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IMAGINING HEALTH PROBLEMS AS SOCIAL ISSUES

John Germov

Overview

- What is sociology and how can it be used to understand health and illness?
 - What social patterns of health and illness exist?
 - What is the social model of health and how does it differ from the medical model?
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Key terms

agency	new public health	social institutions
biological determinism	public health/public health infrastructure	social model of health
biomedicine/ biomedical model	reductionism	social structure
Cartesian dualism	social construction/ constructionism	sociological imagination
class (or social class)	social Darwinism	state
epidemiology/social epidemiology	social determinants of health (SDOH)	structure–agency debate
eugenics	social gradient of health	victim-blaming
lifestyle choices/factors		

THE FOREST THROUGH THE TREES

We live in a health-obsessed age. We are bombarded with messages from health authorities, health professionals, and fitness gurus to 'do this' and 'don't do that'. Everywhere we turn we are urged to take individual responsibility for our health. Our personal experience of illness means that we tend to view it in an individualistic way—as a product of bad luck, poor lifestyle, or genetic fate. As individuals we all want quick and effective cures when we are unwell and thus we often turn to medicine. Yet this is only part of the story. Health and illness also have social origins. Even the highly individual act of suicide occurs within a social context. For example, Australian men have a suicide rate over triple that of women; for Aboriginal and Torres Strait Islander peoples, the suicide rate is more than double the national rate (ABS 2017). In fact, the social patterning of suicide was first highlighted in the late nineteenth century by the sociologist Émile Durkheim (1858–1917). While Durkheim (1897/1951) acknowledged individual reasons for a person committing suicide, he found that suicide rates varied between countries and between different social groups within a country. By studying such social patterns, health sociology exposes the 'forest through the trees'—how individual health problems can be part of a social patterning of illness that has social origins and requires social solutions.

Introduction: the social origins of health and illness

This chapter introduces you to the sociological perspective and how it can be used to understand a wide range of health issues. Health sociology focuses on the social patterns of health and illness—such as the different health statuses between women and men, the poor and the wealthy, or the Indigenous and non-Indigenous populations—and seeks social rather than biological or psychological explanations. It provides a second opinion to the conventional medical view of illness derived from biological and psychological explanations, by exploring the social origins of health and illness—the living and working conditions that fundamentally shape why some groups of people get sicker and die sooner than others.

The **social determinants of health (SDOH)** can clearly be seen when we compare the life expectancy figures of various countries. As we all know, life expectancy in the least developed countries is significantly lower than that in economically developed and comparatively wealthy countries such as Australia, Sweden, Germany, and Japan. For example, the average life expectancy at birth of people living in the least developed countries of the world is more than 30 years less than that for developed countries such as Australia, which has an average life expectancy of 82.8 years (WHO 2016, pp. 104–8). As Table 1.1 shows, though, life expectancy varies among developed countries as well. Put bluntly, the living conditions of the country in which you live can have a significant influence on your chances of enjoying a long and healthy life.

SOCIAL DETERMINANTS OF HEALTH (SDOH)

The social, cultural, political, and economic factors that impact living and working conditions, which directly and indirectly influence individual and population health.

Table 1.1 Life expectancy at birth, 2015

COUNTRY	LIFE EXPECTANCY	
	Men	Women
Australia	80.9	84.8
Indigenous Australians (2010–12)	69.1	73.7
Canada	80.2	84.1
France	79.4	85.4
Germany	78.7	83.4
Italy	80.5	84.8
Japan	80.5	86.8
New Zealand	80.0	83.3
Māori (2013)	73	77.1
Russian Federation	64.7	76.3
Sweden	80.7	84.0
UK	79.4	83.0
US	76.9	81.6

Source: Adapted from WHO (2016), AIHW (2016); Statistics New Zealand (2015)

Australian life expectancy is one of the highest in the world, second only to Japan. This is not due to any biological advantage in the Australian gene pool, but is rather a reflection of the nation's distinctive living and working conditions. We can make such a case for two basic reasons. First, during the twentieth century, life expectancy increased for most countries. For example, Australian life expectancy has increased by more than 30 years since 1890 (AIHW 2016), which is too short a time frame for any genetic improvement to occur in a given population. Second, data compiled over decades of immigration show that the health of migrants comes to reflect that of their host country over time, rather than their country of origin. The longer migrants live in their new country, the more their health mirrors that of the local population (Marmot 1999).

While the average Australian life expectancy figure is comparatively high, it is important to distinguish between different social groups within Australia. Life expectancy figures are crude indicators of population health and actually mask significant health inequalities among social groups within a country. A **social gradient of health** exists, where the lower a person's position in the social hierarchy, the poorer their health (Marmot 2004; 2015). For example, in Australia those in the lowest socio-economic group have the highest rates of illness and premature death, use preventive services less, and have higher rates of illness-related behaviours such as smoking (AIHW 2016). Furthermore, as Table 1.1 shows, life expectancy for Indigenous Australians is around 12 years less than the national average. In fact, the current life expectancy of Indigenous Australians is closer to that of Australians born in the early twentieth century (AIHW 2016). The poorer health of indigenous populations is not an uncommon occurrence, such as the Māori in New Zealand, who also have a lower life expectancy—around 7 years less than the national average (Statistics New Zealand 2015).

SOCIAL GRADIENT OF HEALTH

A continuum of health inequality exists in most countries from high to low, where the poorest group of people have the worst health status, and each group above it has progressively better health, with the most socio-economically advantaged group having the best health status.

Introducing the sociological imagination: a template for doing sociological analysis

What is distinctive about the sociological perspective? How is sociological analysis done? The American sociologist Charles Wright Mills (1916–62) answered such questions by using the expression **sociological imagination** to describe the distinctive feature of the sociological perspective. The sociological imagination is ‘a quality of mind that seems most dramatically to promise an understanding of the intimate realities of ourselves in connection with larger social realities’ (Mills 1959, p. 15). According to Mills, the essential aspect of thinking sociologically, or seeing the world through a sociological imagination, is making a link between ‘private troubles’ and ‘public issues’.

As individuals, we may experience personal troubles without realising they are shared by other people as well. If certain problems are shared by groups of people, they may have a common cause and be best dealt with through collective action. As Mills (1959, p. 226) states, ‘many personal troubles cannot be solved merely as troubles, but must be understood in terms of public issues ... public issues must be revealed by relating them to personal troubles’. For example, the 2007–08 global financial crisis (GFC) led many people to lose their jobs and suffer a lower standard of living due to the economic downturn and government austerity measures; the ripples of which still resonate a decade later.

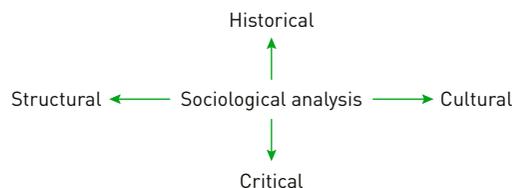
The Australian sociologist Evan Willis (1993; 2011) suggests that the sociological imagination consists of four interrelated parts:

- 1 *historical factors*: how the past influences the present;
- 2 *cultural factors*: how culture impacts on our lives;
- 3 *structural factors*: how particular forms of social organisation affect our lives;
- 4 *critical factors*: how we can improve our social environment.

This four-part sociological imagination template is an effective way to understand how to think and analyse in a sociological way. Figure 1.1 represents the sociological imagination template as a diagram that is easy to remember. Any time you want to analyse a topic sociologically, picture this diagram in your mind.

