *382*(9906), 1702-1703.

Breton, E., & De Leeuw, E. (2011). Theories of the policy process in health promotion research: A review. *Health Promotion International*, *26*(1), 82-90.

Briggs, C. L., & Mantini-Briggs, C. (2009). Confronting health disparities: Latin American social medicine in Venezuela. *American Journal of Public Health*, *99*(3), 549-555.

Brisbois, B. W., Spiegel, J. M., & Harris, L. (2019). Health, environment and colonial legacies: Situating the science of pesticides, bananas and bodies in Ecuador. *Social Science & Medicine*, *239*, 112529.

Brown, D. R., Hernández, A., Saint-Jean, G., Evans, S., Tafari, I., Brewster, L. G., ... & Page, J. B. (2008). A participatory action research pilot study of urban health disparities using rapid assessment response and evaluation. *American Journal of Public Health*, *98*(1), 28-38.

Brown, P., Lyson, M., & Jenkins, T. (2011). From diagnosis to social diagnosis. *Social Science & Medicine*, *73*(6), 939-943.

Brown, T. M., & Fee, E. (2002). “Palliatives will no longer do”: The deep roots and continuing dynamic of community-oriented primary care. *American Journal of Public Health*, *92*(11), 1711-1712.

Brunham, R. C. (2009). Infectious disease prevention and control: Remembering 1908 and imagining 2108. *Canadian Journal of Public Health*, *100*(1), 5.

Buklijas, T. (2008). Cultures of death and politics of corpse supply: Anatomy in Vienna, 1848-1914. *Bulletin of the History of Medicine*, *82*(3), 570.

Busse, R., Blümel, M., Knieps, F., & Bärnighausen, T. (2017). Statutory health insurance in Germany: A health system shaped by 135 years of solidarity, self-governance, and competition. *The Lancet*, *390*(10097), 882-897.

Bynum, B. (2008). Road maps to health. *The Lancet*, *372*(9650), 1626-1627.

Bynum, W. (2014). When kidneys fail. *The Lancet*, *383*(9931), 1798-1799.

Chaufan, C., & Saliba, D. (2019). The global diabetes epidemic and the nonprofit state corporate complex: Equity implications of discourses, research agendas, and policy recommendations of diabetes nonprofit organizations. *Social Science & Medicine*, *223*, 77-88.

Clair, J. M., Clark, C., Hinote, B. P., Robinson, C. O., & Wasserman, J. A. (2007). Developing, integrating, and perpetuating new ways of applying sociology to health, medicine, policy, and everyday life. *Social Science & Medicine*, *64*(1), 248-258.

Clarfield, A. M., & Dechtman, I. D. (2018). Access to medical care for Palestinians in Israel: Delays in a difficult historical context. *American Journal of Public Health*, *108*(1), 15.

Clow, B. (2001). Who's afraid of Susan Sontag? Or, the myths and metaphors of cancer reconsidered. *Social History of Medicine*, *14*(2), 293-312.

Colditz, G. A. (2001). Cancer culture: Epidemics, human behavior, and the dubious search for new risk factors. *American Journal of Public Health*, *91*(3), 357.

Cole, B. L., & Fielding, J. E. (2007). Health impact assessment: A tool to help policy makers understand health beyond health care. *Annual Review of Public Health, 28*, 393-412.

Cole, S. W. (2013). Social regulation of human gene expression: Mechanisms and implications for public health. *American Journal of Public Health*, *103*(S1), S84-S92.

Contrepois, A. (2002). The clinician, germs and infectious diseases: The example of Charles Bouchard in Paris. *Medical History*, *46*(2), 197-220.

Cooper, R. S., Ordunez, P., Iraola Ferrer, M. D., Munoz, J. L. B., & Espinosa-Brito, A. (2006). Cardiovascular disease and associated risk factors in Cuba: Prospects for prevention and control. *American Journal of Public Health, 96*(1), 94-101.

Craddock, S., & Hinchliffe, S. (2015). One world, one health? Social science engagements with the one health agenda. *Social Science and Medicine. S0277-9536*(14)00739-4

David, R., & Collins Jr, J. (2007). Disparities in infant mortality: What's genetics got to do with it?. *American Journal of Public Health, 97*(7), 1191-1197.

de Leeuw, E., & Clavier, C. (2011). Healthy public in all policies. *Health Promotion International*, *26*(suppl_2), ii237-ii244.

De Maio, F., & Ansell, D. (2018). "As natural as the air around us": On the origin and development of the concept of structural violence in health research. *International Journal of Health Services*, *48*(4), 749-759.

de Miguel Salanova, S. (2023). Urban crisis and epidemic typhus in Madrid at the beginning of the twentieth century. *Social History of Medicine*, *36*(2), 235-262.

Dissmann, W., & de Ridder, M. (2002). The soft science of German cardiology. *The Lancet*, *359*(9322), 2027-2029.

Djulbegovic, B., & Guyatt, G. H. (2017). Progress in evidence-based medicine: A quarter century on. *The Lancet*, *390*(10092), 415-423.

Donohoe, M. (2003). Causes and health consequences of environmental degradation and social injustice. *Social Science & Medicine, 56*(3), 573-587.

Durrheim, D. N., & Speare, R. (2004). Communicable disease surveillance and management in a globalised world. *The Lancet*, *363*(9418), 1339-1340.

Duvivier, R. J., Abdou, M. H., Ishak, R. S., Wiley, E., & Alwan, M. B. (2017). Implications of a travel ban on US medical education and training. *The Lancet*, *389*(10079), 1603.

Eldredge, J. D., Waitzkin, H., Buchanan, H. S., Teal, J., Iriart, C., Wiley, K., & Tregear, J. (2004). The Latin American social medicine database. *BMC Public Health*, *4*(1), 1-6.

Elling, R. (2007). Reflections on the health social sciences—Then and now. *International Journal of Health Services*, *37*(4), 601-617.

Elvbakken, K. T. (2020). Physiology and hygiene in the history of nutrition science: The Norwegian case 1870–1970. *Social History of Medicine*, *33*(1), 288-308.

