

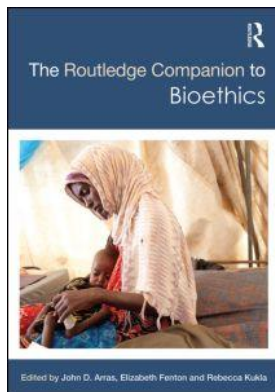
This article was downloaded by: 10.2.97.136

On: 30 Sep 2023

Access details: *subscription number*

Publisher: *Routledge*

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: 5 Howick Place, London SW1P 1WG, UK



The Routledge Companion to Bioethics

John D. Arras, Elizabeth Fenton, Rebecca Kukla

Social Determinants of Health and Health Inequalities

Publication details

<https://test.routledgehandbooks.com/doi/10.4324/9780203804971.ch2>

Sridhar Venkatapuram, Michael Marmot

Published online on: 12 Dec 2014

How to cite :- Sridhar Venkatapuram, Michael Marmot. 12 Dec 2014, *Social Determinants of Health and Health Inequalities from: The Routledge Companion to Bioethics* Routledge

Accessed on: 30 Sep 2023

<https://test.routledgehandbooks.com/doi/10.4324/9780203804971.ch2>

PLEASE SCROLL DOWN FOR DOCUMENT

Full terms and conditions of use: <https://test.routledgehandbooks.com/legal-notices/terms>

This Document PDF may be used for research, teaching and private study purposes. Any substantial or systematic reproductions, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The publisher shall not be liable for an loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

SOCIAL DETERMINANTS OF HEALTH AND HEALTH INEQUALITIES

Sridhar Venkatapuram and Michael Marmot

Introduction

After a number of years during which bioethics seemed to have become static and was even called boring (Jonsen 2000), various internal and external factors are reshaping its scope and methodologies. Two calls coming from within the field are for bioethics to “broaden” and to “globalize” (Wikler 1997; Brock 2000; Macklin 2001; Benatar et al. 2005; Daniels 2006; Green et al. 2008; Millum and Emanuel 2012). However, either call can be understood narrowly or robustly. A restrained view of broadening could mean expanding the scope of bioethics beyond the clinic and the bio-lab, while remaining confined to particular national borders. And a narrow understanding of globalizing bioethics would mean simply exporting the familiar and possibly staid analyses and methods to other faraway places, namely, less developed countries where the discipline is still nascent.

The present chapter discusses the subject of *social determinants of health* (SDH)—how understanding them and reasoning about their ethical dimensions motivates broadening and globalizing bioethics in the most robust sense possible. The increasing and necessary engagement between, on the one hand, the empirical study of the social determinants of human health and, on the other hand, ethics (and philosophy more generally), should motivate bioethics to expand its scope of analysis far beyond the clinic and bio-lab, and even beyond the healthcare sector. Furthermore, the engagement also motivates expanding the scope of moral concern beyond national borders to include all living human beings, as well as those of future generations. Engaging with SDH literature, and the study of the social context of health more broadly, provides an opportunity for bioethics to truly become the study of the ethics of human life (Rose 2007, 2013).

Over the past few decades, while many bioethicists have focused their attention on ethical issues within the clinic and the bio-lab, a large body of empirical knowledge from a wide variety of disciplines and professional practices has been growing around them about the causes, social distributions (i.e., inequalities), differential experiences, persistence, non-health consequences, and possible social responses to preventable disease, disability, and premature mortality within and across countries. Much of this vast empirical literature and surrounding discussions were considered outside the purview of

bioethics, or were simply ignored. A sympathetic reading of the history of bioethics could be that in the face of so many pressing ethical issues related to health within the clinical and lab setting, and being a relatively new area of scholarly inquiry, drawing the discipline's boundaries around the clinic and lab was necessary. It may also be that the traditional philosophical tools and training of bioethicists as well as their lack of grounding in various relevant empirical disciplines limited their abilities to recognize and engage with the numerous ethical issues being raised in the growing corpus of literature on the social context and multiple dimensions of human health (Callahan 1980; Wikler 1997; Schuklenk 2003).

So what has changed? What has happened to motivate bioethicists to begin considering more thoroughly the ethics of health in a broader social and global context? The call to globalize bioethics is surely a consequence of increased globalization across all spheres of social and political life. More specifically, there has been the rise of "global health" as a conceptual framework of analysis, partly as a result of new and resurgent health threats crossing borders more quickly (Birn 2009). This has increased both the recognition of many transnational factors affecting health everywhere and of shared global vulnerability. There has also been an explosion of global public health academic programs and research centers in the United States and Europe that seek to work in or across multiple developing countries. Funding for global health has also significantly increased from about \$5.66 billion in 1990 to about \$26.87 billion by 2010 (Murray et al. 2011). A globalized bioethics thus seems to be responding to such factors as the increasing awareness of global health interdependence, scale of global health inequalities, the global health concept, and increasing activity in the international dimensions of medicine, public health, and health research.

The second call for broadening the scope for bioethics is primarily coming from bioethicists recently becoming exposed to and engaging with epidemiological research on social determinants of health and social inequalities in health (Marchand et al. 1998; Daniels et al. 1999; Marchand and Wikler 2002; Powers and Faden 2008). A broader bioethics would also aim to integrate a number of substantive ethical arguments about health equity, health justice, and global health justice informed by SDH coming from those working outside of traditional clinical bioethics (Evans et al. 2001; Pogge 2001; Sen 2002b; Farmer 2003; Chatterjee 2004; Barry 2005; Anand et al. 2006; Marmot 2006b; Turner 2006; Segall 2009; Ruger 2010; Venkatapuram 2011; Taket 2012).

Historically, bioethics has largely drawn on moral philosophy to evaluate the dyadic relationship between the physician and patient, or researcher and subject, and advances in health technology (Hope et al. 2008; Beauchamp and Childress 2009). In contrast, SDH directly raise issues about social justice and equity, which requires drawing on political philosophy, because SDH illuminate how multiple dimensions of health, including causes and social patterning, are significantly socially produced. From a justice perspective, health is not only a good that is valuable to people which society may try to provide to some extent, it is also unjust if social conditions are impairing people's health (Peter and Evans 2001; Commission on Social Determinants of Health 2008). An SDH perspective contrasts sharply with the common understanding that health is largely an individual phenomenon; that it is a "natural good" affected by random luck and individual behavior over the life course, and best addressed through behavior modifications and access to preventive and curative healthcare (Rawls 1971: 62; Walzer 1983; Dworkin 1993; Rawls 1993: 20; World Health Organization 2000: 4). Recognizing SDH expands the scope of moral concern for

health beyond the individual and healthcare to include social conditions. An ethical perspective on SDH raises questions about the morality of the functioning of diverse social institutions and processes, within and across countries, and over time. Such ethical evaluation of SDH requires engaging with social/global justice philosophy and other branches of philosophy as well as various relevant empirical disciplines—those disciplines that examine the health impacts of the functioning of social institutions and process, within and across countries as well as disciplines that develop, evaluate, and implement social responses (Anand et al. 2006; Wikler and Brock 2008).