Sociological analysis involves applying these four aspects to the issues or problems under investigation. For example, a sociological analysis of why manual labourers have a shorter life expectancy would examine how and why the work done by manual labourers affects their health, by examining:

Figure 1.1 The sociological imagination template



SOCIOLOGICAL IMAGINATION

A term coined by Charles Wright Mills to describe the sociological approach to analysing issues. We see the world through a sociological imagination, or think sociologically, when we make a link between personal troubles and public issues.

- 1 *historical factors*: to understand why manual workplaces are so dangerous;
- 2 *cultural factors*: to examine whether workplace values reflect individual responsibility or a preventative ‘safety-first’ culture;
- 3 *structural factors*: to consider the way work is organised, the role of managerial authority, the rights of workers, the influence of unions, and the role of the state in effectively regulating safety at work;
- 4 *critical factors*: to explore alternatives to the status quo, such as increasing the effectiveness of occupational health and safety legislation.

By using the four parts of the sociological imagination template, you begin to ‘do’ sociological analysis. It is worth highlighting at this point that the template simplifies the process of sociological analysis. When analysing particular topics, it is more than likely that you will find that the parts overlap, making them less clear-cut than the template implies. It is also probable that for some topics, parts of the template will be more relevant and prominent than others—this is all to be expected. The benefit of the template is that it serves as a reminder of the sorts of issues and questions a budding sociologist should be asking.

SOCIAL STRUCTURE

The recurring patterns of social interaction through which people are related to each other, such as social institutions and social groups.

SOCIAL INSTITUTIONS

Formal structures within society—such as health care, government, education, religion, and the media—that are organised to address identified social needs.

AGENCY

The ability of people, individually and collectively, to influence their own lives and the society in which they live.

STRUCTURE–AGENCY DEBATE

A key debate in sociology over the extent to which human behaviour is determined by social structure.

Is society to blame? Introducing the structure–agency debate

As individuals we are brought up to believe that we control our own destiny, especially our health. It is simply up to each individual to ‘do what they wanna do and be what they wanna be’ (to paraphrase the old Masters Apprentices song). This belief ignores the considerable influence of society. Sociology makes us aware that we are social animals and are very much the product of our environment, from the way we dress to the way we interact with one another. We are all influenced by the **social structure**—our culture, customs, and **social institutions**. The idea of social structure serves to remind us of the human-created, social aspects of life, in contrast to purely random events or products of nature (López & Scott 2000).

Understanding the structure of society enables us to examine the social influences on our personal behaviour and the way we socially interact with others. Yet to what extent are we products of society? How much choice, influence or **agency** do we have over our lives? Are we solely responsible for our actions or is society to blame? These questions represent a key debate in sociology, often referred to as the **structure–agency debate**. There is no simple resolution to this debate, but it is helpful to view structure and agency as interdependent; that is, that humans both shape and are simultaneously shaped by society. In this sense, structure and agency are not ‘either/or’ propositions in the form of a choice between constraint and freedom, but are part of the interdependent processes of social life.

Structure and agency are neither inherently positive or negative. For example, the social structure should not simply be viewed in a negative way, as only serving to constrain human freedom, since in many ways the social structure enables us to live, by providing health care, welfare, education, and work. As Mills maintained, an individual ‘contributes, however minutely, to the shaping of this society and to the course of its history, even as he is made by society and by its historical push and shove’ (1959, p. 6). Mills was clearly a product of the

‘historical push and shove’ of his social structure, as he uses the masculine ‘he’ to refer to both men and women—a usage now seen as dated and sexist.

Sociologist Peter Berger long ago warned against depicting people as ‘puppets jumping about on the ends of their invisible strings’ (1966, p. 140). If we use Shakespeare’s ‘all the world’s a stage, and all the men and women merely players’ analogy, we could liken life to a theatre in which we all play our assigned roles—father, mother, child, labourer, teacher, student, and so on. Whether it is how we are dressed as we walk down the street or even how we present ourselves at a funeral, social customs and traditions dictate expected modes of behaviour. In this sense, we are all actors on a stage. Yet, we also have the scope to exercise our agency and make choices about how we act, or whether to modify or change our behaviour, roles and even the stage on which we live our lives.

Although we are born into a world not of our making, and in countless ways our actions and thoughts are shaped by our social environment, we are not simply ‘puppets on strings’. Humans are sentient beings—we are self-aware and thus have the capacity to think and act individually and collectively to change the society into which we are born. Structure and agency may be in tension, but they are interdependent; that is, one cannot exist without the other. At its core, sociology is the study of the relationship between the individual and society; it examines how human behaviour both shapes and is shaped by society, or how ‘we create society at the same time as we are created by it’ (Giddens 1986, p. 11).

Social medicine and public health

Recognition of the social origins of health and illness actually occurred prior to the formal development of sociology as an academic discipline, and can be traced to the mid-nineteenth century, with the development of ‘social medicine’ (coined by Jules Guérin in 1848) or what more commonly became known as **public health** (sometimes referred to as social health, community medicine, or preventive medicine). At this time, infectious diseases such as cholera, typhus, smallpox, diphtheria, and tuberculosis were major killers for which there were no cures and little understanding of how they were transmitted. During the nineteenth century, a number of people such as Louis-René Villermé (1782–1863), Rudolph Virchow (1821–1902), John Snow (1813–58), Edwin Chadwick (1800–90), and Friedrich Engels (1820–95) established clear links between infectious diseases and poverty (Rosen 1972; Porter 1997).

Engels, Karl Marx’s collaborator and patron, made a strong case for the links between disease and poor living and working conditions as an outcome of capitalist exploitation in *The Condition of the Working Class in England* (1845/1958). He used the case of ‘black lung’, a preventable lung disease among miners, to make the point that:

the illness does not occur in those mines which are adequately ventilated. Many examples could be given of miners who moved from well-ventilated to badly ventilated mines and caught the disease. It is solely due to the colliery owners’ greed for profit that this illness exists at all. If the coalowners would pay to have ventilation shafts installed the problem would not exist. (1845/1958, p. 281)

PUBLIC HEALTH/ PUBLIC HEALTH INFRASTRUCTURE

Public policies and infrastructure to prevent the onset and transmission of disease among the population, with a particular focus on sanitation and hygiene such as clean air, water and food, and immunisation. Public health infrastructure refers specifically to the buildings, installations, and equipment necessary to ensure healthy living conditions for the population.

CLASS (OR SOCIAL CLASS)

A position in a system of structured inequality based on the unequal distribution of power, wealth, income, and status. People who share a class position typically share similar **life chances**.

EPIDEMIOLOGY/SOCIAL EPIDEMIOLOGY

The statistical study of patterns of disease in the population. Originally focused on epidemics, or infectious diseases, it now covers non-infectious conditions such as stroke and cancer. Social epidemiology is a sub-field aligned with sociology that focuses on the social determinants of illness.

STATE

A collection of institutions involved in governance and (different levels of) social provision, such as parliament (government and opposition political parties), public-sector bureaucracy, the judiciary, military and the police. See also **social institutions**.

SOCIAL DARWINISM

The incorrect application of Charles Darwin's theory of animal evolution to explain social inequality by transferring his idea of 'survival of the fittest' among animals to 'explain' human inequality.