Engelmann, L. (2016). Photographing AIDS: On capturing a disease in pictures of people with AIDS. *Bulletin of the History of Medicine*, *90*(2), 250-278.

Engh, S. (2023). The complexities of postcolonial international health: Karl Evang in India 1953. *Medical History*, *67*(1), 23-41.

Etches, V., Frank, J., Ruggiero, E. D., & Manuel, D. (2006). Measuring population health: A review of indicators. *Annual Review of Public Health*, *27*, 29-55.

Fairchild, A. L., Rosner, D., Colgrove, J., Bayer, R., & Fried, L. P. (2010). The exodus of public health: What history can tell us about the future. *American Journal of Public Health*, *100*(1), 54-63.

Ferraro, K. F., & Holland, K. B. (2002). Physician evaluation of obesity in health surveys: "Who are you calling fat?". *Social Science & Medicine*, *55*(8), 1401-1413.

Ferre, J. C. (2016). Economic inequalities in Latin America at the base of adverse health indicators. *International Journal of Health Services*, *46*(3), 501-522.

Flynn, M. B. (2021). Global capitalism as a societal determinant of health: A conceptual framework. *Social Science & Medicine*, *268*, 113530.

Fox, D. M. (2001). The professions of public health. *American Journal of Public Health*, *91*(9), 1362-1364.

Freudenberg, N., & Tsui, E. (2014). Evidence, power, and policy change in community-based participatory research. *American Journal of Public Health*, *104*(1), 11-14.

Gaffney, A., Himmelstein, D. U., & Woolhandler, S. (2020). COVID-19 and US health financing: Perils and possibilities. *International Journal of Health Services*, *50*(4), 396-407.

Gathmann, C., Jürges, H., & Reinhold, S. (2015). Compulsory schooling reforms, education and mortality in twentieth century Europe. *Social Science & Medicine*, *127*, 74-82.

George, D. R., Whitehouse, P. J., D'Alton, S., & Ballenger, J. (2012). Through the amyloid gateway. *The Lancet*, *380*(9858), 1986-1987.

Gilligan, J. (2000). Violence in public health and preventive medicine. *The Lancet*, *355*(9217), 1802-1804.

Goldberg, D. S. (2012). Against the very idea of the politicization of public health policy. *American Journal of Public Health*, *102*(1), 44-49.

Gröhe, H. (2017). Together today for a healthy tomorrow—Germany's role in global health. *The Lancet*, *390*(10097), 831-832.

Gulis, G. (2020). Health promotion is a proactive discipline. *Health Promotion International*, *35*(6), 1253-1255.

Han, J. C., Lawlor, D. A., & Kimm, S. Y. (2010). Childhood obesity. *The Lancet*, *375*(9727), 1737-1748.

Hartmann, C. (2016). Post neoliberal public health care reforms: neoliberalism, social medicine, and persistent health inequalities in Latin America. *American Journal of Public Health*, *106*(12), 2145-2151.

Harvey, M. (2021). The political economy of health: Revisiting its Marxian origins to address 21st-century health inequalities. *American Journal of Public Health*, *111*(2), 293-300.

Harvey, M., Piñones-Rivera, C., & Holmes, S. M. (2022). Thinking with and against the social determinants of health: The Latin American social medicine (collective health) critique from Jaime Breilh. *International Journal of Health Services*, *52*(4), 433-441.

Hau, M. (2000). The holistic gaze in German medicine, 1890-1930. *Bulletin of the History of Medicine*, *74*(3), 495-524.

Havik, P. J. (2018). Public health, social medicine and disease control: Medical services, maternal care and sexually transmitted diseases in former Portuguese West Africa (1920–63). *Medical History*, *62*(4), 485-506.

Himmelstein, D. U., & Woolhandler, S. (2023). Corporate efforts to adopt and distort the social determinants of health framework. *International Journal of Social Determinants of Health and Health Services*, *53*(3), 249-252.

Holmes, S. M. (2012). The clinical gaze in the practice of migrant health: Mexican migrants in the United States. *Social Science & Medicine*, *74*(6), 873-881.

Horton, R. (2011). Offline: The hypocritic oath. *The Lancet*, *378*(9803), 1616.

Horton, R. (2014). Offline: What is the World Health Summit for?. *The Lancet*, *383*(9924), 1195.

Horton, R. (2023). Offline: Health's intercultural turn. *The Lancet*, *401*(10370), 12.

Ibrahim, S. A. (2012). Health in the age of politics. *American Journal of Public Health*, *102*(12), 2200-2200.

Ibrahim, S. A., Thomas, S. B., & Fine, M. J. (2003). Achieving health equity: An incremental journey. *American Journal of Public Health*, *93*(10), 1619-1621.

Inhorn, M. C., & Whittle, K. L. (2001). Feminism meets the "new" epidemiologies: Toward an appraisal of antifeminist biases in epidemiological research on women's health. *Social Science & Medicine*, *53*(5), 553-567.

Kaufman, J. S. (2019). Commentary: Causal inference for social exposures. *Annual Review of Public Health*, *40*, 7-21.

Kickbusch, I. (2003). The contribution of the World Health Organization to a new public health and health promotion. *American Journal of Public Health*, *93*(3), 383-388.

Kickbusch, I. (2015). The imperative of public health: Opportunity or trap?. *Health Promotion International*, *30*(2), 197-200.

Kickbusch, I., Franz, C., Holzscheiter, A., Hunger, I., Jahn, A., Köhler, C., ... & Schmidt, J. O. (2017). Germany's expanding role in global health. *The Lancet*, *390*(10097), 898-912.

Kim, D., Baum, C. F., Ganz, M. L., Subramanian, S. V., & Kawachi, I. (2011). The contextual effects of social capital on health: A cross-national instrumental variable analysis. *Social Science & Medicine*, *73*(12), 1689-1697.

Kokkinen, L. (2022). Studying social determinants of health using fuzzy-set qualitative comparative analysis: A worked example. *Social Science & Medicine*, *309*, 115241.

Koltai, J., Varchetta, F. M., McKee, M., & Stuckler, D. (2020). Deaths of despair and Brexit votes: Cross-local authority statistical analysis in England and Wales. *American Journal of Public Health*, *110*(3), 401-406.