“Social determinants of health” is a phrase that emerges from the discipline of epidemiology, the science that identifies the determinants and distribution of morbidity and mortality. However, in the present discussion, the phrase is used broadly to encompass research and activity related to SDH in many disciplines and professional practices. Such broad use of the term is intended to highlight that while epidemiological research on SDH has recently come to the attention of philosophers, many disciplines have been identifying and ethically evaluating SDH and health inequalities, and still continue to do so.

Furthermore, the following discussion reflects a view of bioethics as having disciplinary borders and presents various arguments and individuals as being internal or external to the discipline. Since the birth of academic bioethics, the borders of the discipline or “field” have been constantly shifting, as they are now. What criteria should be used to determine whether a philosophical argument or scholar is within or outside bioethics is an important question. However, that question is not directly addressed here. For ease of discussion on the past and future engagement between bioethics and SDH, bioethics is understood in its mainstream form—the study of the ethics of medical care and biological research. While it is true that bioethics is not exclusively that, the calls to broaden and globalize bioethics are implicitly based on the current scope and other aspects of the discipline being identifiable to some meaningful extent. The following discussion brings these two calls into sharper relief by identifying some disciplinary reasons why bioethics and political philosophy have only recently begun engaging with SDH research. It is a necessary and most welcome engagement. But the initial exchanges have not been as smooth or mutually beneficial as they could be. Interdisciplinary engagements can sometimes be fraught with cross-communication, misunderstandings, or feelings of inequitable benefits. With nothing less than moral judgments about the state of societies and the health of human kind being at stake in the ethical evaluation of SDH, the engagement between bioethicists/philosophers and SDH researchers and policy advocates needs to be carefully undertaken.

A final note on language is that while much of the literature in epidemiology and elsewhere uses the phrase “social determinants of health,” in actuality, the language refers to the social determinants of disease, disability, illness, mortality, and other such negative states. Moreover, the concept of health itself is contested and in flux (Nordenfelt et al. 2001; Cribb 2005; Blaxter 2010; Venkatapuram 2011). Important advances in knowledge have also recently occurred about various dimensions of “positive health” (e.g., wellbeing, longevity, resilience, happiness, life satisfaction) (Diener et al. 1999; Ryan and Deci 2001; Huppert et al. 2005). However, despite their profound implications for the present discussion we set aside debates on conceptions of health and research on positive health. Unless stated as otherwise, SDH below refers to the social determinants of ill-health and premature mortality.

The discussion is organized as follows. The second section presents a brief recent history of sources internal and external to mainstream bioethics that have highlighted

SDH and their ethical dimensions. The third section focuses on the science of epidemiology, how SDH research is transforming the prevailing explanatory paradigm in epidemiology, and the insights social epidemiology has so far provided. The fourth section discusses some links between SDH and social justice philosophy. The fifth section concludes.

Bioethics and Health Injustice

At least since the late 1970s researchers and practitioners working outside both bioethics and philosophy have been drawing attention to a wide range of SDH and related ethical issues at the individual, social group, and national population levels. An incomplete list includes epidemiologists researching the social determinants of morbidity and mortality as well as the social gradient in health achievements (“health inequalities”); women’s health and HIV/AIDS activists; practitioners of social medicine; international health and development researchers; sociologists; political scientists; anthropologists; and economists. Rather than dilemmas posed by conflicting moral principles, the ethical analyses largely involved claims of inequity and injustice related to such aspects as the causes, distribution patterns, non-health consequences, persistence through generations, experience of illness and mortality, and social responses. Many of the identified injustices related to discrimination, neglect, exploitation, egregious violations of bodily integrity as well as poor reasoning in health policies and other social policies that impact health.

Starting in the late-1980s physicians, HIV/AIDS and health activists, international lawyers, and even academic researchers increasingly expressed their ethical analyses using the language of rights, particularly human rights (Mann et al. 1994). However, some philosophers, including some bioethicists, often found these claims unconvincing and incoherent (Wikler 1997: 187). Outside of rights expressly articulated in law, there has been longstanding philosophical skepticism of the idea of “natural rights,” and by extension, human rights. Such skepticism of non-legal rights dates back to at least the eighteenth century, when Jeremy Bentham resolutely criticized the notion of natural rights invoked in the French Declaration of the Rights of Man and the Citizen (Bentham 1843). So, for example, every citizen or human being having a moral right to healthcare was received as empty rhetoric (Fried 1976; Daniels 1985: 4–5; Forman 2010). A popular criticism was derived from Robert Nozick’s well known argument that things (i.e., healthcare) just do not appear like “manna from heaven” which then can be distributed among individuals. A physician’s labor as well as healthcare goods and services are property that belongs to someone with historical and other legitimate claims. Rights language is seen to ride roughshod over legitimate rules of property ownership. But property ownership has been only one among other worries about a moral or human right to healthcare (Nozick 1974; Fried 1976; Walzer 1983; Daniels 1985: 114–39; Glendon 1991; Human Rights Program, Harvard Law School and Francois-Xavier Bagnoud Center for Health and Human Rights, Harvard School of Public Health 1993).

An argument for a human right to health was dismissed as doubly incoherent for invoking moral rights as well as a claim to be healthy, something that is not plausible for everyone or at all times (Fried 1976; Daniels 1985; Toebes 1999). However, more recently, increasing numbers of philosophers have been identifying the moral foundations for human rights as well as a human right to health. While it seems more plausible than ever that the philosophy of human rights and claims of “real world” health inequity

and injustice can be brought together, the debates about the foundations and coherence of a human right to health continues to be vibrant and contentious (Pogge 2002; Farmer 2003; Sen 2004; O'Neill 2005; Vizard 2006; Beyrer and Pizer 2007; Arras and Fenton 2009; Harrington and Stuttaford 2010; Venkatapuram 2011; Preda 2012; Sen 2012; Wolff 2012).

Furthermore, a dominant tradition in liberal political philosophy sees social justice as being centered on a social contract (Kymlicka 2002: 53–101; Nussbaum 2006). And for a theoretical social contract to be formed, there have to be some basic prerequisite “circumstances of justice,” including a moderate scarcity of resources (Rawls 1971: 126–30). Where there are few or no material resources, there is seen to be little purpose or possibility for social cooperation, so the concept of justice never gets off the ground. Such theoretical structures and assumptions have meant that discussions about justice in resource poor settings (i.e., poor countries) have been a non-starter; justice simply does not apply in those settings. To try to deal with this particular conceptual architecture in social justice philosophy, some initial theorists of global justice aimed to develop a global social contract where the world's resources are commonly held (Beitz 1975; Pogge 1989; Blake and Smith 2013). In any case, the skepticism of non-legal rights as well as the assumption that justice did not apply in poor countries led many philosophers, including bioethicists, to be skeptical or to dismiss the many varied claims of health injustice. Indeed, they may have been sympathetic to the tragedies motivating the claims, but could not recognize or accept the claims as violations of moral/human rights or instances of injustice (Human Rights Program, Harvard Law School and Francois-Xavier Bagnoud Center for Health and Human Rights, Harvard School of Public Health 1993; Miller 1998; Rawls 1999; Nagel 2005; Risse 2006; Veatch 2006).

