

Health and Social Inequality

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Abstract

The link between social cleavages and life chances has been a mainstay of sociology, social science, and public health's contribution to understanding well-being, morbidity, and mortality. From early classic work to the most recent studies, inequality has been associated with the incidence and prevalence of disease, access to health care, and higher-than-expected death rates, even for infants. Importantly, these differences have been documented for individuals, for neighborhoods, and for nations. On all of these key indicators, there is a clear gradient, whether measured by socioeconomic status (SES), education, or even social networks. Recent work has restated and expanded the impact of inequality through the Theory of Fundamental Causes and a focus on "health disparities." The latter targets group membership by race, ethnicity, and/or gender, to name a few social characteristics. However, challenges arise from pushing our understandings of the role of inequalities further as status configurations, for example, only proxy the social interactions, social conditions, and social experiences that produce inequality. New theoretical and empirical research also suggests that incorporating biology into our understanding of how social inequality translates into poor health, unequal treatment, and premature death can be done by synthesizing new visions of sociocultural embeddedness with biological embedding into a complex systems framework for health and health care research. This integration dismisses the "old silos" and calls for increased collaborations across the sociomedical sciences, medicine, and genetics.

INTRODUCTION

Questions of who is healthy and who gets sick, who receives care and who is denied access to care, and who lives and who dies have always provided a powerful window into understanding how social inequality works in human societies. From the beginnings of social and behavioral science up through the present, research has demonstrated that factors that tap into one's place in the social hierarchy; that is, their social status, are associated with health, with illness (what individuals feel), disease (what doctors diagnose), with treatments offered and received, and with outcomes (recovery, disability, and death). These include, but are not limited to, education, income, gender,

culture, social networks, and race/ethnicity. Much research focuses on an individual's or a family's socioeconomic status (or SES for short), examining how this affects a wide range of health conditions and health care.

But the impact of inequality goes beyond the individual. Both classic and recent research have demonstrated that the neighborhood, the community, and political units (e.g., states in the United States) where a person lives also shape physical and mental well-being, in part by marking the kinds of social, economic, and cultural conditions, experiences, and resources they can access. At an even larger scope, the overall level of inequality in a society is associated with measures of health and well-being, including infant mortality and rates of major diseases. This is particularly important because it helps to understand why the United States, while among the richest countries on the globe, consistently reports lower levels of population health.

Many researchers believe that inequality, characteristic of every society that has ever existed, is the single most important factor that marks a person's fate in terms of well-being, life, and death. However, inequality not only lays bare the health consequences of social stratification but is also a key to understanding some underlying causes. One of the omnipresent debates is captured by the difference between "social causation" and "social selection." The "social causation hypothesis" argues that the conditions of living in the lower social classes, even before a person is born, influences health through resources, experiences, and exposures. Poor health, particularly mental health and mental illness, is concentrated among individuals with low SES. The "social selection hypothesis," also referred to as the *social drift hypothesis*, suggests that the onset of illness can have a negative effect on social class, often causing downward mobility, or a loss of social status, because illness and disease, in and of themselves, interfere with a person's ability to remain in their current social class. Recent research has shown, for example, that child and adolescent mental health issues translate into a lower probability of completing high school or of entering college, both of which are known correlates of adult SES. Further, issues of prejudice and discrimination are involved in drift hypothesis because the stigma attached to illness, disease, and disability may influence employment opportunities, housing options, and general community acceptance. In the end, however, this debate reveals a complexity, with research showing that both social processes are most likely at work and that the type, severity, and length of illness may be crucial in determining which of these social processes predominates. In the case of schizophrenia, for example, the drift hypothesis is particularly powerful but for depression, social causation appears to be more influential. Findings are not definitive, however, and the debate continues.

FOUNDATIONAL RESEARCH

Early in the history of social science, German sociologists Karl Marx and Max Weber argued that SES was a basic cause of health and illness. With the coming of the industrial revolution, Marx focused on the impact of social class, arguing that the modern conditions of work determined social status but also directly influenced morbidity (disease), mortality (death), and treatment. Along with Engels, he documented that the conditions of labor in the working classes (in mines, in the new industrial factories) put them at direct risk for diseases. Just as importantly, the wages they received meant that they were likely to live in overcrowded, unsanitary, and poor conditions, not only affecting their health, but the life chances of their children.