Koplan, J. P., Bond, T. C., Merson, M. H., Reddy, K. S., Rodriguez, M. H., Sewankambo, N. K., & Wasserheit, J. N. (2009). Towards a common definition of global health. *The Lancet*, *373*(9679), 1993-1995.

Koste, J. L. (2017). American Association for the History of Medicine: Report of the Ninetieth Annual Meeting. *Bulletin of the History of Medicine*, *91*(3), 624-657.

Krieger, J., & Higgins, D. L. (2002). Housing and health: Time again for public health action. *American Journal of Public Health*, *92*(5), 758-768.

Kruger, D. H., Schneck, P., & Gelderblom, H. R. (2000). Helmut Ruska and the visualisation of viruses. *The Lancet*, *355*(9216), 1713-1717.

Kusnanto, H. (2004). Catastrophic failures of public health. *The Lancet*, 363(9420), 1552.

Kyrle, P. A., & Eichinger, S. (2005). Deep vein thrombosis. *The Lancet, 365*(9465), 1163-1174.

Labonte, R. (2013). The art of medicine: Health activism in a globalising era: Lessons past for future efforts. *The Lancet*, *381*(9884), 2158-2159.

Laine-Frigren, T. (2022). Ask the doctor: Mental hygiene among the young in Fin-de-Siècle Finland. *Social History of Medicine*, *37*(2), 292-311

Lancet. (2010). A year of German celebrations and new beginnings. *The Lancet, 376*(9748), 1195.

Lancet. (2012). Social determinants of health and outcomes in New Zealand. *The Lancet, 379*(9821), 1075.

Lane, R. (2015). Salim Yusuf: Global leader in cardiovascular disease research. *The Lancet, 386*(9994), 645.

Larkin, M. (2000). Medical history preserved. *The Lancet*, *356*(9231), 779.

Laucht, C. (2019). 'Treatment Not Trident': Medical activism, health inequality and anti-militarism in 1980s Britain. *Social History of Medicine*, *32*(4), 843-866.

Lee, S. (2023). Does democracy matter for public health?. *International Journal of Social Determinants of Health and Health Services*, *53*(1), 15-29.

Leonidas, J. C., Guelfguat, M., & Valderrama, E. (2003). Langerhans' cell histiocytosis. *The Lancet*, *361*(9365), 1293-1295.

Lessard, R., & Raynault, M. F. (2009). Public health and poverty. *Canadian Journal of Public Health*, *100*(4), 247.

Leung, Z., Middleton, D., & Morrison, K. (2012). One Health and EcoHealth in Ontario: a qualitative study exploring how holistic and integrative approaches are shaping public health practice in Ontario. *BMC Public Health*, *12*, 1-15.

Levin, B. W., & Browner, C. H. (2005). The social production of health: Critical contributions from evolutionary, biological, and cultural anthropology. *Social Science & Medicine*, *61*(4), 745-750.

Linker, B. (2007). Feet for fighting: locating disability and social medicine in First World War America. *Social History of Medicine*, *20*(1), 91-109.

Littlejohns, L. B., Smith, N., & Townend, L. (2019). Why public health matters today more than ever: The convergence of health and social policy. *Canadian Journal of Public Health*, *110*, 275-278.

Loewenberg, S. (2009). Germany to host the World Health Summit. *The Lancet*, *374*(9696), 1133-1136.

Loff, B., Burris, S., & Lazzarini, Z. (2001). Are human rights good for your health?. *The Lancet*, *358*(9296), 1901.

Lönnroth, K., Jaramillo, E., Williams, B. G., Dye, C., & Raviglione, M. (2009). Drivers of tuberculosis epidemics: The role of risk factors and social determinants. *Social Science & Medicine*, *68*(12), 2240-2246.

Mackenbach, J. P. (2013). Political conditions and life expectancy in Europe, 1900–2008. *Social Science & Medicine*, *82*, 134-146.

Mackenbach, J. P., & McKee, M. (2013). Social-democratic government and health policy in Europe: A quantitative analysis. *International Journal of Health Services*, *43*(3), 389-413.

Mak, G. (2012). Hermaphrodites on Show. The case of Katharina/Karl Hohmann and its use in nineteenth-century medical science. *Social History of Medicine*, *25*(1), 65-83.

Marcellus, L., Pauly, B., Martin, W., Revai, T., Easton, K., & MacDonald, M. (2022). Navigating conflicting value systems: A grounded theory of the process of public health equity work in the context of mental health promotion and prevention of harms of substance use. *BMC Public Health*, *22*(1), 210.

Marmot, M. (2006). Health in an unequal world. *The Lancet*, *368*(9552), 2081-2094.

Martucci, J. (2018). Religion, medicine, and politics: Catholic physicians' guilds in America, 1909–32. *Bulletin of the History of Medicine*, *92*(2), 287-316.

McKee, M., & Coker, R. (2003). Politics and science. *The Lancet*, *362*(9390), 1159.

McManus, I. C. (2005). Sir James Paget's research into medical education. *The Lancet*, *366*(9484), 506-513.

McMichael, A. J., & Beaglehole, R. (2000). The changing global context of public health. *The Lancet*, *356*(9228), 495-499.

McMichael, A. J., Neira, M., Bertollini, R., Campbell-Lendrum, D., & Hales, S. (2009). Climate change: A time of need and opportunity for the health sector. *The Lancet*, *374*(9707), 2123-2125.

Medvedyuk, S., Govender, P., & Raphael, D. (2021). The reemergence of Engels' concept of social murder in response to growing social and health inequalities. *Social Science & Medicine*, *289*, 114377.

Meyer-Renschhausen, E., & Wirz, A. (1999). Dietetics, health reform and social order: Vegetarianism as a moral physiology. The example of Maximilian Bircher-Benner (1867–1939). *Medical History*, *43*(3), 323-341.

Mitsuda, T. (2017). Entangled histories: German veterinary medicine, c. 1770–1900. *Medical History*, *61*(1), 25-47.