Skepticism about moral claims to healthcare and health, especially in places where they are most lacking, may be surprising since justice is one of the four well known principles of bioethics (Beauchamp and Childress 2009). But that principle has often been interpreted to relate to the fair distribution of limited healthcare resources across individuals (within a rich society) rather than encompassing the broader concern for the justness of the many dimensions of health, including the causes, consequences, persistence, distribution, differential experiences, and possible social responses to preventable ill-health and premature mortality in individuals and groups (Wikler 1997). One obvious explanation could be that this principle was narrowly interpreted to mean justice only within healthcare and the lab; that healthcare and research is a special moral domain of justice distinct from other domains (Walzer 1983; Daniels 1985). Another possibility is that the moral concern for health was seen to be wholly dealt with by access to healthcare; the social context and causes of health and its distribution were simply not recognized (Walzer 1983; Daniels 1985; Dworkin 1993; Wikler 1997). Poor countries were hardly considered because there was little healthcare there.

The consequence of the skepticism of rights, theoretical architecture and assumptions in social justice philosophy, and the primary focus on the clinic and bio-lab in bioethics has been that alongside the vocal agitation for health rights even in developed societies since the 1980s and the global movements for human rights, health equity, and health justice, bioethics and philosophy have come to be seen as unsympathetic, largely interested in rich country issues, and possibly impotent in addressing health injustice in the real world (Wikler 1997; Landman and Schüklenl 2001; Macklin 2001; Benatar 2004; Farmer and Campos 2004; Pogge 2005). The visible gulf between the focused and rigorous analysis of ethical issues related to the clinical encounter and biological research

mostly in rich countries and the social movements, theories, and empirical evidence about health injustices outside of the clinic and bio-lab and around the world presented a challenge to bioethics and philosophy more generally about their ability to be responsive to the world and its most pressing problems.

Internal Voices

In contrast to traditional focal points, a few bioethicists have been engaging with at least some of the ethics of the broader social contexts of health for some time. For example, the growth of feminist bioethics was a direct effort to integrate concerns about race, class, ethnicity, and gender into the dominant bioethics framework (Donchin 2012). And, starting in the late 1970s, Norman Daniels began to examine how the revitalized philosophical debates about social justice could inform bioethics. His focus was particularly on identifying the moral purpose of healthcare institutions within a just society, and how that would inform fairly distributing limited healthcare resources (Daniels 1985). Onora O’Neill has been arguing for going beyond principlism in bioethics based on a broader understanding of the clinical encounter and health issues (O’Neill 1996). Dan Wikler examined the ethics of coercion in health promotion policies (Wikler 1978) and Solly Benatar wrote about teaching medical ethics in the social context of South Africa (Benatar 1994). Indeed, a more comprehensive review would surely reveal others. Interestingly, even as early as the 1970s, a few philosophers showed interest in the ethics of health of people in other, poor countries. O’Neill and Peter Singer made seminal arguments about the moral obligations to address the health of non-citizens, and specifically, in poor countries (Singer 1972; O’Neill 1975).

So three aspects—the ethical evaluation of social factors and institutions affecting health, using ethical reasoning aside from principles, and expanding the moral concern for the health to include people far away—have been present, though largely on the periphery to the main focus of bioethics. These three efforts have recently become much more prominent, and all come together because awareness of SDH explodes out the scope of moral concern regarding health beyond the individual, healthcare, and health research to include social conditions and social inequalities in health. Those social conditions do not stop at national borders. Reasoning about the ethics of these social conditions requires a different approach than principlism that has been common in bioethics. For example, the international causal pathways to ill-health (e.g., new and resurgent infectious diseases) most immediately raise questions about health-related rights and obligations of people within and across national borders, about the morality of social factors driving the exposures to harmful agents, the ethical underpinnings of global coordination of policies, inequalities in access to benefits of relevant research and available medicines, and so forth.

Outside of clinical bioethics, various philosophers have been considering broader ethical dimensions of health and wellbeing, including SDH. Many of these philosophers are represented in the books, *The Quality of Life* and *Summary Measures of Population Health* (Nussbaum and Sen 1993; Murray et al. 2002). More recently, political philosophers interested in global justice have had to engage with the science and ethics of SDH. The foremost issues of moral concern about the “the distant needy” often turn out to be high premature mortality and high burden of preventable morbidity (Chatterjee 2004). Most notably, Thomas Pogge has caught sight of the global social causal pathways to premature mortality and preventable morbidity of the “global poor.” In contrast to

viruses moving across borders, the global economic and political order is identified as harming the poor. In response, he and others have been articulating the injustice in, and the required just social response to, many of these pathways (Pogge 2002, 2007).

Development Economics

As previously stated, many disciplines outside of bioethics and philosophy have been making important contributions to the understanding of SDH and social ethics for decades. Among these, two of the most substantive and far-reaching contributions come from the disciplines of epidemiology and economics. What makes these two disciplines worth highlighting is that they identify generalizable pathways between social factors and health. Epidemiology is a central source of information on the subject as it is the science that identifies the determinants of disease and death, and increasingly, positive health. It is discussed in the third section. In the remainder of this section, we discuss development economics. It has provided some of the most directly relevant yet under-recognized insights about SDH and social ethics.

Development economics seeks to understand the causes, processes, and goals of economic development (Ray 1998; Rodrik and Rosenzweig 2010). This includes understanding the nature and causes of poverty and deprivation that, in turn, are most often reflected in high burdens of preventable ill-health and premature mortality. Thus, health is central to the study of economic development. Amartya Sen, the economist and philosopher, is widely recognized as making seminal contributions that have transformed the understanding of the economics of development as well as welfare economics more broadly. In particular, he has been arguing since the 1970s that the health of a population reveals a lot about the functioning of a society's economic and political institutions, and what he calls "public action." This assertion is far less anodyne than it initially seems.

Sen seeks to highlight that health—often using life expectancy as a minimal measure—and its distribution in a population are profoundly socially produced through the actions or neglect of social, economic, and political institutions (Sen 1982a, 1997, 1999, 2002a). Sen's assertion, based on a large body of empirical research, seeks to undermine numerous prominent theories and policy prescriptions related to health and mortality, particularly in developing countries. Sen's targets include the Malthusian thesis and its significant influence on population policies and toleration of famine mortality; development viewed largely as growing gross national incomes (GNIs); the "health follows wealth" thesis propagated by the Preston curve which shows a linear relationship between rising national wealth and rising life expectancy; and many more. Sen's many research projects—including the study of the social causation of modern famines, on the more than 100 million missing women in the world, on the explanation of significant differences in quality of life achievements across developing countries experiencing strong economic growth, on the "outlier" developing countries with high health achievements—all clearly connect health achievements and their distribution to social choices, and thereby, social ethics. For Sen, the functioning of social institutions reflects social choices. What is also worth noting is that the reach of Sen's analysis is extremely wide as it is generalizable to all developing countries where the majority of the world's human beings live and, indeed, experience disease, disability, and die. Moreover, Sen's analyses about the role of social choices or public action in relation to health achievements has also been extended to rich countries, thus giving his analyses a fully global scope (Sen 1993; Marmot 2006a; Stiglitz et al. 2009).