Building on these early ideas, Weber described how *life chances* (including health) and *life styles* (including what people eat; whether they exercise) reflected the opportunities they have. By opportunities, Weber targeted access to resources including food and housing, but also education, work, and health care. He also looked to more subjective factors, such as beliefs, values, and attitudes, as having the potential to shape what individuals did and what happened to them. Even early physicians of “social medicine” (e.g., Rudolf Virchow) recognized that inequality both predisposed people to disease and denied them access to modern medical care either geographically or economically.

Later researchers showed how geography or “place” mattered as part of the way inequality influenced peoples’ lives, especially their health. Robert Park and Ernest Burgess drew concentric circles on a map of the city of Chicago in the early part of the twentieth century. Starting with the center point in the area of greatest poverty and working outward, they were able to show a direct decrease in morbidity and mortality as distance from the city center increased. In fact, Park and Burgess argued that as people moved up in social class, they also moved away from the city center and improved their life chances. They saw these neighborhood conditions which marked wealth or poverty as more important than any other factors including ethnicity, race, or religion.

While the pure concentric geographic approach fell out of favor as being too simplistic, research on social class continued to document the importance of residence. In the classic study *Social Class and Mental illness*, sociologist August Hollingshead and psychiatrist Fredrick Redlich developed and used a three factor measure of social class (education, occupation, and neighborhood of residence) to examine whether social class was related to mental illness and treatment. Interviewing all individuals who were treated for mental health problems in New Haven, Connecticut, in a single year, they documented that the prevalence of mental illness was higher among individuals

in the lower classes and that they tended to be diagnosed with more serious problems as they were defined at the time (“psychosis” being more serious than “neurosis”). Further, they were less likely to receive any treatment at all or, if they did, they were more likely to receive care in public institutions and through the most constraining and intrusive treatments, including cold packs, electroshock, and lobotomies (as opposed to psychotherapy).

In a later study, also in New Haven, Hollingshead worked with physician Raymond Duff to look more broadly at how social class shaped treatment. They documented several ways that hospitals reflected and reproduced inequality. Physicians came from the professional classes; others who worked in hospitals did not. Inequality in medical work also drew on gender differences where nurses’ subordinate position to physicians was in evidence, despite nurses’ greater knowledge about a patient’s status, given their involvement in day-to-day care. Even the physical design of the early modern hospital reflected the status hierarchy of society, with the operating theater, where the most prestigious members of the medical profession (surgeons) worked, being on the rooftop level, the private medical rooms closer to the top, semiprivate in the middle, and rooms for those without means in lower floor wards. Room assignments, made primarily according to ability to pay, did not reflect differential treatment, per se, but private accommodations certainly afforded more personal attention and better conditions for patients and families. More importantly, however, this sociologist-physician team did document that ward patients encountered more treatment difficulties, at first because their financial situations (no or limited insurance) translated into delay in being admitted, with concomitant greater severity upon admission. Further, the aftermath of hospitalization rippled through the lives of the lower class patients more dramatically, affecting their savings, housing, and even their children’s ability to stay in school.

Standing conceptually between these two studies were community studies such as those of Earl L. Koos’ 1954 *Health of Regionville* or Leighton’s 1959 *My Name is Legion* (one of three books documenting the Stirling County Study of Psychiatric Disorder and Sociocultural Environment). In the Elmira, New York study, Koos documented that social class shaped more than health care access or illness prevalence. The influence of social class extended to the very way that individuals understood health problems and responded to them. Individuals categorized as living in the lowest class in Elmira did not believe that medical care should be sought for a wide range of symptoms including back pain or persistent cough, symptoms to which nearly all of the respondents in the highest social class indicated that they would seek out a physician. Social class influence on the cultural construction of “need” was only eliminated when symptoms of unexplained bleeding were offered.

These studies reflected inequalities in the social and cultural access to care before the advent of important social programs such as US Medicaid and Medicare or Atlantic Canada's provincial insurance systems. However, research continues to document the association of inequality with health problems, with the individual's response to them, with the ability to receive treatment, and with the aftereffects of catastrophic illness on the economic and social conditions of people's lives. In fact, the robust body of research showing how inequality translates into poor health, into lack of access to care, and premature death and disability was instrumental in garnering support for public programs in North America.