Engels also noted the differences in the death rates between labourers and professionals, claiming that the squalid living conditions of the working **class** were primarily responsible for the disparity, stating that 'filth and stagnant pools in the working-class quarters of the great cities have the most deleterious effects upon the health of the inhabitants' (1845/1958, p. 110).

In 1854, a cholera epidemic took place in Soho, London. John Snow, a medical doctor, documented cases on a city map and investigated all of the 93 deaths that had occurred within a well-defined geographical area. After interviewing residents, he was able to establish that people infected with cholera had sourced their water from the same public water pump in Broad Street. Snow came to the conclusion that the water from the pump was the source of cholera, and at his insistence, the pump's handle was removed, and the epidemic ceased (Snow 1855/1936; Rosen 1972; Porter 1997; McLeod 2000). This case is famous for being one of the earliest examples of the use of **epidemiology** to understand and prevent the spread of disease.

Virchow, often remembered in medical circles for his study of cellular biology, also made a clear case for the social basis of medicine, highlighting its preventive role when he claimed:

Medicine is a social science, and politics nothing but medicine on a grand scale ... if medicine is really to accomplish its great task, it must intervene in political and social life ... The improvement of medicine would eventually prolong human life, but improvement of social conditions could achieve this result even more rapidly and successfully. (cited in Rosen 1972, p. 39 and Porter 1997, p. 415)

Virchow was a significant advocate for public health care and argued that the **state** should act to redistribute social resources, particularly to improve access to adequate nutrition. Therefore, social medicine and the public health movement grew from recognition that the social environment played a significant role in the spread of disease (Rosen 1972; Porter 1997). In other words, the infectious diseases that afflicted individuals had social origins that necessitated social reforms to prevent their onset (see Rosen 1972 and 1993 and Waitzkin 2000 for informative histories of social medicine; Porter 1997 for a very readable history of medicine in general; Bloom 2002 for a history of medical sociology; and White 2001 for access to early writings on health sociology).

In the UK, Chadwick was a key figure in the development of the first *Public Health Act* (1848), which was based on his 'sanitary idea'—that disease could be prevented through improved waste disposal and sewerage systems. In particular, he focused on removing cesspools of decomposing organic matter from densely populated areas, as well as the introduction of high-pressure flushing sewers, and food hygiene laws to protect against food adulteration. Public health legislation in Australia was first introduced in Victoria in 1854, largely mirroring the British Act, with other colonies following suit (Reynolds 1995; Lawson & Bauman 2001). By the early twentieth century, public health had become part of the nation-building project in Australia, as efforts aimed at facilitating a fit, strong, and patriotic 'race' of Australians mixed with ideas about **social Darwinism** and **eugenics** that were prevalent at the time (see Powles 1988; Crotty et al. 2000). In Australia and elsewhere, public health approaches were resisted by many doctors who viewed them as unscientific and as potentially undermining the need for medical services (Porter 1997; Waitzkin 2000). Such views had some popularity given the dominant laissez-faire political philosophy of

the time, which supported only minor state intervention in economic and public affairs. Nonetheless, investment in public health was made, perhaps because infectious disease knew no class barriers (that is, it was worth spending money on the poor to prevent the spread of disease to the rich).

Despite the influence of social medicine and the success of public health measures, health care would develop in an entirely different direction. The insights of social medicine would be cast aside for almost a century as the new science of **biomedicine** gained ascendancy.

The rise of the biomedical model

In 1878, Louis Pasteur (1822–96) developed the germ theory of disease, whereby illness was caused by germs infecting organs of the human body: a model of disease that became the foundation of modern medicine. Robert Koch (1843–1910) refined this idea via the doctrine of ‘specific aetiology’ (meaning specific cause of disease) through ‘Koch’s postulates’: a set of criteria for proving that specific bacteria caused a specific disease (Dubos 1959; Capra 1982). The central idea was that specific micro-organisms caused disease by entering the human body through air, water, food, and insect bites (Porter 1997). This mono-causal model of disease, which came to be known as the medical or biomedical model, became the dominant medical paradigm by the early twentieth century. While early discoveries led to the identification of many infectious diseases, there were few effective cures.

One of the earliest applications of the scientific understanding of infectious disease was the promotion of hygiene and sterilisation procedures, particularly in surgical practice, to prevent infection through the transmission of bacteria (Capra 1982). Until the early twentieth century, it had been common practice to operate on patients without a concern for hygiene or the proper cleaning and sterilisation of equipment, resulting in high rates of post-operative infection and death.

The biomedical model is based on the assumption that each disease or ailment has a specific cause that physically affects the human body in a uniform and predictable way, meaning that universal ‘cures’ for people are theoretically possible. It involves a mechanical view of the body as a machine made up of interrelated parts, such as the skeleton and circulatory system. The role of the doctor is akin to that of a body mechanic identifying and repairing the broken parts (Capra 1982). Throughout the twentieth century, medical research, training, and practice increasingly focused on attempts to identify and eliminate specific diseases in individuals, and thus moved away from the perspective of social medicine and its focus on the social origins of disease (Najman 1980).

Before the development of medical science, quasi-religious views of health and illness were dominant, whereby illness was connected with sin, penance, and evil spirits; the body and soul were conceived as a sacred entity beyond the power of human intervention. Therefore, the ‘body as machine’ metaphor represented a significant turning point away from religious notions towards a secular view of the human body. The influence of scientific discoveries—particularly through autopsies that linked diseased organs with symptoms observed before death, as well as Pasteur’s germ theory—eventually endorsed a belief in the

EUGENICS

The study of human heredity based on the unproven assumption that selective breeding could improve the intellectual, physical, and cultural traits of a population.

BIOMEDICINE/ BIOMEDICAL MODEL

The conventional approach to medicine in Western societies, based on the diagnosis and explanation of illness as a malfunction of the body’s biological mechanisms. This approach underpins most health professions and health services, which focus on treating individuals with little attention to the social origins of illness and its potential prevention.

CARTESIAN DUALISM

A belief that the mind and body are separate entities, also called mind–body dualism and named after the philosopher René Descartes. This assumption underpins medical approaches that view disease in physical terms and thus ignore the psychological and subjective aspects of illness.

separation of body and soul. In philosophical circles, this view came to be known as mind–body dualism and is sometimes referred to as **Cartesian dualism** after the philosopher René Descartes (1590–1650). Descartes, famous for the saying ‘I think therefore I am’, suggested that although the mind and body interacted with one another, they were separate entities. Therefore, the brain was part of the physical body whereas the mind (the basis of individuality) existed in the spiritual realm and was apparent evidence of a God-given soul. Such a distinction provided the philosophical justification for secular interventions on the physical body in the form of medical therapies. Since the body was merely a vessel for the immortal soul or spirit, medicine could rightly practise on the body while religion could focus on the soul (Capra 1982; Porter 1997). The assumption of mind–body dualism underpinned the biomedical model, whereby disease was seen as located in the physical body, and thus, the mind, or mental state of a person, was considered unimportant.

The limits of biomedicine

While the biomedical model represented a significant advance in understanding disease and resulted in beneficial treatments, it has come under significant criticism from both within medicine and from a range of social and behavioural disciplines such as sociology and psychology. The major criticism is that the biomedical model underestimates the complexity of health and illness, particularly by neglecting social and psychological factors (Powles 1973).