Monteiro, C. A., & Cannon, G. (2021). Yes, food portion sizes and people have become bigger and bigger. What is to be done?. *American Journal of Public Health*, *111*(12), 2091-2093.

Moscucci, O. (2005). Gender and cancer in Britain, 1860–1910: The emergence of cancer as a public health concern. *American Journal of Public Health*, *95*(8), 1312-1321.

Muennig, P., Fiscella, K., Tancredi, D., & Franks, P. (2010). The relative health burden of selected social and behavioral risk factors in the United States: Implications for policy. *American Journal of Public Health*, *100*(9), 1758-1764.

Muntaner, C. (2013). Democracy, authoritarianism, political conflict, and population health: A global, comparative, and historical approach. *Social Science & Medicine*, *86*, 107-112.

Muntaner, C., & Gomez, M. B. (2002). Anti-egalitarianism, legitimizing myths, racism, and "Neo-McCarthyism" in social epidemiology and public health: A review of Sally Satel's PC, MD. *International Journal of Health Services*, *32*(1), 1-17.

Napier, A. D., Ancarno, C., Butler, B., Calabrese, J., Chater, A., Chatterjee, H., ... & Woolf, K. (2014). Culture and health. *The Lancet*, *384*(9954), 1607-1639.

Nash, L. (2018). Comment: Materia medica. *Bulletin of the History of Medicine*, *92*(1), 50-54.

Navarro, V. (2009). What we mean by social determinants of health. *International Journal of Health Services*, *39*(3), 423-441.

Navarro, V., & Shi, L. (2001). The political context of social inequalities and health. *International Journal of Health Services*, *31*(1), 1-21.

Nolte, K. (2008). Carcinoma uteri and 'sexual debauchery'—morality, cancer and gender in the nineteenth century. *Social History of Medicine*, *21*(1), 31-46.

Nyce, J. M., & Timpka, T. (2012). The reformist triad and institutional forgetting of culture: A field study into twentieth-century Swedish social medicine. *International Journal of Health Services*, *42*(1), 95-107.

Ottersen, O. P., Dasgupta, J., Blouin, C., Buss, P., Chongsuvivatwong, V., Frenk, J., ... & Scheel, I. B. (2014). The Lancet–University of Oslo Commission on Global Governance for Health: The political origins of health inequity: prospects for change. *The Lancet*, *383*(9917), 630–667.

Paluzzi, J. E. (2004). A social disease/a social response: Lessons in tuberculosis from early 20th century Chile. *Social Science & Medicine*, *59*(4), 763-773.

Paradis, G. (2009). Social determinants of health: So what?. *Canadian Journal of Public Health*, *100*(3), 164.

Pearson, C. (2019). Combating canine 'visiting cards': Public hygiene and the management of dog mess in Paris since the 1920s. *Social History of Medicine*, *32*(1), 143-165.

Pentecost, M., Adams, V., Baru, R., Caduff, C., Greene, J. A., Hansen, H., ... & Ortega, F. (2021). Revitalising global social medicine. *The Lancet*, *398*(10300), 573-574.

Perri, M. G., Peoples-Sheps, M., Blue, A., Lednicky, J. A., & Prins, C. (2015). Public health education at the University of Florida: Synergism and educational innovation. *American Journal of Public Health*, *105*(S1), S83-S87.

Phelps, S. (2016). Brain ways: Meynert, Bachelard and the material imagination of the inner life. *Medical History*, *60*(3), 388-406.

Pilgrim, D. (2016). The aspiration for holism in the medical humanities: Some historical and philosophical sources of reflection. *Health*, *20*(4), 430-444.

Places, P. (2017). A Public Health of Consequence: Review of the June 2017. *American Journal of Public Health*, *107*(3), 365-367.

Pontes, M. R., & Lima, J. P. (2020). Brazil's COVID-19 response. *The Lancet*, *396*(10254), e34.

Prasad, A. (2023). Renzo Guinto: creating resilient planetary systems for health. *The Lancet*, *401*(10384), 1256.

Pross, C. (2009). The attitude of German émigré doctors towards medicine under national socialism. *Social History of Medicine*, *22*(3), 531-552.

Prüll, C. R. (2003). Part of a scientific master plan? Paul Ehrlich and the origins of his receptor concept. *Medical History*, *47*(3), 332-356.

Puska, P., & Ståhl, T. (2010). Health in all policies—the Finnish initiative: Background, principles, and current issues. *Annual Review of Public Health*, *31*, 315-328.

Rabbani, F., Shipton, L., White, F., Nuwayhid, I., London, L., Ghaffar, A., ... & Abbas, F. (2016). Schools of public health in low and middle-income countries: An imperative investment for improving the health of populations?. *BMC Public Health*, *16*(1), 1-12.

Rachlis, M. M. (2004). Moving forward with public health in Canada. *Canadian Journal of Public Health*, *95*(6), 405.

Raphael, D. (2006). Social determinants of health: Present status, unanswered questions, and future directions. *International Journal of Health Services*, *36*(4), 651-677.

Raphael, D. (2008). Shaping public policy and population health in the United States: Why is the public health community missing in action?. *International Journal of Health Services*, *38*(1), 63-94.

Raphael, D. (2009). Escaping from the phantom zone: Social determinants of health, public health units and public policy in Canada. *Health Promotion International*, *24*(2), 193-198.

Raphael, D. (2011). Mainstream media and the social determinants of health in Canada: Is it time to call it a day?. *Health Promotion International*, *26*(2), 220-229.

Raphael, D. (2015). Beyond policy analysis: The raw politics behind opposition to healthy public policy. *Health Promotion International*, *30*(2), 380-396.

Reuveny, R. (2021). Climate-related migration and population health: Social science-oriented dynamic simulation model. *BMC Public Health*, *21*, 1-22.

Ridker, P. M., MacFadyen, J. G., Thuren, T., Everett, B. M., Libby, P., Glynn, R. J., ... & Gersh, B. (2017). Effect of interleukin-1β inhibition with canakinumab on incident lung cancer in patients with atherosclerosis: Exploratory results from a randomised, double-blind, placebo-controlled trial. *The Lancet*, *390*(10105), 1833-1842.