CUTTING-EDGE RESEARCH

While there have been dramatic changes in society and the way we study health, illness, and healing, the relationship between inequality and health persists. As physician-sociologist Howard Waitzkin recently pointed out: "Conditions of society that generate illness and mortality have become largely forgotten and rediscovered with each succeeding generation." (2011, p. 9) In recent years, this reminder has come in the form of two important sets of concepts and theories that now dominate the way we think about and talk about these issues—fundamental causes and health disparities.

THE THEORY OF FUNDAMENTAL CAUSES

The classic 1995 paper by Bruce Link and Jo Phelan was in part a review of the clear and substantial body of research showing the inequality-health link, and in part, a conceptualization of why that link persists despite efforts to eliminate or reduce it. They argue that mechanisms to intervene in the link will always be frustrated by the ability of inequality to find a way to affect differential mortality and morbidity. Power and resources, including money, knowledge, and social networks central to life chances, will be denied, to one extent or another, to those at the bottom of the social ladder.

The Theory of Fundamental Causes had three effects on understanding health and inequality beyond providing a clear conceptual restating and expansion. First, it spurred a new wave of research that demonstrated that inequality remains a major predictor of health, morbidity, and mortality in contemporary times, despite continued improvements in medical technology. Second, it led to research that moved beyond examining causes (epidemiological studies) to how later process (health service studies) continued to translate inequality into diminished life chances. Third, it raised the question of what other forces and factors could be considered fundamental causes of differential health and health care outcomes.

On the first, the range and scope of studies exploded across the medical, social science, and public health fields. The findings of the inequality-health relationship were and continue to be very robust across time, across diseases, and across countries. On the second, and despite Link and Phelan's concern that intervening mechanisms will never erase inequalities, studies elaborated how health outcomes, and not just onset of health problems, were shaped by social class. Using cases of diabetes care by class and heart disease by gender, Karen Lutfey and her colleagues have demonstrated that status differences not only preserve but also exacerbate the initial effects through how providers decide on treatment regimes for individuals. For example, while maintaining the Theory of Fundamental Cause's insistence that inequality cannot be distilled down to or reduced in any long-term way by proximate mechanisms, Lutfey considered the social contexts within which proximate risk factors operate. In two diabetes clinics, populated by patients with diverse social class backgrounds, the less socially advantaged were given less complex treatment regimes which influenced long-term average glucose levels, and in turn heightened the risk of adverse health outcomes. On the third, and in concert with this resurgence of attention to inequality, David Williams and his colleagues turned their attention to the role of race and ethnic differences. While also a long-term focus and not independent of inequality defined by economic status, this area gained new energy and attention, flourishing under the new moniker of "health disparities," now a large part of the research agenda on health and inequality.

THE RISE OF HEALTH DISPARITIES

In the broadest manner, health disparities signal differences in mortality and morbidity between groups of people, including race, ethnicity, gender, and other social designations such as rural residence. These other social categories mark differences in power, privilege, and esteem that translate into differences in life style and life chances. They define the social fault lines of society. *Health care* disparities refer to the unequal treatment of individuals in health care systems based on these characteristics. In 2002, the US Institute of Medicine characterized this type of disparity as a difference in treatment not justified by underlying health conditions or patient preferences. However, social scientists have argued that excluding health preferences is problematic because they already reflect the operation of cultures shaped by status differences such as race, class, and gender. Because everything from lack of insurance coverage to physician practice patterns, differentially acquired or enacted by social characteristics, reflect inequalities, health disparities broaden the focus from economic inequality to social inequalities.