The idea of specific aetiology in fact only applies to a limited range of infectious diseases. As early as the 1950s, René Dubos (1959, p. 102) argued that ‘most disease states are the indirect outcome of a constellation of circumstances rather than the direct result of single determinant factors’. Furthermore, Dubos noted that not all people exposed to an infectious disease contracted it. For example, we may all come into contact with someone suffering from a contagious condition such as the flu, but only a few of us will get sick. Therefore, disease causation is more complex than the biomedical model implies and is likely to involve multiple factors such as physical condition, nutrition, and stress, which affect an individual’s susceptibility to illness (Dubos 1959).

The biomedical model, underpinned by mind–body dualism and a focus on repairing the ‘broken’ parts of the machine-like body, can lead to the objectification of patients. Since disease is viewed only in physical terms, as something that can be objectively observed, treating ‘it’ takes primacy over all other considerations, and patients may become objectified as ‘diseased bodies’ or ‘cases’, rather than treated as unique individuals with particular needs. This form of criticism often underpins claims of doctors’ poor interpersonal and communication skills. Such a situation is also related to what Fritjof Capra (1982) calls ‘medical scientism’; that is, a reverence for scientific methods of measurement and observation as the most superior form of knowledge about understanding and treating disease. Therefore, patients’ thoughts, feelings, and subjective experiences of illness are considered ‘unscientific’ from this viewpoint and are mostly dismissed.

A further criticism of biomedicine is its **reductionism**. The development of medical science has led to an increasing focus on smaller and smaller features of human biology for the cause and cure of disease—from organs to cells to molecules and most recently to genes. By reducing disease to the biological, cellular, molecular, and genetic levels, the biomedical approach ignored or downplayed the social and psychological aspects of illness, so that the experience of disease was treated as if it occurred in a social vacuum. Not only does this marginalise the importance of social support networks, but it also ignores the role played by social factors such as poverty, poor working conditions, and discrimination in affecting an individual's physical and mental health.

A related outcome of reductionism has been an ever-growing number of medical specialists, such as cardiologists (heart specialists) and ophthalmologists (eye specialists), based on the assumption that each body part and function can be treated almost in isolation from the others. Such an approach has fuelled the search for 'magic bullet' cures, resulting in huge expenditure on medical drugs, technology, and surgery. It has also led to a curative and interventionist bias in medical care, often at the expense of prevention and non-medical alternatives.

Reductionism can also lead to **biological determinism**, a form of social Darwinism that assumes people's biology causes or determines their inferior social, economic, and health status. Biological determinism underpins most elitist, racist, and sexist beliefs. For example, some people argue that the poor are poor because they are born lazy and stupid. Such views have often been used to justify slavery and exploitation of indigenous people, women, children, and workers; it is a very convenient 'explanation', particularly when those at the top of the social ladder espouse it. When people argue that social or health inequalities are biologically determined, the implication is that little can or should be done to change them.

A final criticism of the biomedical model is its tendency towards **victim-blaming** (Ryan 1971) by locating the cause and cure of disease as solely within the individual. As Capra states, '[i]nstead of asking why an illness occurs, and trying to remove the conditions that lead to it, medical researchers try to understand the biological mechanisms through which the disease operates, so that they can then interfere with them' (1982, p. 150). Therefore, the individual body becomes the focus of intervention, and health and illness become primarily viewed as individual responsibilities. A preoccupation with treating the individual has the potential to legitimate a victim-blaming approach to illness, either in the form of genetic fatalism (your poor health is the result of poor genetics) or as primarily an outcome of poor **lifestyle choices**. By ignoring the social context of health and illness and locating primary responsibility for illness within the individual, there is little acknowledgment of social responsibility; that is, the need to ensure healthy living and working environments.

The critique of the biomedical model above has necessarily been a generalisation and does not imply that all doctors work from within the confines of this model. In fact, many of the criticisms of the model have come from those within the medical profession itself. While it is now widely accepted that the causes of illness are multifactorial, it is still fair to claim that the biomedical model remains the dominant influence over medical training and practice to this day.

REDUCTIONISM

The belief that all illnesses can be explained and treated by reducing them to biological and pathological factors.

BIOLOGICAL DETERMINISM

An unproven belief that individual and group behaviour and social status are an inevitable result of biology.

VICTIM-BLAMING

The process whereby social inequality is explained in terms of individuals being solely responsible for what happens to them in relation to the choices they make and their assumed psychological, cultural, and/or biological inferiority.

LIFESTYLE CHOICES/FACTORS

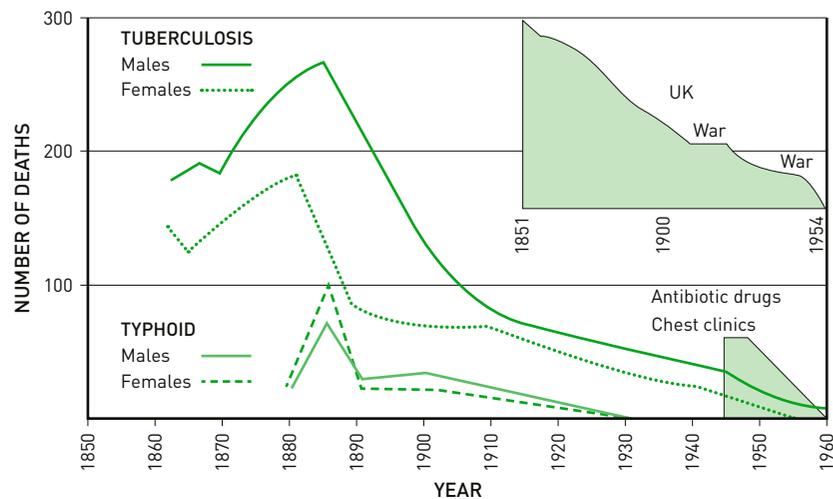
The decisions people make that are likely to impact on their health such as those relating to diet, exercise, smoking, alcohol, and other drugs. The term implies that people are solely responsible for choosing and changing their lifestyle.

Rediscovering the social origins of health and illness

Thomas McKeown (1976; 1979; 1988), a doctor and epidemiologist, was one of the earliest authors to expose the exaggerated role of medical treatment in improving population health. McKeown argued that the medical profession and governments had overestimated the influence of medical discoveries on improvements in life expectancy during the twentieth century. McKeown (1976; 1979) found that mortality (death) from most infectious diseases had declined before the development of effective medical treatments, meaning that improvements in life expectancy were not substantially due to medical intervention. Similar findings have been reported in the US (McKinlay & McKinlay 1977) and Australia (Gordon 1976; Lawson 1991). Figure 1.2 provides a graphic example of this, showing the declining rate of tuberculosis for Australia—which occurred before effective medical treatment. The same trend occurred in the UK and the US in the same period. Graphs for most infectious diseases tell a similar story (aside from smallpox and polio), indicating that the contribution of medicine to population-level improvements in life expectancy appears to have been smaller than is commonly assumed.

McKeown (1979) suggests that the major reason for the increase in life expectancy throughout the twentieth century was not due to medical treatments, but rather to rising living standards, particularly improved nutrition, which increased people's resistance to infectious disease. While McKeown's work highlighted the importance of social, non-medical interventions for improving population health, Simon Szreter (1988, p. 37) provides a more complex argument. He suggests that rather than the “invisible” hand of rising living standards, it was the state's redistribution of economic resources that increased life expectancy through improved working conditions and a range of public health measures such as better public housing, food regulation, education, and sanitation reforms.