Rock, M., Buntain, B. J., Hatfield, J. M., & Hallgrímsson, B. (2009). Animal–human connections, "One Health," and the syndemic approach to prevention. *Social Science & Medicine*, *68*(6), 991-995.

Rosenberg, C. E. (2007). Erwin H. Ackerknecht, social medicine, and the history of medicine. *Bulletin of the History of Medicine*, 511-532.

Rosenberg, C. E. (2012). Epilogue: Airs, waters, places. A status report. *Bulletin of the History of Medicine*, *86*(4), 661-670.

Rosenberg, D. Y. (2018). Political economy of infant mortality rate: Role of democracy versus good governance. *International Journal of Health Services*, *48*(3), 435-460.

Rosendaal, F. R., & Raskob, G. E. (2014). On world thrombosis day. *The Lancet*, *384*(9955), 1653-1654.

Rozenblatt, D. (2018). Work: Disease, cure, and national ethos in modern Italy. *Social History of Medicine*, *31*(2), 348-372.

Rubin, M. S., Colen, C. G., & Link, B. G. (2010). Examination of inequalities in HIV/AIDS mortality in the United States from a fundamental cause perspective. *American Journal of Public Health*, *100*(6), 1053-1059.

Ruffin, J. (2010). The science of eliminating health disparities: Embracing a new paradigm. *American Journal of Public Health*, *100*(S1), S8-S9.

Rupke, N. A. (2000). Adolf Mühry (1810–1888): Göttingen's Humboldtian medical geographer. *Medical History*, *44*(S20), 86-97.

Santelli, J. S. (2008). Medical accuracy in sexuality education: Ideology and the scientific process. *American Journal of Public Health*, *98*(10), 1786-1792.

Schweikardt, C. (2014). Autopsy issues in German federal republic transplantation legislation until 1997. *Bulletin of the History of Medicine*, *88*(4), 697-726.

Scott-Marshall, H. K. (2021). A political economy lens on health inequalities in the 21st Century. *American Journal of Public Health*, *111*(4), 553-555.

Sellers, C. (2018). To place or not to place: Toward an environmental history of modern medicine. *Bulletin of the History of Medicine*, *92*(1), 1-45.

Semenza, J. C., & Giesecke, J. (2008). Intervening to reduce inequalities in infections in Europe. *American Journal of Public Health*, *98*(5), 787-792.

Sharma, A. (2011). Medicine from the margins? Naturheilkunde from medical heterodoxy to the University of Berlin, 1889–1920. *Social History of Medicine*, *24*(2), 334-351.

Shenfield, G. (2000). Ana Marusic. *The Lancet*, *356*, 18.

Shetty, P. (2013). Martin McKee: Champion of public health in Europe. *The Lancet*, *381*(9872), 1089.

Smeeth, L., Cook, C., Thomas, S., Hall, A. J., Hubbard, R., & Vallance, P. (2006). Risk of deep vein thrombosis and pulmonary embolism after acute infection in a community setting. *The Lancet*, *367*(9516), 1075-1079.

Smith, K. E., & Stewart, E. A. (2017). Academic advocacy in public health: Disciplinary 'duty' or political 'propaganda'?. *Social Science & Medicine*, *189*, 35-43.

Stampar, A. (2006). On health politics. *American Journal of Public Health*, *96*(8), 1382-1385.

Sturdy, S. (2007). Scientific method for medical practitioners: The case method of teaching pathology in early twentieth-century Edinburgh. *Bulletin of the History of Medicine*, 760-792.

Tajer, D. (2003). Latin American social medicine: Roots, development during the 1990s, and current challenges. *American Journal of Public Health*, *93*(12), 2023-2027.

Tanous, O. (2022). Structural violence and its effects on children living in war and armed conflict zones: A Palestinian perspective. *International Journal of Health Services*, *52*(1), 5-8.

Toivanen, S., Tarantino, A. O., Emmelin, M., & Östergren, P. O. (2020). Diverting blame to stay sane-young people's strategies for dealing with the mental health effects of precarious employment: A grounded theory study. *BMC Public Health*, *20*, 1-12.

Trevisan, M., & de Camargo, K. R. (2020). Post-COVID-1 9 reflections around the world: A new AJPH forum. *American Journal of Public Health*, *110*(12), 1792-1793.

Virchow, R. C. (2006). Report on the typhus epidemic in Upper Silesia. *American Journal of Public Health*, *96*(12), 2102-2105.

Voices from the Past (2015) The realtionship of fetal and infant mortality to residential segregation: An inquiry into social epidemiology. *American Journal of Public Health*, *105* (2), 278-281

Waddington, K. (2003). " Unfit for human consumption": Tuberculosis and the problem of infected meat in late Victorian Britain. *Bulletin of the History of Medicine*, 636-661.

Waitzkin, H. (2021). Confronting the upstream causes of COVID-19 and other epidemics to follow. *International Journal of Health Services*, *51*(1), 55-58.

Waitzkin, H., Iriart, C., Estrada, A., & Lamadrid, S. (2001). Social medicine then and now: Lessons from Latin America. *American Journal of Public Health*, *91*(10), 1592-1601.

Wallace, R. G., Bergmann, L., Kock, R., Gilbert, M., Hogerwerf, L., Wallace, R., & Holmberg, M. (2015). The dawn of structural One Health: A new science tracking disease emergence along circuits of capital. *Social Science & Medicine*, *129*, 68-77.

Walter, N., Bourgois, P., & Loinaz, H. M. (2004). Masculinity and undocumented labor migration: Injured Latino day laborers in San Francisco. *Social Science & Medicine*, *59*(6), 1159-1168.

Watson, T., Shantsila, E., & Lip, G. Y. (2009). Mechanisms of thrombogenesis in atrial fibrillation: Virchow's triad revisited. *The Lancet*, *373*(9658), 155-166.

Watt, G., Giacaman, R., Zurayk, H., & Horton, R. (2014). Progress of the Lancet Palestinian health alliance. *The Lancet*, *383*(9914), e5-e6.