THE FOCUS ON SOCIAL RELATIONSHIPS

In addition to the reassertion of the power of inequality, in whatever form and defined by whatever social cleavages, contemporary research has revealed in no uncertain terms that social connections to others matter. Since social science embarked on the impact of social factors on health, the role of personal ties has been central. In the classic work on suicide by Emile Durkheim, how well-integrated we are to one another in terms of love, care, and concern, as well as how well we are regulated by others in terms of guidance, cooperation, and even coercion, shape health, health care, and their outcomes. While this has been long accepted, perhaps even underlying the human mechanisms of inequality, privilege and disadvantage, the 1970s saw the beginnings of the direct documentation of how social ties matter in preventing heart disease and shepherding individuals to or away from health care systems. On a basic level, research documented that loneliness is responsible for more deaths, directly and indirectly, than smoking. Social networks protect individuals from the onset of stressful life events and help to buffer their effects when they do occur. Social connections link individuals together in social support groups, discourage unhealthy behaviors, and help lay the pathways to care. However, social networks can have a dark side as well because it is what they hold, in terms of cultural beliefs, values, and attitudes, as well as what they recommend, that matters. For example, while the health benefits of marriage have been debated, the results from research are complex. Marriage may benefit men, but men married too young may be more predisposed to suicide. The nagging of spouses on health behaviors, an important accompaniment to the love and concern of marriage, help to explain its overall salubrious effects. But marriages with toxic relationships can have opposite, and often deadly, effects on life and well-being. Attachment to families, more generally, may provide support and care in the face of illness, but network members may also try to hide illness, keeping family out of treatment for fear of the prejudice and discrimination attached to stigmatized conditions.

In the most powerful demonstration of late, Christakis and Fowler resuscitated and reworked unique data in the Framingham Heart Study to show not only the association between social ties and risk factors such as obesity, loneliness, and smoking, but also how changing networks are associated with health status and health behavior change. Similarly, social ties have long been seen as underlying response to mechanisms in individuals' illnesses—knowledge of options, recommendations for health and illness behaviors, advocacy during hospitalization, and monitoring follow-through on treatment recommendations embedded in community ties. In fact, newer approaches, such as the Network Episode Model, developed in light of the poor explanatory power of sociodemographic characteristics to explain

who seeks formal care, the kinds of pathways to care followed, and how outcomes unfold. Inequality itself is embedded in these social networks and helps to form the mechanisms through which fundamental causes translate into health disparities. The NEM, for example, began with the premise that responding to illness or prevention is a phenomenon structured and given meaning through a social process managed by individuals' social networks in the community and the treatment system. Because individuals have both agency and habit (i.e., practical consciousness), they pragmatically improvise and routinize within the possibilities and limits of social network structures in their community, organizations, and historical period. However, as part of a society that includes institutions of social control, they may also encounter the health care system with resistance and under coercive requirements (e.g., required examinations for employment or sports; involuntary commitment for mental health problems). All of these reflect vectors of social inequality.

KEY ISSUES FOR FURTHER RESEARCH

Contemporary research has set a solid foundation for linking social stratification and life chances, including health. It has provided a clear understanding that inequality exists in health and health care outcomes. It has revitalized theory and research on the role of SES and pushed our understanding of how other social characteristics, including race/ethnicity, gender, and social relationships represent important cleavages that divide those who have from those who have not. These are fundamental causes that predispose individuals to living a healthy life, being relatively free from disease and disability, and avoiding premature death. When these factors cumulate in a negative direction, health and health care disparities widen between individuals, groups, communities, and global borders.

While there is no indication that research on fundamental causes, health disparities or even the fundamental causes of health disparities has provided all the answers or all of the solutions, there is also no indication that the intellectual energy devoted to these issues, is slowing down. However, with the basics reaffirmed in contemporary research, at least two looming questions arise as challenges for the next era of research. First, given the complexity of the social factors and forces that shape health and health care inequalities, how can we conceptualize and study the way inequality, for example, among individuals, neighborhoods, and nations, works together in concert or opposition? And, can we embrace new biological and genetics findings as part of how social inequality matters in health? Second, even in light of the Theory of Fundamental Causes, can we get underneath how factors such as SES or race/ethnicity shape the social and cultural landscape that reinforces

how sociodemographic and socioeconomic characteristics come to have consequences for health?

PUTTING IT ALL TOGETHER

Given the visibility and magnitude of scientific resources devoted to genetic and biological factors in health and health care outcomes, how can we integrate the power of social inequality into a fuller understanding of how health and disease emerge? Since World War II, a major push in medical sciences has been unlocking the genetic code, expecting that the keys to understanding and developing medicine would follow. In fact, the Human Genome Project has been completed, and much has been discovered. However, compared to the initial hope, the results have pointed to few clear links between candidate genes and disease, slowing the move to personalized medicine that was expected to eliminate many inequalities. Now, more complicated ideas around copy number variants (CNVs, i.e., additions or deletions in gene sequences) or systems of genes are being pursued. From the point of view of the sociomedical sciences, the most interesting discoveries have centered on the power of epigenetics to reveal how biological foundations are shaped by nonbiological factors. The contemporary and widely held view is that environments, including the social environment, affect the chemical coating on the genome (through histones and methylation–demethylation processes), leaving the genome intact but turning genes “on” or “off.”