Figure 1.2 Decline in the number of tuberculosis and typhoid deaths in Australia



Source: Gordon 1976, after graph by H. Silverstone, Department of Social and Preventive Medicine, University of Queensland; data from O. Lancaster and colleagues

While the exact contributions of public health measures, rising living standards, and medicine to improving population health is impossible to determine, the significance of McKeown's work and subsequent findings has been to highlight the importance of addressing the social origins of health and illness. As McKeown states, 'improvement in health is likely to come ... from modification of the conditions which lead to disease, rather than from intervention in the mechanism of disease after it has occurred' (1979, p. 198).

It is important to note that McKeown himself was not anti-medicine, but wanted to reform medical practice so that it focused on prevention of what he saw were the new threats to health: 'personal behaviour', as evidenced through smoking, alcohol consumption, drug taking, poor diet, and lack of exercise. Therefore, he still viewed health care in individualistic terms, by focusing preventive efforts at the level of modifying the behaviour of individuals (see Doing health sociology 1.1).

There is no denying the significant role medicine has played in the treatment of illness, particularly in trauma medicine, palliative care, and general surgery, as well as the prevention of illness through immunisation. The primary expertise of doctors lies in combating disease and attempting to treat individuals once they are ill. Yet as we have seen, this is only part of the story and has tended to obscure the social origins of health and illness.

DOING HEALTH SOCIOLOGY 1.1

From risk-taking to risk-imposing lifestyle factors

While the notion of 'lifestyle diseases' or 'diseases of affluence' is a clear indication of the social origins of illness, most disease prevention efforts have aimed to reform the individual, rather than pursue wider social reform (often ignoring the fact that diseases of affluence tend to affect the least affluent much more). By solely targeting the health-damaging behaviour of risk-taking individuals, such as smoking, alcohol abuse, poor diet and sedentary lifestyles, there has been a tendency toward victim-blaming. A focus on individual behaviour ignores the social determinants that give rise to risk-taking in the first place—the 'risk-imposing factors' and 'illness-generating social conditions' (Waitzkin 2000; Ratcliffe et al. 1984) such as poverty, unhealthy work environments, and the marketing efforts of corporations. As epidemiologist Michael Marmot (1999, p. 1) incisively puts it, there is a need to understand the 'causes of the causes'; the social determinants or social conditions that create unhealthy products, habits, and lifestyles.

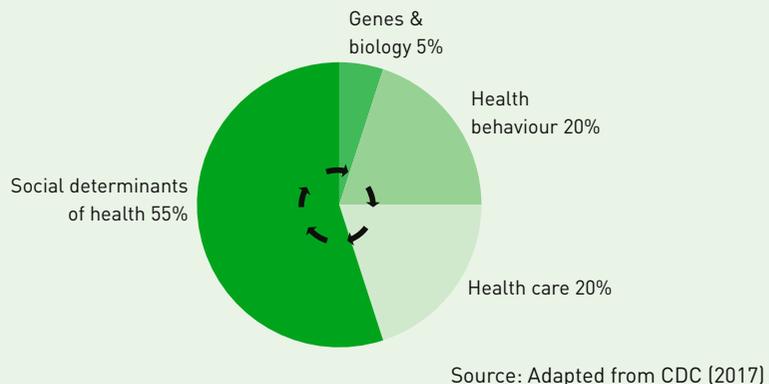
The World Health Organization (WHO) defines the social determinants as 'the conditions in which people are born, grow, live, work and age and inequities in power, money and resources that give rise to them' (WHO 2014, p. xiii). According to the medically trained Marmot (2015, p. 23), who has been one of the strongest proponents of the importance of addressing the SDOH, 'Health is too important to be left solely to doctors. Health is related not only to access to technical solutions

but to the nature of society'. Once someone is sick, access to quality health care can literally save a person's life. 'But it is not the lack of medical care that causes illness' (Marmot 2015, p. 37).

There are clearly many determinants of health, spanning biological, behavioural, social, and ecological factors, along with access to appropriate health care. The US Centers for Disease Control and Prevention (CDC 2017) estimate that the SDOH (inclusive of the physical and ecological environment) account for around 55 per cent of population health, with health care and individual behaviour contributing 20 per cent each, and 5 per cent due to genetics/biology, as depicted in Figure 1.3. While these are general estimates, it is important to note that the SDOH also interact with the other determinants (notably health behaviour and health care), as represented by the arrows, making the reality of health outcomes multifactorial.

- With the SDOH in mind, what are some 'causes of the causes' you can identify?

Figure 1.3 The major determinants of population health



The World Health Organization (WHO) effectively acknowledged this limitation of biomedicine in 1946, when it included in its constitution the now-famous holistic definition of health as 'a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity' (WHO 1946). This often-quoted definition implies that a range of biological, psychological, and social factors influence health. Furthermore, health is conceptualised as 'not merely the absence of disease', but rather in the positive sense of 'well-being'. While this definition has been criticised for its utopian and vague notion of 'complete well-being', it is of symbolic importance because it highlights the need for a broader approach to health than the biomedical model alone can deliver.

The widespread recognition of the biomedical model's limitations, from those within and outside the medical profession, has led to the development of a variety of multifactorial models, such as the biopsychosocial model (Engel 1977; 1980; Cooper et al. 1996), the web of causation model (MacMahon & Pugh 1970), **new public health** (WHO 1986; see also Petersen & Lupton 1996), and the ecological model (Hancock 1985). While these models

NEW PUBLIC HEALTH

A social model of health linking 'traditional' public health concerns about physical aspects of the environment (clean air and water, safe food, occupational safety), with concerns about the behavioural, social, and economic factors that affect people's health.

represent a significant advance on the biomedical model in acknowledging the multiple determinants of health, to greater and lesser degrees they remain focused on health interventions aimed at the individual, particularly through lifestyle/behaviour modification and health education. What is required is an explicitly **social model of health** in order to propose effective health interventions at the population and community levels (Waitzkin 2000; Ashton & Seymour 1988; Baum 2016).

The social model of health

The social model of health focuses attention on social determinants and societal level health interventions. It is sometimes used interchangeably with the SDOH and the new public health approach, but the terms have different disciplinary origins, with the new public health approach arising from the health sciences, and the social model drawn primarily from the field of health sociology. Some new public health approaches have been criticised by sociologists for an over-reliance on individualistic solutions in practice (see Lupton 1995; Petersen & Lupton 1996). Yet there are significant examples of sociologically informed approaches that can make it problematical to draw distinctions between the two terms (see especially Beaglehole & Bonita 1997; Baggott 2000; Baum 2016). A further development has been the promotion of an ecological public health model (see Rayner & Lang 2012), which suggests a greater need to address the complex interrelatedness of humans and their environment (both natural and social). For our purposes, we will use the term ‘social model of health’, as it better reflects the unique theories, research methods, and modes of analysis of health sociology discussed in this book.

The social model of health has been used as a general umbrella term to refer to approaches that focus on the social determinants of health and illness (see Broom 1991; Gillespie & Gerhardt 1995). As Dorothy Broom (1991, p. 52) states: ‘the social model locates people in social contexts, conceptualises the physical environment as socially organised, and understands ill-health as a process of interaction between people and their environments.’ It is one of the aims of this book to map out in more detail what a social model of health entails. Table 1.2 contrasts the key features of the biomedical model with the social model to highlight the different focuses, assumptions, benefits, and limitations of each. It is important to emphasise that the social model does not deny the existence of biological or psychological aspects of disease that manifest in individuals, or deny the need for medical treatment. Instead, it highlights that health and illness occur in a social context and that effective health interventions, particularly preventive efforts, need to move beyond the medical treatment of individuals. In exposing the social origins of illness, it necessarily implies that a greater balance between individual and social interventions is required, since the vast majority of health funding continues to be directed towards medical intervention. Therefore, the social model is not intended as a replacement for the biomedical model, but rather coexists alongside it.