Watts, G. (2023). Kumanan Rasanathan: Committed advocate of equity in health. *The Lancet*, *401*(10371), 96.

Westin, S. (2008). Welfare for all—or only for the needy?. *The Lancet*, *372*(9650), 1609-1610.

Whitley, R., & Prince, M. (2006). Can urban regeneration programmes assist coping and recovery for people with mental illness? Suggestions from a qualitative case study. *Health Promotion International*, *21*(1), 19-26.

Wiist, W. H., Barker, K., Arya, N., Rohde, J., Donohoe, M., White, S., ... & Hagopian, A. (2014). The role of public health in the prevention of war: Rationale and competencies. *American Journal of Public Health*, *104*(6), e34-e47.

Wolf, M. (2015). Is there really such a thing as “one health”? Thinking about a more than human world from the perspective of cultural anthropology. *Social Science & Medicine*, *129*, 5-11.

Wright, D., Jacklin, L., & Themeles, T. (2013). Dying to get out of the asylum: Mortality and madness in four mental hospitals in Victorian Canada, c. 1841–1891. *Bulletin of the History of Medicine*, *87*(4), 591-621.

Zinsstag, J., Schelling, E., Wyss, K., & Mahamat, M. B. (2005). Potential of cooperation between human and animal health to strengthen health systems. *The Lancet*, *366*(9503), 2142-2145.

Appendix F: Engels Scoping Review of Literature Publications

Barnish, M. S., Tan, S. Y., Taeihagh, A., Tørnes, M., Nelson-Horne, R. V., & Melendez-Torres, G. J. (2021). Linking political exposures to child and maternal health outcomes: A realist review. *BMC Public Health*, *21*(1), 1-16.

Bashford, A. (2015). Comment: Bioscapes: Gendering the global history of medicine. *Bulletin of the History of Medicine*, *89*(4), 690-695.

Baum, F. E., Legge, D. G., Freeman, T., Lawless, A., Labonté, R., & Jolley, G. M. (2013). The potential for multi-disciplinary primary health care services to take action on the social determinants of health: Actions and constraints. *BMC Public Health*, *13*(1), 1-13.

Beliaeva, A. (2022). Creating the new Soviet man: The case of neurasthenia. *Social History of Medicine*, *35*(3), 927-945.

Benach, J. (2021). We must take advantage of this pandemic to make a radical social change: The coronavirus as a global health, inequality, and eco-social problem. *International Journal of Health Services*, *51*(1), 50-54.

Benach, J., Benavides, F. G., Platt, S., Diez-Roux, A., & Muntaner, C. (2000). The health-damaging potential of new types of flexible employment: A challenge for public health researchers. *American Journal of Public Health*, *90*(8), 1316.

Bhandari, S., Thomassen, Ø., & Nathan, R. (2022). Causation, historiographic approaches and the investigation of serious adverse incidents in mental health settings. *Health*, *27*(6), 1019-1032

Borras, A. M. (2021). Toward an intersectional approach to health justice. *International Journal of Health Services*, *51*(2), 206-225.

Borras, A. M. (2023). The challenge of exposing and ending health inequalities through social and policy change: Canadian experiences. *International Journal of Social Determinants of Health and Health Services*, *53*(2), 130-145.

Borras, A. M., & Mohamed, F. A. (2020). Health inequities and the shifting paradigms of food security, food insecurity, and food sovereignty. *International Journal of Health Services*, *50*(3), 299-313.

Bradshaw, M., & Ellison, C. G. (2010). Financial hardship and psychological distress: Exploring the buffering effects of religion. *Social Science & Medicine*, *71*(1), 196-204.

Brisbois, B. W., Spiegel, J. M., & Harris, L. (2019). Health, environment and colonial legacies: Situating the science of pesticides, bananas and bodies in Ecuador. *Social Science & Medicine*, *239*, 112529.

Brown, T. M., & Fee, E. (2002). "Palliatives will no longer do": The deep roots and continuing dynamic of community-oriented primary care. *American Journal of Public Health*, *92*(11), 1711-1712.

Brown, T. M., & Fee, E. (2003). Friedrich Engels: Businessman and revolutionary. *American Journal of Public Health*, *93*(8), 1248-1249.

Chaufan, C., & Saliba, D. (2019). The global diabetes epidemic and the nonprofit state corporate complex: Equity implications of discourses, research agendas, and policy recommendations of diabetes nonprofit organizations. *Social Science & Medicine*, *223*, 77-88.

Chernomas, R., & Hudson, I. (2009). Social murder: The long-term effects of conservative economic policy. *International Journal of Health Services*, *39*(1), 107-121.

Chernomas, R., & Hudson, I. (2010). Inequality as a cause of social murder. *International Journal of Health Services*, *40*(1), 61-78.

Chernomas, R., Hudson, I., & Chernomas, G. (2018). Can neoliberal capitalism affect human evolution?. *International Journal of Health Services*, *48*(1), 166-188.

Chilton, M., & Jones, S. (2020). The rights of nature and the future of public health. *American Journal of Public Health*, *110*(4), 459-460.

Cockerham, W. C., Hinote, B. P., Cockerham, G. B., & Abbott, P. (2006). Health lifestyles and political ideology in Belarus, Russia, and Ukraine. *Social Science & Medicine*, *62*(7), 1799-1809.

Crinson, I., & Yuill, C. (2008). What can alienation theory contribute to an understanding of social inequalities in health?. *International Journal of Health Services*, *38*(3), 455-470.

de Camargo Jr, K. R. (2009). A hard rain's a-gonna fall. *American Journal of Public Health*, *99*(10), 1735-1735.

De Maio, F., & Ansell, D. (2018). "As natural as the air around us": On the origin and development of the concept of structural violence in health research. *International Journal of Health Services*, *48*(4), 749-759.

Dixon, J., & Banwell, C. (2009). Theory driven research designs for explaining behavioural health risk transitions: The case of smoking. *Social Science & Medicine*, *68*(12), 2206-2214.

Edman, J. (2016). Transnational nationalism and idealistic science: The alcohol question between the wars. *Social History of Medicine*, *29*(3), 590-610.