Following Sen, other economists have also presented research findings on the links between health achievements and the role of public action, such as investing in medical coverage, public healthcare, school education, and so forth (Anand and Ravallion 1993; Biggs et al. 2010). These findings interrogate the “strong correlation” between economic growth and improvements in health and longevity, and further undermine the assumption of an automatic relationship. The research increasingly being expanded to include developed countries continues to illuminate the causal role of social choices and health; SDH take the form of macro-economic and other social policies implemented by identifiable actors (Stuckler et al. 2009a, 2009b).

Despite the availability for many decades of development economics research and analyses that clearly identify SDH and link them to social ethics, only very recently have efforts begun to join them up with other analyses of SDH, including those in social epidemiology (Marmot 2006b). In fact, researchers of one prominent line of inquiry in social epidemiology who focus on effects of income inequality on health outcomes conclude that SDH come into play only in countries that are above a \$25,000 GNI per capita threshold (Wilkinson and Pickett 2009). Below the threshold (i.e., poor countries), absolute material conditions are said to have a more direct effect on health and longevity. Such a distinction between material conditions versus SDH seems to completely disregard the decades of development economics research on the social determinants of those material conditions which, in turn, impact health.

Perhaps there should be little surprise that awareness or engagement with development economics analyses is largely absent in bioethics. Moreover, it has also been missing in social justice philosophy despite Sen also making seminal contributions in these debates since the late 1970s based directly on his empirical research in developing countries (Sen 1982b). A rare example appears in John Rawls’ *The Law of Peoples* where, based on Sen’s research on famines, Rawls concludes that famines reflect political failures and indecent governments (Rawls 1999: 9). But even he seems to be unaware of or unable to engage with Sen’s broader analyses of social choices and health outcomes. However, the situation seems to be changing. Putting Sen’s contributions aside, alongside bioethicists and social justice philosophers engaging with epidemiology, global justice philosophers have recently begun engaging with development economics (Blake and Smith 2013). In both situations there are seen to be various benefits from philosophers engaging with relevant empirical evidence and methods.

The next section discusses how SDH research within epidemiology is challenging the dominant scientific paradigm, partly by attempting to integrate insights from macroeconomics, such as those presented above, and from other social sciences. In fact, there are many interesting parallels between economics and epidemiology. Just as there is a distinction between micro- and macroeconomics, we can distinguish between micro and macro epidemiology. And as there is rich country economics versus poor country economics, there has been a longstanding division between rich country epidemiology and poor country epidemiology. As a result, there is much in common between economists’ efforts to show the role of social choice or public action behind the state of health and quality of life of individual human beings in poor *and* rich countries, and the efforts of social epidemiologists seeking to put the health of all human beings on the same plane of analysis—within a single explanatory framework that identifies specific pathways of disease and mortality that include determinants from individual genetics all the way to global institutions and processes. In both these disciplinary efforts, ethical issues have been continually highlighted.

Social Epidemiology

Epidemiology is the informational engine of medicine, public health, health research, and policy. Despite its foundational role in these fields, epidemiologists themselves consider it to be a relatively new discipline still in an early stage of development (Rothman et al. 2008: v) While there has been enormous growth in research and in the understanding of epidemiological concepts starting in the 1960s, there are still some disagreements about fundamental concepts. One of the central controversies is whether epidemiology should include research on social determinants (Rothman et al. 1998; Susser 1999; Zielhuis and Kiemeny 2001; Krieger 2011). To put it simply, there is a debate as to whether epidemiology should strive to be a natural science or a social science. Including the study of social determinants would make epidemiology more like a social science. And in the opinion of some epidemiologists, this would make epidemiology less objective, authoritative, and scientific (Marmot 1976; Rothman et al. 1998; Zielhuis and Kiemeny 2001).

Nevertheless, there is a long history of identifying the role of the social environment in the causal pathways to disease and mortality. It is central to the epidemiological work of Louis-René Villermé and Rudolph Virchow in the nineteenth century (Virchow and Rather 1985; Julia and Valleron 2011). It is very much a visible part of community and social medicine that began to flourish in the mid-twentieth century (Trostle 2004). However, as epidemiology developed into a distinct scientific discipline in the twentieth century, its research paradigm was increasingly narrowed down to individual-level factors (Krieger 1994). In contrast, contemporary social epidemiology harnesses the most current epidemiological tools and methodologies combined with sociological analysis to explicitly identify supra-individual social phenomena that affect both the causation and distribution of ill-health across individuals and social groups, within and across countries, and over time (Marmot and Wilkinson 1999; Berkman and Kawachi 2000; Krieger 2011).

Among the many productive insights from social epidemiology over the last four decades, one discovery has been particularly revolutionary. Initially identified by the Whitehall studies in the late 1970s, epidemiologists have been producing compelling evidence that health outcomes (e.g., life expectancy, mortality rates, obesity, and cognitive development, etc.) are distributed along a social gradient; each socio-economic class—defined by income, occupational grade, educational attainment, etc.—has worse health outcomes than the one above it (Macintyre 1997; Marmot et al. 1997; Kawachi et al. 2002). Health is not simply divided between the haves and have-nots; there is a health/illness gradient from top to bottom of the social hierarchy within all societies. Research also shows that the steeper the socio-economic gradient (i.e., the more social inequality there is in a society), the lower overall health and wellbeing of the entire population. Everyone in a given society is worse off in the domain of health and many other life domains than they could be otherwise if there were less social inequality (Deaton 2003; Wilkinson and Pickett 2009).

Prior to the identification of the health gradient, social epidemiology was largely focused on including social, economic, or cultural factors in the individual-level exposure category and seeing if there was a causal inference to be made with disease. The remarkable findings on the social distribution patterns of ill-health now motivate research that can explain both causation and distribution. Unlike most epidemiological studies that try to identify what causes a disease in one individual rather than another,

post-gradient social epidemiology aims to identify what causes disease in certain individuals and in differing amounts in different social groups.

Researchers have so far identified a whole range of social determinants (discrete factors and pathways) to ill-health over the entire life cycle, starting from the social conditions surrounding the mother while the child is still *in utero* all the way to the quality of social relationships in old age. To be clear, healthcare is crucial to treating or mitigating ill-health, but social epidemiologists argue that the more influential *causal* determinants include such things as early infant care and stimulation, safe and secure employment, housing conditions, discrimination, self-respect, personal relationships, community cohesion, and income inequality (Marmot and Wilkinson 1999; Berkman and Kawachi 2000). Along with the rapid growth in knowledge about discrete social factors and pathways, a variety of explanatory theories have been proposed. Keeping in mind that most social epidemiological research has been done in rich countries, Mackenbach presents a good review of the extant theories (Mackenbach 2012). The WHO Commission on the Social Determinants of Health presented an explanatory model for all human beings (Commission on Social Determinants of Health 2008).