The social model assumes that health is a social responsibility by examining the social determinants of individuals’ health status and health-related behaviour. While the

THEORY LINK

See Chapter 25 for more on the new public health approach.

SOCIAL MODEL OF HEALTH

Focuses on social determinants of health such as the social production, distribution, and construction of health and illness, and the social organisation of health care. It directs attention to the prevention of illness through community participation and social reforms that address living and working conditions. In opposition to the dominant **biomedical model**, health is understood holistically as physical, mental, psychological and social well-being as opposed to an absence of disease.

biomedical model concentrates on treating disease and risk-taking among individuals, the social model focuses on societal factors that are risk-imposing or illness-inducing (for example, toxic pollution, stressful work, discrimination, and peer pressure), and in particular highlights the health inequalities suffered by different social groups based on class, gender, ethnicity, and occupation, to name a few. What should be clear from the comparison offered in Table 1.2 is that health issues have a number of dimensions.

Table 1.2 A comparison of biomedical and social models of health: key characteristics

	BIOMEDICAL MODEL	SOCIAL MODEL
Focus	<ul style="list-style-type: none"> Individual focus: acute treatment of ill individuals Clinical services, health education, immunisation 	<ul style="list-style-type: none"> Societal focus: living and working conditions that affect health Public health infrastructure and legislation, social services, community action, equity and access issues
Assumptions	<ul style="list-style-type: none"> Health and illness are objective biological states Individual responsibility for health 	<ul style="list-style-type: none"> Health and illness are social constructions Social responsibility for health
Key indicators of illness	<ul style="list-style-type: none"> Individual pathology Hereditary/genetic factors, sex, age Risk-taking factors 	<ul style="list-style-type: none"> Social inequality Social groups: class, gender, 'race', ethnicity, age, occupation, unemployment Risk-imposing/illness-inducing factors
Causes of illness	<ul style="list-style-type: none"> Gene defects and micro-organisms (viruses, bacteria) Trauma (accidents) Behaviour/lifestyle 	<ul style="list-style-type: none"> Political/economic factors: distribution of wealth/income/power, poverty, level of social services Employment factors: access to paid work, educational opportunities, stressful and dangerous work Cultural factors: values, customs, prejudice and discrimination
Intervention	<ul style="list-style-type: none"> Cure individuals via surgery, genetic and pharmaceutical interventions Behaviour modification (non-smoking, exercise, diet) Health education and immunisation 	<ul style="list-style-type: none"> Public policy State intervention to alleviate health and social inequities Community participation, advocacy, and political lobbying
Goals	<ul style="list-style-type: none"> Cure disease, limit disability, and reduce risk factors to prevent disease in individuals 	<ul style="list-style-type: none"> Prevent illness and reduce health inequities to aim for an equality of health outcomes
Benefits	<ul style="list-style-type: none"> Addresses disease and disability of individuals Prevention of disease through immunisation 	<ul style="list-style-type: none"> Addresses the social determinants of health and illness Identifies policy solutions to prevent disease through interventions beyond the health system
Criticisms	<ul style="list-style-type: none"> Disease focus leads to lack of preventive efforts Reductionist: ignores the complexity of health and illness Fails to take into account social origins of health and illness Medical opinions can reinforce victim-blaming 	<ul style="list-style-type: none"> Utopian goal of equality can lead to unfeasible prescriptions for social change Overemphasis on the harmful side effects of biomedicine Proposed solutions can be complex and difficult to implement in the short-term Sociological opinions can underestimate individual responsibility and psychological factors

The social model logically implies that any attempts to improve the overall health of the community need to address overall living and working conditions such as poverty, employment opportunities, workplace health and safety, and cultural differences. The social model gives equal priority to the prevention of illness along with the treatment of illness, and aims to alleviate health inequalities. Such issues necessitate community participation and state interventions—including social services and public policies (such as workplace safety and pollution controls)—which lie outside the strict confines of the health system or individuals' control. It should be acknowledged that this makes the interventions proposed by advocates of the social model more complex and difficult to achieve, given their broad thrust, long-term implications, and dependence on intersectoral collaboration.

The three key dimensions of the social model of health: beyond the SDOH

The social model extends beyond the SDOH, which are now commonly acknowledged in the health sciences and by leading health authorities (see WHO 2018; CDC 2017). While the social model arose as a critique of the limitations and misapplications of the biomedical model, it draws upon sociological research and theorising, and comprises three key dimensions that are reflected in the structure of this book:

- 1 *The social production and distribution of health and illness* highlights that many illnesses are socially produced. For example, illnesses arising from exposure to hazardous work practices are often beyond an individual's control and therefore need to be addressed at a societal level, such as through occupational health and safety legislation. Furthermore, there is an unequal social distribution of health, whereby some social groups suffer higher rates of morbidity and mortality. Therefore, a focus on the social production and distribution of health and illness examines the role that living and working conditions can play in causing and alleviating illness.
- 2 *The social construction of health and illness* refers to how definitions of health and illness can vary between cultures and change over time—what is considered a disease in one culture or time period may be considered normal and healthy elsewhere and at other times. For example, homosexuality was once considered a psychiatric disorder despite the lack of scientific evidence of pathology. It is no longer medically defined as a disorder. This is an example of how cultural beliefs, social practices, and social institutions shape, or construct, the ways in which health and illness are understood. Notions of health and illness are not necessarily objective facts, but can be **social constructions** that reflect the culture, politics, and morality of a particular society at a given point in time.
- 3 *The social organisation of health care* concerns the way a particular society organises, funds, and utilises its health services. A central focus has been the dominant role of the medical profession, which has significantly shaped health policy and health funding to benefit its own interests, largely to the detriment of preventive approaches and nursing, allied, and alternative health practitioners. Unequal relationships between the health professions can prevent the efficient use of health resources and the optimal delivery of health care to patients.

SOCIAL CONSTRUCTION/ CONSTRUCTIONISM

The socially created, yet often enduring characteristics of human life, based on the idea that people actively construct reality in a way that then reacts back on their day-to-day lives. Social categorisations are neither 'natural', inevitable nor entirely relative or meaningless. Instead, notions of normality/ abnormality, right/ wrong, and health/ illness are subjective human creations, though creations with considerable consequences, that should not be taken for granted.

Conclusion

Question: What do you get when you cross a sociologist with a member of the Mafia?

Answer: An offer you can't understand.

Giddens (1996, p. 1)

A common accusation made of sociology is that it is just common sense dressed up in unnecessary jargon. The subject matter of sociology is familiar, and as members of society it is easy to think we should all be experts on the subject. This familiarity can breed suspicion and sometimes contempt. All disciplines have specialist concepts to help classify their subject matter and sociology is no different. Sociological concepts, such as those you have been introduced to in this chapter, are used to impose a sense of intellectual order on the complexities of social life; they are a form of academic shorthand to summarise a complex idea in a word or phrase.