Edman, J. (2020). A medical challenge: The alcohol disease in Sweden 1946–1955. *Social History of Medicine*, *33*(1), 224-246.

Eisenberg-Guyot, J., & Prins, S. J. (2020). Relational social class, self-rated health, and mortality in the United States. *International Journal of Health Services*, *50*(1), 7-20.

Elling, R. (2007). Reflections on the health social sciences—Then and now. *International Journal of Health Services*, *37*(4), 601-617.

Etches, V., Frank, J., Ruggiero, E. D., & Manuel, D. (2006). Measuring population health: A review of indicators. Annual Review of Public Health, *27*, 29-55.

Ferre, J. C. (2016). Economic inequalities in Latin America at the base of adverse health indicators. *International Journal of Health Services*, *46*(3), 501-522.

Flynn, M. B. (2021). Global capitalism as a societal determinant of health: A conceptual framework. *Social Science & Medicine*, *268*, 113530.

Fox, N. J. (2022). The critical (micro) political economy of health: A more-than-human approach. *Health, 28*(1), 22-39

Gathmann, C., Jürges, H., & Reinhold, S. (2015). Compulsory schooling reforms, education and mortality in twentieth century Europe. *Social Science & Medicine*, *127*, 74-82.

Goldberg, D. S. (2012). Against the very idea of the politicization of public health policy. *American Journal of Public Health*, *102*(1), 44-49.

Granados, J. A. T. (2012). Economic growth and health progress in England and Wales: 160 years of a changing relation. *Social Science & Medicine*, *74*(5), 688-695.

Han, G. S. (2000). Traditional herbal medicine in the Korean community in Australia: A strategy to cope with health demands of immigrant life. *Health, 4*(4), 426-454.

Harvey, M. (2021). The political economy of health: Revisiting its Marxian origins to address 21st-century health inequalities. *American Journal of Public Health*, *111*(2), 293-300.

Harvey, M., Piñones-Rivera, C., & Holmes, S. M. (2022). Thinking with and against the social determinants of health: The Latin American social medicine (collective health) critique from Jaime Breilh. *International Journal of Health Services, 52*(4), 433-441.

Himmelstein, D. U., & Woolhandler, S. (2023). Corporate efforts to adopt and distort the social determinants of health framework. *International Journal of Social Determinants of Health and Health Services, 53*(3), 249-252

Hinote, B. P., Cockerham, W. C., & Abbott, P. (2009). The specter of post-communism: Women and alcohol in eight post-Soviet states. *Social Science & Medicine, 68*(7), 1254-1262.

Horton, R. (2017). Offline: Medicine and Marx. *The Lancet, 390*(10107), 2026.

Hussey, K. D. (2022). 'The waste of daylight': Rhythmicity, workers' health and Britain's Edwardian daylight saving time bills. *Social History of Medicine, 35*(2), 422-443.

Johansson, M., & Partanen, T. (2002). Role of trade unions in workplace health promotion. *International Journal of Health Services, 32*(1), 179-193.

Kaufman, J. S. (2019). Commentary: Causal inference for social exposures. *Annual Review of Public Health, 40*, 7-21.

Khan, T. A., Farooqi, I., Swalehin, M., & Hamid, W. (2022). A qualitative study on the health-seeking behavior and its determinants among carpet weavers in Kashmir. *Health Promotion International, 37*(1), daab046.

Kickbusch, I. (2003). The contribution of the World Health Organization to a new public health and health promotion. *American Journal of Public Health, 93*(3), 383-388.

Krieger, J., & Higgins, D. L. (2002). Housing and health: Time again for public health action. *American Journal of Public Health, 92*(5), 758-768.

Krieger, N. (2008). Proximal, distal, and the politics of causation: What's level got to do with it?. *American Journal of Public Health, 98*(2), 221-230.

le Roux, G. M. (2005). "Whistle while you work": A historical account of some associations among music, work, and health. *American Journal of Public Health, 95*(7), 1106-1109.

Lee, S. (2023). Does democracy matter for public health?. *International Journal of Social Determinants of Health and Health Services, 53*(1), 15-29.

Lewontin, R., Levins, R. (2000). Let the numbers speak. *International Journal of Health Services, 30*(4), 873-877

Littlejohns, L. B., Smith, N., & Townend, L. (2019). Why public health matters today more than ever: The convergence of health and social policy. *Canadian Journal of Public Health, 110*, 275-278.

Loff, B., Burris, S., & Lazzarini, Z. (2001). Are human rights good for your health?. *The Lancet, 358*(9296), 1901.

Malat, J., Mayorga-Gallo, S., & Williams, D. R. (2018). The effects of whiteness on the health of whites in the USA. *Social Science & Medicine, 199*, 148-156.

Mansfield, C. J., Mitchell, J., & King, D. E. (2002). The doctor as God's mechanic? Beliefs in the Southeastern United States. *Social Science & Medicine, 54*(3), 399-409.

Marshall, W. E. (2005). Aids, race and the limits of science. *Social Science & Medicine, 60*(11), 2515-2525.

McDonough, P., Worts, D., & Sacker, A. (2010). Socioeconomic inequalities in health dynamics: A comparison of Britain and the United States. *Social Science & Medicine, 70*(2), 251-260.

Medvedyuk, S., Govender, P., & Raphael, D. (2021). The reemergence of Engels' concept of social murder in response to growing social and health inequalities. *Social Science & Medicine, 289*, 114377.

Menchik, D. A. (2014). Simmel's dynamic social medicine: New questions for studying medical institutions?. *Social Science & Medicine, 107*, 100-104.

Montenegro, C. (2023). Mental health, by the masses and for the masses. *The Lancet, 401*(10388), 1562-1563.

Muntaner, C. (2013). Democracy, authoritarianism, political conflict, and population health: A global, comparative, and historical approach. *Social Science & Medicine, 86*, 107-112.

Muntaner, C., & Benach, J. (2023). Why social (political, economic, cultural, ecological) determinants of health? Part 1: Background of a contested construct. *International Journal of Social Determinants of Health and Health Services, 53*(2), 117-121.