For most of the twentieth century, SDH were thought to largely affect the poor through material deprivations, or were perhaps an additional factor to the proximate individual level causal factors of biology, behavior, and exposures to harmful agents. However, in light of the many research findings and the identification of the social gradient in health in every society and across societies, SDH are now argued to be more dominant than proximate factors; SDH in fact shape the proximate causes. And where one stands on the social gradient determines the types and levels of harmful exposures and protective factors in pathways to ill-health and mortality. Social epidemiology, thus, has the potential to produce a more general explanatory paradigm for epidemiology than the current more specific explanatory paradigm that focuses only on individual level factors.

What is currently at play in the field of epidemiology is whether micro-epidemiology, the dominant explanatory paradigm during the second-half of the twentieth century, can continue to survive as a general theory of epidemiology in the twenty-first century. For micro-epidemiology to survive, it must at least be able to integrate macro-analysis. The robustness of SDH research over the last few decades compels both intellectually and ethically pursuing further SDH research and the construction of an explanatory paradigm with less “slippage.” As it now stands, the individual-level multi-factorial framework, whether metaphorically described as the web of causation or a causal pie, does not recognize “non-natural” determinants of disease and mortality. The model allocates relative responsibility for the causation of ill-health across three categories of determinants consisting of individual biological factors, individual behaviors, and proximate exposures to harmful substances. While the model does not limit the number of different links in the web of causation or pieces in the causal pie, the directions of interactions, or time scales, all determinants must come from within the three categories. Such a causal model clearly excludes social phenomena that influence the three proximate categories of causal factors, and consequently, cannot evaluate the distribution across social groups within a population, or explain differences across populations.

Furthermore, individual biological endowments, the category that seems to be the most natural of the causal factors, can also be significantly affected by social factors. Prior to an individual’s birth, social phenomena can profoundly affect an individual’s parents’ sexual behavior, reproduction, and the quality of pregnancy, which then directly

determine an individual's biological endowments and functioning (Posner 1992; Bauman 2003). So, even individual biological endowments are influenced by social factors, making all three categories in the micro-epidemiology model clearly subject to social influence.

The inability of micro-epidemiology's explanatory framework to recognize the influences of social phenomena on the three individual-level "natural" causal categories yields incomplete explanations. Alternatively, we can say that such explanations are only of specific kinds of causal determinants and pathways. Only when the causal links beyond individual level factors—the causes of proximate causes—are allowed into the frame are we able to perceive other types of proximate natural and social causes as well as social distribution patterns (Rose 1985). If micro-epidemiology cannot integrate macro-analysis, a new general theory or explanatory paradigm for epidemiology must be found that can account for the independent and interactive effects of determinants that work at the molecular level all the way up to the global social environment (March and Susser 2006).

Social Justice

In contemporary domestic and global health policy debates, ethical ideas are often used to justify or critique how limited resources are distributed across individuals or for constraining individual rights for the sake of the greater good. But just beyond these familiar and immediate policy questions, there exist far deeper questions regarding how and why there should be social interventions to address ill-health in the first place. What is it about health or ill-health that compels a social response or makes it a concern for social justice? Is it the types of causes of ill-health, the absolute levels of health achievements, their relative inequalities, or the consequences of ill-health that must be addressed as a matter of social justice? There are good reasons to believe that all of these multiple dimensions of health should matter for realizing social equity and justice (Sen 1998b, 2002b; Daniels 2008; Venkatapuram 2011). Even so, how do we then morally evaluate or prioritize the different dimensions of the types of causes, levels of ill-health, and consequences of ill-health in relation to each other? Which dimension should social action address first, second, and so forth? Furthermore, how does the understanding of what matters about these different dimensions change when the moral concern for individuals is supplemented by concern for groups? These various questions show that the moral concern for health is indeed multi-dimensional.

SDH research complicates these numerous and difficult ethical questions even further by elucidating how improving absolute and/or relative health inequalities requires making changes to a range of basic social practices and institutions. The scope of social intervention to address health concerns is much larger than just providing healthcare or addressing individual-level material causal factors. In fact, SDH research explodes the scope of social intervention to encompass all social/global environments as it strives to identify and address any and all possible social determinants of impairments and mortality. While some social determinants are such things as the social bases of autonomy, freedom, dignity, or respect that impact health through psycho-social pathways, interventions to transform such determinants could mean redistributing economic resources and opportunities, material goods as well as choices and duties of individuals and institutions. What this means is that addressing inequalities in the realm of individual or group health achievements will have to manipulate or, indeed, create inequalities in the other

realms of individual lives and societal functioning. For example, stable employment is good for health aside from its income generation, through engendering a sense of self-respect and social relationships. Policies that impede firing people may, however, result in less business growth impacting incomes of all employees and national economic growth. Improving health inequalities could result in lower incomes or larger income inequalities.

In the language of social justice debates, mitigating or manipulating SDH means that there must be a redistribution of some valued “moral goods” in different social spheres. While SDH research, including social epidemiology, has provided information on some social bases of causal pathways to impairments and mortality, the literature has given little attention to the possible consequences in other non-health social spheres that would follow from transforming such causal pathways.

Ideally, transforming or redistributing a particular SDH will improve health achievements which, in turn, will create even more positive SDH. For example, engendering the social bases of dignity through creating opportunities for income and wealth could improve health achievements. Individuals who take advantage of those opportunities could in turn create more opportunities for income and wealth and thus, also, more social bases of dignity for themselves and others. Where such a virtuous circle does not exist, however, what sort of criteria shall we use to evaluate if, when, and how trade-offs are made between improving absolute levels and relative inequalities in health functioning as well as how things function or are distributed in other social domains?

There are a vast number of philosophical and ethical issues that need to be evaluated in light of SDH. What is clear is that health has to be a central component of the theoretical and practical evaluation of social justice. There is perhaps nothing worse to say about a society than that its social institutions, and the social choices behind them, are causing preventable morbidity and premature mortality on a large scale. The practical political implications of SDH research is clearly far-reaching within and across countries. Policies for providing access to healthcare, health insurance, or a minimum package of healthcare goods are a necessary but only small step towards improving health and health equity. Policies designed to address the more egregious SDH and health inequalities would require sweeping social reforms that some societies would find hard to consider let alone implement. However, there are also a number of countries which show that it is possible to implement policies that are directly aimed at SDH and improving health equity (World Health Organization Regional Office for Europe 2013). For example, the government of Finland implemented a national action plan to reduce health inequalities over 2008–11 with noticeable positive results (National Institute for Health and Welfare 2013).

Conclusion

The empirical research of SDH extends the moral scope of the concern for health and health inequalities much wider than healthcare or even the health sector, and deep into the basic structures of domestic and indeed, global society (Sen 1998a; Marmot 2006a; Daniels 2008). Many extant approaches to social justice, and indeed bioethics, are simply ill-equipped to evaluate the ethics of such broad relationships between social and global arrangements and ill-health/health inequalities. The disciplinary boundaries, assumptions, and theoretical structures erase much of the health injustices or push these concerns outside the scope of justice. In contrast, development economics and social

epidemiology, among other disciplines, have been able to identify and evaluate such relationships. Greater efforts towards mutually beneficial engagements between philosophers and SDH researchers and policy advocates are essential for progress to be made on the many difficult moral questions about SDH and health inequalities.