As this chapter has shown, to understand the complexity of health and illness we need to move beyond biomedical approaches and incorporate a social model of health. Sociology enables us to understand the links between our individual experiences and the social context in which we live, work, and play. With a sociological imagination, seeing health problems as social issues can be a healthy way of opening up debate on a range of topics previously unimagined.

Summary of main points

- Much of health sociology has arisen as a critique of the dominance of the medical profession and its biomedical model.
- Health sociology examines social patterns of health and illness, particularly various forms of health inequality, and seeks to explain them by examining the influence of society. When groups of people experience similar health problems, there are likely to be social origins that require social action to address them.
- The sociological imagination, or sociological analysis, involves four interrelated features—historical, cultural, structural, and critical—which can be applied to understand health problems as social issues.
- Health sociology challenges individualistic and biological explanations of health and illness through a social model of health that involves three key dimensions: the social production and distribution of health, the social construction of health, and the social organisation of health care.

SOCIOLOGICAL REFLECTION

A SOCIOLOGICAL AUTOBIOGRAPHY

Apply the four parts of the sociological imagination template to explain the person you have become. In other words, write a short sociological autobiography by briefly noting the various things that have influenced you directly or indirectly in terms of your beliefs, interests, and behaviour.

- Historical factors: how has your family background or key past events and experiences shaped the person you are?
- Structural factors: how have various social institutions influenced you?
- Cultural factors: what role have cultural background, traditions, and belief systems played in forming your opinions and influencing your behaviour?
- Critical factors: have your values and opinions about what you consider important changed over time? Why or why not?

Complete another sociological reflection, this time applying the sociological imagination template to a health problem of interest to you. Briefly note any key points that come to mind under the four parts of the template. What insights can you derive by adopting a sociological imagination?

DISCUSSION QUESTIONS

- 1 How can illness have social origins? Consider the social gradient of health and examples of the social determinants of health in your answer.
- 2 What are the advantages and limitations of the biomedical model?
- 3 What have been some of the consequences of the dominance of biomedical explanations for our understanding of health and illness?
- 4 Why did the insights of social medicine/public health approaches have such a limited influence over the development of modern medicine?
- 5 What are the three key dimensions of the social model of health? Provide examples of each in your answer. What are the advantages and limitations of the model?
- 6 In 1946, the World Health Organization defined health as 'a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity'. Why might some groups regard this definition as 'radical' and utopian? Who might these groups consist of? What do you think of the definition?

FURTHER INVESTIGATION

- 1 Using the three dimensions of the social model of health as a guide, examine the evidence for effective social interventions to prevent disease and address health inequality.
- 2 The influence of the biomedical model is waning—the future belongs to the social determinants of health. Discuss.
- 3 Illness is simply a matter of bad luck, bad judgment, or bad genetics. Critically analyse this statement by applying a sociological imagination to explore the social origins of illness.

FURTHER READING

Australia's Adult Health Tracker 2016: <www.vu.edu.au/sites/default/files/australias-health-tracker-adult.pdf>.

Australian Institute of Health and Welfare (AIHW) 2016, *Australia's Health 2016*, AIHW, Canberra.

Baum, F. 2016, *The New Public Health*, 4th edn, Oxford University Press, Melbourne.

Blaxter, M. 2010, *Health*, 2nd edn, Polity Press, Cambridge.

Gabe, J. & Monaghan, L. 2013, *Key Concepts in Medical Sociology*, 2nd edn, Sage, London.

Germov, J. & Poole, M. (eds) 2019, *Public Sociology: An Introduction to Australian Society*, 4th edn, Allen & Unwin, Sydney.

Marmot, M. 2015, *The Health Gap: The Challenge of an Unequal World*, Bloomsbury Press, London.

Ratcliff, K.S. 2017, *The Social Determinants of Health: Looking Upstream*, Polity Press, Cambridge.

World Health Organization (WHO) 2014, *Review of Social Determinants and the Health Divide in the WHO European Region: Final Report*, Copenhagen, WHO Regional Office for Europe.

WEB RESOURCES

Adult Health Tracker (Australia):
<www.atlasesaustralia.com.au/ahpc>.

American Sociological Association: Medical Sociology: <www.asanet.org/communities/sections/sites/medical-sociology>.

Australian Institute of Health and Welfare (AIHW):
<www.aihw.gov.au>.

British Sociological Association: Medical Sociology (MedSoc) Study Group: <www.britsoc.co.uk/groups/medical-sociology-groups/medical-sociology-medsoc-study-group>.

Centers for Disease Control and Prevention (CDC): Social Determinants of Health:
<www.cdc.gov/socialdeterminants>.

Public Health Association of Australia (PHAA): <www.phaa.net.au>.

World Health Organization (WHO): Social Determinants of Health:
<www.who.int/social_determinants/en>.

DOCUMENTARIES/FILMS

Boyer Lectures 2016: Fair Australia: Social Justice and the Health Gap (2016): Four x 60-minute podcasts; <www.abc.net.au/radionational/programs/breakfast/boyer-lectures-michael-marmot-social-determinants-ill-health/7636982>

Michael Marmot discusses how social determinants such as birthplace and income can have a greater effect on our lives than access to healthcare.

The Trouble with Medicine (1993): Six x 55-minute episodes

A documentary series dealing with various challenges and limitations relating to biomedicine.

Unnatural Causes (2009): Seven episodes—one x 56 minutes and six x 27 minutes (approx.)

Provides examples of the ways inequality impacts health in the US by leading social determinants of health scholar, Michael Marmot.

REFERENCES

- Ashton, J. & Seymour, H. 1988, *The New Public Health: The Liverpool Experience*, Open University Press, Milton Keynes.
- Australian Bureau of Statistics (ABS) 2017, *Causes of Death Australia, 2016*, Cat. no. 3303.0, ABS, Canberra.
- Australian Institute of Health and Welfare (AIHW) 2016, *Australia's Health 2016*, AIHW, Canberra.
- Baggott, R. 2000, *Public Health: Policy and Politics*, Palgrave, Basingstoke.
- Baum, F. 2016, *The New Public Health*, 4th edn, Oxford University Press, Melbourne.
- Beaglehole, R. & Bonita, R. 1997, *Public Health at the Crossroads*, Cambridge University Press, Cambridge.
- Berger, P.L. 1966, *Invitation to Sociology: A Humanistic Perspective*, Penguin, Harmondsworth.
- Bloom, S. 2002, *The Word as Scalpel: A History of Medical Sociology*, Oxford University Press, New York.
- Broom, D. 1991, *Damned if We Do: Contradictions in Women's Health Care*, Allen & Unwin, Sydney.
- Capra, F. 1982, *The Turning Point: Science, Society and the Rising Culture*, Simon & Schuster, New York.
- CDC 2017, *Social Determinants of Health: Frequently Asked Questions*, Centers for Disease Control and Prevention (CDC): <www.cdc.gov/nchhstp/socialdeterminants/faq.html>.
- Cooper, N., Stevenson, C. & Hale, G. (eds) 1996, *Integrating Perspectives on Health*, Open University Press, Buckingham.
- Crotty, M., Germov, J. & Rodwell, G. (eds) 2000, "'A race for a place": eugenics, Darwinism and social thought and practice in Australia', *Proceedings of the History & Sociology of Eugenics Conference*, University of Newcastle, 27–28 April, Faculty of Arts and Social Science, University of Newcastle, Newcastle.
- Dubos, R. 1959, *Mirage of Health: Utopias, Progress, and Biological Change*, Harper & Row, New York.
- Durkheim, E. 1897/1951, *Suicide: A Study in Sociology*, Free Press, Glencoe.
- Engel, G.L. 1977, 'The need for a new medical model: a challenge for biomedicine', *Science*, vol. 196, no. 4286, pp. 129–36.
- Engel, G.L. 1980, 'The clinical application of the biopsychosocial model', *American Journal of Psychiatry*, vol. 137, no. 5, pp. 535–44.
- Engels, F. 1845/1958, *The Condition of the Working Class in England*, trans. W.O. Henderson & W.H. Chaloner, Basil Blackwell, Oxford.
- Giddens, A. 1986, *Sociology: A Brief but Critical Introduction*, 2nd edn, Macmillan, London.
- Giddens, A. 1996, *In Defence of Sociology: Essays, Interpretations and Rejoinders*, Polity Press, Cambridge.
- Gillespie, R. & Gerhardt, C. 1995, 'Social dimensions of sickness and disability', in G. Moon & R. Gillespie (eds), *Society and Health: An Introduction to Social Science for Health Professionals*, Routledge, London, pp. 79–94.
- Gordon, D. 1976, *Health, Sickness and Society: Theoretical Concepts in Social and Preventive Medicine*, University of Queensland Press, Brisbane.
- Guérin, J. 1848, 'Medicine sociale', *Gazette Medicale de Paris*, No. 11, 11 de mars.
- Hancock, T. 1985, 'The mandala of health: a model of the human ecosystem', *Family and Community Health*, November, vol. 8, no. 1, pp. 1–10.
- Lawson, J.S. 1991, *Public Health Australia: An Introduction*, McGraw-Hill, Sydney.
- Lawson, J.S. & Bauman, A.E. 2001, *Public Health Australia: An Introduction*, McGraw-Hill, Sydney.