Muntaner, C., & Gomez, M. B. (2002). Anti-egalitarianism, legitimizing myths, tacism, and "Neo-McCarthyism" in social epidemiology and public health: A review of Sally Satel's PC, MD. *International Journal of Health Services, 32*(1), 1-17.

Namin, S., Xu, W., Zhou, Y., & Beyer, K. (2020). The legacy of the home owners' loan corporation and the political ecology of urban trees and air pollution in the United States. *Social Science & Medicine*, *246*, 112758.

Napier, A. D., Ancarno, C., Butler, B., Calabrese, J., Chater, A., Chatterjee, H., ... & Woolf, K. (2014). Culture and health. *The Lancet*, *384*(9954), 1607-1639.

Navarro, V. (2008). Looking back at the future: Why Hillarycare failed. *International Journal of Health Services*, *38*(2), 205-212.

Navarro, V. (2009). What we mean by social determinants of health. *International Journal of Health Services*, *39*(3), 423-441.

Nazroo, J. Y. (2003). The structuring of ethnic inequalities in health: Economic position, racial discrimination, and racism. *American Journal of Public Health*, *93*(2), 277-284.

Ning, A. M. (2013). How 'alternative' is CAM? Rethinking conventional dichotomies between biomedicine and complementary/alternative medicine. *Health*, *17*(2), 135-158.

Northridge, M. E. (2003). Partnering to advance public health: Making a difference through government, community, business, and academic vocations. *American Journal of Public Health*, *93*(8), 1205-1206.

Palladino, P. (2001). Medicine yesterday, today, and tomorrow. *Social History of Medicine*, *14*(3), 539-551.

Phelan, J. C., Link, B. G., & Dovidio, J. F. (2008). Stigma and prejudice: One animal or two?. *Social Science & Medicine*, *67*(3), 358-367.

Phillips, C. D., & McLeroy, K. R. (2004). Health in rural America: Remembering the importance of place. *American Journal of Public Health*, *94*(10), 1661-1663.

Raphael, D. (2006). Social determinants of health: Present status, unanswered questions, and future directions. *International Journal of Health Services*, *36*(4), 651-677.

Raphael, D. (2008). Shaping public policy and population health in the United States: Why is the public health community missing in action?. *International Journal of Health Services*, *38*(1), 63-94.

Raphael, D. (2009). Escaping from the Phantom Zone: social determinants of health, public health units and public policy in Canada. *Health Promotion International*, *24*(2), 193-198.

Raphael, D. (2011). Mainstream media and the social determinants of health in Canada: Is it time to call it a day?. *Health Promotion International*, *26*(2), 220-229.

Raphael, D. (2015). Beyond policy analysis: The raw politics behind opposition to healthy public policy. *Health Promotion International*, *30*(2), 380-396.

Raphael, D., & Bryant, T. (2022). Emerging themes in social determinants of health theory and research. *International Journal of Health Services*, *52*(4), 428-432.

Rechel, B., & McKee, M. (2009). Health reform in central and eastern Europe and the former Soviet Union. *The Lancet*, *374*(9696), 1186-1195.

Rice, J., & Rice, J. S. (2009). The concentration of disadvantage and the rise of an urban penalty: Urban slum prevalence and the social production of health inequalities in the developing countries. *International Journal of Health Services*, *39*(4), 749-770.

Richardson, E. T., Kelly, J. D., Sesay, O., Drasher, M. D., Desai, I. K., Frankfurter, R., ... & Barrie, M. B. (2017). The symbolic violence of 'outbreak': A mixed-methods, quasi-experimental impact evaluation of social protection on Ebola survivor wellbeing. *Social Science & Medicine*, *195*, 77-82.

Rushton, K. (2018). Sources and resources: The Manchester medical manuscripts collection. *Social History of Medicine*, *31*(4), 847-856.

Salmond, C., Crampton, P., King, P., & Waldegrave, C. (2006). NZiDep: a New Zealand index of socioeconomic deprivation for individuals. *Social Science & Medicine*, *62*(6), 1474-1485.

Scott-Marshall, H. K. (2021). A political economy lens on health inequalities in the 21st century. *American Journal of Public Health*, *111*(4), 553-555.

Seim, J., Corman, M., & McCann, L. (2022). Producing paramedicine: Case studies in the medical labor process. *Social Science & Medicine*, *309*, 115231.

Sellers, C. (2018). To place or not to place: Toward an environmental history of modern medicine. *Bulletin of the History of Medicine*, *92*(1), 1-45.

Shapin, S. (2019). Why was "custom a second nature" in early modern medicine?. *Bulletin of the History of Medicine*, *93*(1), 1-26.

Shaw, M. (2004). Housing and public health. *Annual Review of Public Health*, *25*, 397-418.

Smith, G. (2000). Learning to live with complexity: Ethnicity, socioeconomic position, and health in Britain and the US. *American Journal of Public Health*, *90*(11), 1694-1697.

Tanous, O. (2022). Structural violence and its effects on children living in war and armed conflict zones: A Palestinian perspective. *International Journal of Health Services*, *52*(1), 5-8.

Tipper, A. (2010). Economic models of the family and the relationship between economic status and health. *Social Science & Medicine*, *70*(10), 1567-1573.

Waitzkin, H., Iriart, C., Estrada, A., & Lamadrid, S. (2001). Social medicine then and now: Lessons from Latin America. *American Journal of Public Health*, *91*(10), 1592-1601.

Walter, N., Bourgois, P., & Loinaz, H. M. (2004). Masculinity and undocumented labor migration: Injured Latino day laborers in San Francisco. *Social Science & Medicine*, *59*(6), 1159-1168.

Warner, J., Riviere, J., & Carson, J. (2008). On wit, irony, and living with imperfection: How Britain said no to abstinence. *American Journal of Public Health*, *98*(5), 814-822.

Wise, P. H. (2003). The anatomy of a disparity in infant mortality. *Annual Review of Public Health*, *24*(1), 341-362.

Zakrison, T. L., Milian Valdés, D., & Muntaner, C. (2019). Social violence, structural violence, hate, and the trauma surgeon. *International Journal of Health Services*, *49*(4), 665-681.