For bioethicists and other philosophers, what is relevant to the reasoning about SDH is that the currently identified determinants operate at levels ranging from the micro, such as individual level psychosocial mechanisms, to the macro, such as community cultures, national political regimes, and global processes affecting trade and respect for human rights. The possibility that extra-national, global determinants may also have significant impact on the health and longevity of some individuals and social groups requires that the causal analysis as well as the ethical analysis have a global scope. Health is and has been for at least a century affected by broader global factors.

It is a very exciting time in bioethics and philosophy where careful scholarship and concern for real world justice can come together. Evidence about SDH from social epidemiology, development economics and other disciplines can and should be vital parts of philosophical reasoning about the multiple moral dimensions of health. Just within the past decade, there have been a number of substantial philosophical arguments that make it difficult to dismiss offhand the idea of human rights, the possibility of justice in resource poor countries, or the right to health not just healthcare. These arguments have been motivated or strengthened by engaging with SDH research. Such efforts show that we can and do make progress in ethics. So there is much hope invested in thinking that bioethics, following through on its principle of social justice and expanding its scope and methodologies of inquiry to meaningfully engage with SDH literature and research, will bolster the momentum in progress on reasoning about health and social/global justice even further.

Related Topics

- Chapter 1, "The Right to Health Care," John D. Arras
 Chapter 6, "Bioethics and Human Rights," Elizabeth Fenton
 Chapter 10, "Moral Responsibility for Addressing Climate Change," Madison Powers

References

- Anand, S. and Ravallion, M. (1993) "Human Development in Poor Countries: On the Role of Private Incomes and Public Services," *Journal of Economic Perspectives* 7: 133–50.
 Anand, S., Peter, F. and Sen, A. (2006) *Public Health, Ethics, and Equity*, Oxford: Oxford University Press.
 Arras, J. and Fenton, E. (2009) "Bioethics & Human Rights," *Hastings Center Report* 39: 27–38.
 Barry, B. (2005) *Why Social Justice Matters*, Cambridge: Polity.
 Bauman, Z. (2003) *Liquid Love: On the Frailty of Human Bonds*, Cambridge: Polity Press.
 Beauchamp, T.L. and Childress, J.F. (2009) *Principles of Biomedical Ethics*, New York and Oxford: Oxford University Press.
 Beitz, C.R. (1975) "Justice and International Relations," *Philosophy & Public Affairs* 4: 360–89.
 Benatar, S.R. (1994) "Teaching Medical-Ethics," *Quarterly Journal of Medicine* 87: 759–67.
 Benatar, S.R. (2004) "Blinkered Bioethics," *Journal of Medical Ethics* 30: 291–2.
 Benatar, S.R., Daar, A.S. and Singer, P.A. (2005) "Global Health Challenges: The Need for an Expanded Discourse on Bioethics," *PLoS Med* 2: 587–9.
 Bentham, J. (1843) "Anarchical Fallacies: Being an Examination of the Declaration of Rights Issues During the French Revolution," in J. Waldron (ed.) *Nonsense Upon Stilts: Bentham, Burke and Marx on the Rights of Man*, New York: Methuen.
 Berkman, L.F. and Kawachi, I.O. (2000) *Social Epidemiology*, New York: Oxford University Press.

- Beyrer, C. and Pizer, H. (2007) *Public Health and Human Rights: Evidence-Based Approaches*, Baltimore, MD: Johns Hopkins University Press.
- Biggs, B., King, L., Basu, S. and Stuckler, D. (2010) "Is Wealthier Always Healthier? The Impact of National Income Level, Inequality, and Poverty on Public Health in Latin America," *Social Science & Medicine* 71: 266–73.
- Birn, A.E. (2009) "The Stages of International (Global) Health: Histories of Success or Successes of History?" *Global Public Health* 4: 50–68.
- Blake, M. and Smith, P.T. (2013) "International Distributive Justice," in E.N. Zalta (ed.) *The Stanford Encyclopedia of Philosophy*, Stanford University, CA: Stanford University.
- Blaxter, M. (2010) *Health*, Cambridge: Polity.
- Brock, D.W. (2000) "Broadening the Bioethics Agenda," *Kennedy Institute of Ethics Journal* 10: 21–38.
- Callahan, D. (1980) "Shattuck Lecture: Contemporary Biomedical Ethics," *New England Journal of Medicine* 302: 1228–33.
- Chatterjee, D.K. (2004) *The Ethics of Assistance: Morality and the Distant Needy*, Cambridge: Cambridge University Press.
- Commission on Social Determinants of Health (2008) *Closing the Gap in a Generation: Health Equity Through Action on the Social Determinants of Health*. Final Report of the Commission on Social Determinants of Health, Geneva: World Health Organization.
- Cribb, A. (2005) *Health and the Good Society: Setting Healthcare Ethics in Social Context*, Oxford: Clarendon Press.
- Daniels, N. (1985) *Just Health Care*, Cambridge and New York: Cambridge University Press.
- Daniels, N. (2006) "Equity and Population Health: Toward a Broader Bioethics Agenda," *Hastings Center Report* 36: 22.
- Daniels, N. (2008) *Just Health: Meeting Health Needs Fairly*, Cambridge and New York: Cambridge University Press.
- Daniels, N., Kennedy, B.P. and Kawachi, I. (1999) "Why Justice Is Good for Our Health: The Social Determinants of Health Inequalities," *Daedalus* 128: 215–51.
- Deaton, A. (2003) "Health, Inequality, and Economic Development," *Journal of Economic Literature* 41: 113–58.
- Diener, E., Suh, E.M., Lucas, R.E. and Smith, H.L. (1999) "Subjective Well-Being: Three Decades of Progress," *Psychological Bulletin* 125: 276–302.
- Donchin, A. (2012) "Feminist Bioethics," in E.N. Zalta (ed.) *The Stanford Encyclopedia of Philosophy*, Stanford University, CA: Stanford University.
- Dworkin, R. (1993) "Justice in the Distribution of Health Care," *McGill Law Journal* 38: 883–98.
- Evans, T., Whitehead, M., Diderichsen, F., Bhuiya, A. and Wirth, M. (eds.) (2001) *Challenging Inequities in Health: From Ethics to Action*, Oxford and New York: Oxford University Press.
- Farmer, P. (2003) *Pathologies of Power: Health, Human Rights, and the New War on the Poor*, Berkeley, CA: University of California Press.
- Farmer, P. and Campos, N.G. (2004) "New Malaise: Bioethics and Human Rights in the Global Era," *Journal of Law Medicine & Ethics* 32: 243–51.
- Forman, L. (2010) "What Future for the Minimum Core? Contextualising the Implications of South African Socioeconomic Rights Jurisprudence for the International Human Rights to Health," in J. Harrington and M. Stuttaford (eds.) *Global Health and Human Rights: Legal and Philosophical Perspectives*, London: Routledge.
- Fried, C. (1976) "Equality and Rights in Medical-Care," *Hastings Center Report* 6: 29–34.
- Glendon, M.A. (1991) *Rights Talk: The Impoverishment of Political Discourse*, New York: Free Press.
- Green, R.M., Donovan, A. and Jaus, S.A. (2008) *Global Bioethics: Issues of Conscience for the Twenty-first Century*, Oxford and New York: Clarendon Press and Oxford University Press.
- Harrington, J. and Stuttaford, M. (2010) *Global Health and Human Rights: Legal and Philosophical Perspectives*, London: Routledge.
- Hope, R.A., Savulescu, J. and Hendrick, J. (2008) *Medical Ethics and Law: The Core Curriculum*, Edinburgh: Churchill Livingstone.
- Human Rights Program, Harvard Law School and Francois-Xavier Bagnoud Center for Health and Human Rights, Harvard School of Public Health (1993) *Economic and Social Rights and the Right to Health*, Cambridge, MA: Harvard Law School Human Rights Program.
- Huppert, F.A., Baylis, N. and Keverne, B. (2005) *The Science of Well-Being*, Oxford: Oxford University Press.
- Jonsen, A. (2000) "Why Has Bioethics Become So Boring," *Journal of Medicine and Philosophy* 25: 689–99.