How do we incorporate our understandings of inequality’s influence on health under this new model now that the old nature–nurture debate has been rendered scientifically obsolete? A three-part approach lies in bridging insights across research communities from the social, biological, and medical sciences. The biological/genetic part has been summarized in briefest terms above. More relevant to this entry are two other pieces of the whole that have been conceptualized: biological embedding and social embeddedness.

BIOLOGICAL EMBEDDING

Biological embedding, first coined by anthropologist and public health researcher Clyde Hertzman in 2010, targets how social factors and processes “get under the skin” to affect health and development. Hertzman developed this idea to explain the nearly universal social class gradient in health, hypothesizing that individuals’ developmental, material experiences and psychosocial conditions interact to “sculpt” the brain in childhood. Both immediate and prolonged interactions between defense systems and the brain respond to the adverse psychosocial experiences, often associated

with disadvantaged social position. This elevates disease risk in childhood and cumulates to a trajectory of greater morbidity and early mortality in adulthood. In sum, biological embedding alters biological processes caused by social experiences and circumstances, and in turn, either protects or predisposes individuals to health and disease.

SOCIAL EMBEDDENESS

While biological embedding results from day-to-day experiences as well as exceptional traumas, the social environment is intricate, dense, and multifaceted, requiring a way to conceptualize how inequality matters. Introduced by sociologist Mark Granovetter in 1985, the concept of social embeddedness takes into account how the different levels of society and the advantage and disadvantage part and parcel of them, are fundamentally tied together and can be traced through individuals' personal networks. What individuals know, how they evaluate the potential efficacy and suitability of a range of behavior, and what they eventually do are fundamentally tied to, negotiated in, and given meaning through social interactions. Individuals' social ties describe their place in the community as well as individuals' access to and participation in rich, supportive, advantaged environments or decimated, difficult, and disadvantaged ones known to be associated with well-being or disease risk. In health care, this includes patterned interactioned experiences that Lutfey's diabetes patients from different SES backgrounds experienced in clinical settings.

In fact, the recent concern with intersectionality (holding particular constellations of class, race, gender, sexual orientation, etc.) reflects a classic prediction in social network theory that such configurations only offer a crude way to track the kinds of social interactions that individuals have. When David Williams reinvigorated the work on race/ethnicity and health inequalities, he answered the question of whether SES played a role. In fact, it did but it was not the only fundamental cause; it did not "explain" racial disparities in health and health care. Much to the surprise of many who thought it impossible, Williams was able to document that culture mattered. Individuals' reports of their experiences of discrimination, which can only be enacted through social interactions and networks of relationships in families, workplaces, and communities, had a direct explanatory power. In such issues, forces that tap into stigma have proved to be powerful forces in the illness experience and health/health care outcomes. This greater emphasis on culture—attitudes, beliefs, values, norms—of those who suffer from ill health and those who care for them are socially embedded. Too often, social characteristics themselves are relied upon to proxy culture. As Williams' research has shown, it is not being African-American, *per se*, that results

in poor health, but the combination of SES disadvantage and day-to-day stigmatizing experiences that combine to create health disparities.

Together, understanding biological starting points that will be shaped by, and in turn, shape structures and meanings of inequality in which individuals are embedded offer a new and exciting challenge. Discarding the old either-or mentality of past debates means that we can begin to unlock the inequality in both material and nonmaterial resources. In seeing biology and social embeddedness working through the dynamics of biological embedding, a new challenging agenda comes into focus, suggesting new frameworks such as the Social Symbiome, which synthesizes disciplinary findings and novel conjectures through a networked lens in which the biomedical and sociomedical sciences work together, understanding the way that inequality shapes health takes on renewed perspective, calling for theoretical, methodological, and analytic developments to match the intricacy of unraveling the roots of life chances.

FURTHER READING

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