- López, J. & Scott, J. 2000, *Social Structure*, Open University Press, Buckingham.
- Lupton, D. 1995, *The Imperative of Health: Public Health and the Regulated Body*, Sage, London.
- MacMahon, B. & Pugh, T.F. 1970, *Epidemiological Principles and Methods*, Little Brown, Boston.
- Marmot, M.G. 1999, 'Introduction', in M. Marmot & R.G. Wilkinson (eds), *Social Determinants of Health*, Oxford University Press, Oxford.
- Marmot, M. 2004, *Status Syndrome: How your Social Standing Directly Affects your Health and Life Expectancy*, Bloomsbury, Oxford.
- Marmot, M. 2015, *The Health Gap: The Challenge of an Unequal World*, Bloomsbury Press, London.
- McKeown, T. 1976, *The Role of Medicine: Dream, Mirage or Nemesis?*, Nuffield Hospital Trust, London.
- McKeown, T. 1979, *The Role of Medicine: Dream, Mirage or Nemesis?*, 2nd edn, Basil Blackwell, Oxford.
- McKeown, T. 1988, *The Origins of Human Disease*, Basil Blackwell, Oxford.
- McKinlay, J.B. & McKinlay, S.M. 1977, 'The questionable effect of medical measures on the decline of mortality in the United States in the twentieth century', *Milbank Memorial Fund Quarterly*, vol. 55, no. 3, pp. 405–28.
- McLeod, K.S. 2000, 'Our sense of Snow: the myth of John Snow in medical geography', *Social Science & Medicine*, vol. 50, no. 7, pp. 923–35.
- Mills, C.W. 1959, *The Sociological Imagination*, Oxford University Press, New York.
- Najman, J. 1980, 'Theories of disease causation and the concept of general susceptibility: a review', *Social Science & Medicine*, vol. 14A, no. 3, pp. 231–7.
- Petersen, A. & Lupton, D. 1996, *The New Public Health: Health and Self in the Age of Risk*, Allen & Unwin, Sydney, and Sage, London.
- Porter, R. 1997, *The Greatest Benefit to Mankind: A Medical History of Humanity from Antiquity to the Present*, HarperCollins, London.
- Powles, J. 1973, 'On the limitation of modern medicine', *Science, Medicine and Man*, vol. 1, no. 1, pp. 1–30.
- Powles, J. 1988, 'Professional hygienists and the health of a nation', in R. MacLeod (ed.), *The Commonwealth of Science: ANZAAS and the Scientific Enterprise in Australasia 1888–1988*, Oxford University Press, Melbourne, pp. 292–307.
- Ratcliffe, J., Wallack, L., Fagnani, F. & Rodwin, V. 1984, 'Perspectives on prevention: health promotion vs health protection', in J. de Kervasdoué, J.R. Kimberley & G. Rodwin (eds), *The End of an Illusion: The Future of Health Policy in Western Industrialized Nations*, University of California Press, Berkeley, CA, pp. 56–84.
- Rayner, G. & Lang, T. 2012, *Ecological Public Health: Reshaping the Conditions for Good Health*, Routledge, Oxford.
- Reynolds, C. 1995, *Public Health Law in Australia*, Federation Press, Leichhardt.
- Rosen, G. 1972, 'The evolution of social medicine', in H.E. Freeman, S. Levine & L.G. Reeder (eds), *Handbook of Medical Sociology*, 2nd edn, Prentice Hall, Englewood Cliffs, NJ, pp. 30–60.
- Rosen, G. 1993, *A History of Public Health*, Johns Hopkins University Press, New York.
- Ryan, W. 1971, *Blaming the Victim*, Vintage, New York.
- Snow, J. 1855/1936, *On the Mode of Communication of Cholera* [reprinted as *Snow on Cholera*], Hafner, New York.
- Statistics New Zealand 2015, *New Zealand Period Life Tables: 2012–14*: <www.stats.govt.nz/browse_for_stats/health/life_expectancy/NZLifeTables_HOTP12-14.aspx>.
- Szreter S. 1988, 'The importance of social intervention in Britain's mortality decline c. 1850–1914: a re-interpretation of the role of public health', *Society for the Social History of Medicine*, vol. 1, no. 1, pp. 1–37.

- Waitzkin, H. 2000, *The Second Sickness: Contradictions of Capitalist Health Care*, 2nd edn, Rowman & Littlefield, Lanham.
- White, K. (ed.) 2001, *The Early Sociology of Health and Illness*, 6 vols, Routledge, London.
- Willis, E. 1993, *The Sociological Quest: An Introduction to the Study of Social Life*, Allen & Unwin, Sydney.
- Willis, E. 2011, *The Sociological Quest: An Introduction to the Study of Social Life*, 5th edn, Allen & Unwin, Sydney.
- World Health Organization (WHO) 1946, *Constitution of the World Health Organization*, WHO, Geneva.
- World Health Organization (WHO) 1986, *Ottawa Charter for Health Promotion, First International Conference on Health Promotion: The Move Towards a New Public Health*, 17–21 November, WHO, Ottawa (Canada) & Geneva.
- World Health Organisation (WHO) 2014, *Review of Social Determinants and the Health Divide in the WHO European Region: Final Report*, WHO Regional Office for Europe, Copenhagen.
- World Health Organization (WHO) 2016, *World Health Statistics: Monitoring Health for the SDGs*, WHO, Geneva.
- World Health Organization (WHO) 2018, *Social Determinants of Health: About Social Determinants of Health*, WHO, Geneva: http://www.who.int/social_determinants/sdh_definition/en/.