- Julia, C. and Valleron, A.J. (2011) "Louis-Rene Villerme (1782–1863), a Pioneer in Social Epidemiology: Re-analysis of His Data on Comparative Mortality in Paris in the Early 19th Century," *Journal of Epidemiology and Community Health* 65: 666–70.
- Kawachi, I., Subramanian, S.V. and Almeida-Filho, N. (2002) "A Glossary for Health Inequalities," *Journal of Epidemiology and Community Health* 56: 647–52.
- Krieger, N. (1994) "Epidemiology and the Web of Causation: Has Anyone Seen the Spider?" *Social Science & Medicine* 39: 887–903.
- Krieger, N. (2011) *Epidemiology and the People's Health: Theory and Context*, New York: Oxford University Press.
- Kymlicka, W. (2002) *Contemporary Political Philosophy: An Introduction*, Oxford and New York: Oxford University Press.
- Landman, W.A. and Schüklenl, U. (2001) "Why a Developing World Bioethics Journal?" *Developing World Bioethics* 1.
- Macintyre, S. (1997) "The Black Report and Beyond: What Are the Issues?" *Social Science & Medicine* 44: 723–45.
- Mackenbach, J.P. (2012) "The Persistence of Health Inequalities in Modern Welfare States: The Explanation of a Paradox," *Social Science & Medicine* 75: 761–9.
- Macklin, R. (2001) "Bioethics and Public Policy in the Next Millennium: Presidential Address," *Bioethics* 15: 373–81.
- Mann, J.M., Gostin, L., Gruskin, S., Brennan, T., Lazzarini, Z. and Fineberg, H.V. (1994) "Health and Human Rights," *Health and Human Rights* 1: 6–23.
- March, D. and Susser, E. (2006) "The Eco- in Eco-epidemiology," *International Journal of Epidemiology* 35: 1379–83.
- Marchand, S. and Wikler, D. (2002) "Health Inequalities and Justice," in J.L.P. Tao (ed.) *Cross-Cultural Perspectives on the (Im)Possibility of Global Bioethics*, Dordrecht and Boston, MA: Kluwer Academic Publishers.
- Marchand, S., Wikler, D. and Landesman, B. (1998) "Class, Health and Justice," *The Milbank Quarterly* 76: 449–67, 305–6.
- Marmot, M. (1976) "Facts, Opinions and Affaires du Coeur," *American Journal of Epidemiology* 103: 519–26.
- Marmot, M. (2006a) "Health in an Unequal World," *The Lancet* 368: 2081–94.
- Marmot, M. (2006b) "Health in an Unequal World: Social Circumstances, Biology and Disease," *Clinical Medicine* 6: 559–72.
- Marmot, M., Ryff, C.D., Bumpass, L.L., Shipley, M. and Marks, N.F. (1997) "Social Inequalities in Health: Next Questions and Converging Evidence," *Social Science & Medicine* 44: 901–10.
- Marmot, M.G. and Wilkinson, R.G. (1999) *Social Determinants of Health*, Oxford and New York: Oxford University Press.
- Miller, D. (1998) "The Limits of Cosmopolitan Justice," in D. Mapel and T. Nardin (eds.) *International Society: Diverse Ethical Perspectives*, Princeton, NJ: Princeton University Press.
- Millum, J. and Emanuel, E.J. (2012) *Global Justice and Bioethics*, New York: Oxford University Press.
- Murray, C.J., Anderson, B., Burstein, R., Leach-Kemon, K., Schneider, M., Tardif, A. and Zhang, R. (2011) "Development Assistance for Health: Trends and Prospects," *Lancet* 378: 8–10.
- Murray, C.J.L., Salomon, J.A., Mathers, C.D. and Lopez, A.D. (eds.) (2002) *Summary Measures of Population Health: Concepts, Ethics, Measurement and Applications*, Geneva: World Health Organization.
- Nagel, T. (2005) "The Problem of Global Justice," *Philosophy and Public Affairs* 33: 113–47.
- National Institute for Health and Welfare (Thl) (Finland) (2013) *National Programmes and Acts* [online]. Available at: http://www.thl.fi/en_US/web/kaventaja-en/national-programmes (accessed December 11, 2013).
- Nordenfelt, L., Khushf, G. and Fulford, K.W.M. (2001) *Health, Science, and Ordinary Language*, Amsterdam: Rodopi.
- Nozick, R. (1974) *Anarchy, State, and Utopia*, New York: Basic Books.
- Nussbaum, M.C. (2006) *Frontiers of Justice: Disability, Nationality, Species Membership*, Cambridge, MA: Belknap Press, Harvard University Press.
- Nussbaum, M.C. and Sen, A.K. (1993) *The Quality of Life*, New York: Clarendon Press, Oxford University Press.
- O'Neill, O. (1975) "Lifeboat Earth," *Philosophy & Public Affairs* 4: 273–92.
- O'Neill, O. (1996) *Towards Justice and Virtue: A Constructive Account of Practical Reasoning*, Cambridge: Cambridge University Press.

- O'Neill, O. (2005) "The Dark Side of Human Rights," *International Affairs* 81: 427–39.
- Peter, F. and Evans, T. (2001) "Ethical Dimensions of Health Equity," in T. Evans, M. Whitehead, F. Diderichsen, A. Bhuiya and M. Wirth (eds.) *Challenging Inequities in Health: From Ethics to Action*, Oxford and New York: Oxford University Press.
- Pogge, T. (1989) *Realizing Rawls*, Ithaca, NY and London: Cornell University Press.
- Pogge, T. (2001) *Global Justice*, Oxford: Blackwell.
- Pogge, T. (2002) *World Poverty and Human Rights: Cosmopolitan Responsibilities and Reforms*, Cambridge and Malden, MA: Polity.
- Pogge, T. (2005) "Real World Justice," *The Journal of Ethics* 9: 29–53.
- Pogge, T. (2007) *Freedom From Poverty as a Human Right: Who Owes What to the Very Poor?* Oxford: Oxford University Press; Paris: UNESCO.
- Posner, R.A. (1992) *Sex and Reason*, Cambridge, MA: Harvard University Press.
- Powers, M. and Faden, R.R. (2008) *Social Justice: The Moral Foundations of Public Health and Health Policy*, New York and Oxford: Oxford University Press.
- Preda, A. (2012) Is There a Human Right to Health? in P.T. Lenard and C. Straehle (eds.) *Health Inequalities and Global Justice*, Edinburgh: Edinburgh University Press.
- Rawls, J. (1971) *A Theory of Justice*, Cambridge, MA: Harvard University Press.
- Rawls, J. (1993) *Political Liberalism*, New York: Columbia University Press.
- Rawls, J. (1999) *The Law of Peoples*, Cambridge, MA: Harvard University Press.
- Ray, D. (1998) *Development Economics*, Princeton, NJ and Chichester, Princeton University Press.
- Risse, M. (2006) "Do We Owe the Global Poor Assistance or Rectification?" *Ethics & International Affairs* 19: 9–18.
- Rodrik, D. and Rosenzweig, M.R. (2010) *Handbook of Development Economics* (Volume 5), Amsterdam: North Holland.
- Rose, G. (1985) "Sick Individuals and Sick Populations," *International Journal of Epidemiology* 14: 32–8.
- Rose, N. (2007) *Politics of Life Itself: Biomedicine, Power and Subjectivity in the Twenty-first Century*, Princeton, NJ and Oxford: Princeton University Press.
- Rose, N. (2013) "The Human Sciences in a Biological Age," *Theory Culture & Society* 30: 3–34.
- Rothman, K.J., Adami, H.O. and Trichopoulos, D. (1998) "Should the Mission of Epidemiology Include the Eradication of Poverty?" *Lancet* 352: 810–13.
- Rothman, K.J., Greenland, S. and Lash, T.L. (2008) *Modern Epidemiology*, Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins.
- Ruger, J.P. (2010) *Health and Social Justice*, Oxford: Oxford University Press.
- Ryan, R.M. and Deci, E.L. (2001) "On Happiness and Human Potentials: A Review of Research on Hedonic and Eudaimonic Well-Being," *Annual Review of Psychology* 52: 141–66.
- Schuklenk, U. (2003) "AIDS: Bioethics and Public Policy," *New Review of Bioethics* 1: 127–44.
- Segall, S. (2009) *Health, Luck, and Justice*, Princeton, NJ and Woodstock: Princeton University Press.
- Sen, A. (1982a) *Choice, Welfare, and Measurement*, Cambridge, MA: MIT Press.
- Sen, A. (1982b) "Equality of What?" in *Choice, Welfare, and Measurement* (1st MIT Press edition), Cambridge, MA: MIT Press.
- Sen, A. (1993) "The Economics of Life and Death," *Scientific American* 268: 40–7.
- Sen, A. (1997) *Resources, Values, and Development*, Cambridge, MA: Harvard University Press.
- Sen, A. (1998a) "Mortality as an Indicator of Economic Success and Failure," *The Economic Journal* 108: 1–25.
- Sen, A. (1998b) "Why Health Equity?" in S. Anand, F. Peter and A.K. Sen (eds.) *Global Health Equity Initiative: Public Health, Ethics and Equity*, Oxford: Oxford University Press.
- Sen, A. (1999) *Development as Freedom*, New York: Knopf.
- Sen, A. (2002a) *Rationality and Freedom*, Cambridge, MA: Belknap Press.
- Sen, A. (2002b) "Why Health Equity?" *Health Economics* 11: 659–66.
- Sen, A. (2004) "Elements of a Theory of Human Rights," *Philosophy & Public Affairs* 32: 315–55.
- Sen, A. (2012) "The Global Reach of Human Rights," *Journal of Applied Philosophy* 29: 91–100.
- Singer, P. (1972) "Famine, Affluence, and Morality," *Philosophy and Public Affairs* 1: 229–43.
- Stiglitz, J., Sen, A. and Fitoussi, J.-P. (2009) *Report by the Commission on the Measurement of Economic Performance and Social Progress*. Available at: <http://www.stiglitz-sen-fitoussi.fr/en/index.htm> (accessed July 1, 2014).
- Stuckler, D., Basu, S., Suhrcke, M., Coutts, A. and Mckee, M. (2009a) "The Public Health Effect of Economic Crises and Alternative Policy Responses in Europe: An Empirical Analysis," *Lancet* 374: 315–23.

- Stuckler, D., King, L. and Mckee, M. (2009b) "Mass Privatisation and the Post-Communist Mortality Crisis: A Cross-National Analysis," *Lancet* 373: 399–407.
- Susser, M. (1999) "Should the Epidemiologist be a Social Scientist or a Molecular Biologist?" *International Journal of Epidemiology* 28: S1019–22.
- Taket, A.R. (2012) *Health Equity, Social Justice and Human Rights*, London: Routledge.
- Toebes, B.C.A. (1999) *The Right to Health as a Human Right in International Law*, Antwerpen: INTERSENTIA/HART.
- Trostle, J.A. (2004) *Epidemiology and Culture*, Cambridge and New York: Cambridge University Press.
- Turner, B.S. (2006) *Vulnerability and Human Rights*, University Park, PA: Pennsylvania State University Press.
- Veatch, R. (2006) "Are Human Rights Important in Bioethics?" *Health Affairs* 25: 287–8.
- Venkatapuram, S. (2011) *Health Justice. An Argument from the Capabilities Approach*, Cambridge: Polity Press.
- Virchow, R.L.K. and Rather, L.J. (1985) *Collected Essays on Public Health and Epidemiology*, Canton, MA: Science History Publications, USA.
- Vizard, P. (2006) *Poverty and Human Rights: Sen's "Capability Perspective" Explored*, Oxford: Oxford University Press.
- Walzer, M. (1983) *Spheres of Justice: A Defense of Pluralism and Equality*, New York: Basic Books.
- Wikler, D. (1978) "Persuasion and Coercion for Health: Ethical Issues in Government Efforts to Change Life-Styles," *The Milbank Quarterly* 56: 303–38.
- Wikler, D. (1997) "Presidential Address: Bioethics and Social Responsibility," *Bioethics* 11: 185–92.
- Wikler, D. and Brock, D.W. (2008) "Population-Level Bioethics: Mapping a New Agenda," in R.M. Green, A. Donovan and S.A. Jauss (eds.) *Global Bioethics: Issues of Conscience for the Twenty-first Century*, Oxford: Clarendon Press; Oxford and New York: Oxford University Press.
- Wilkinson, R.G. and Pickett, K. (2009) *The Spirit Level: Why More Equal Societies Almost Always Do Better*, London: Allen Lane.
- Wolff, J. (2012) *The Human Right to Health*, New York: W.W. Norton & Co.
- World Health Organization (2000) *Health Systems: Improving Performance*, Geneva: WHO.
- World Health Organization Regional Office for Europe (2013) *Review of Social Determinants and the Health Divide in the WHO European Region: Final Report*, Geneva: WHO
- Zielhuis, G. and Kiemeny, L. (2001) "Social Epidemiology? No Way," *International Journal of Epidemiology* 30: 43–4.