CPRN DISCUSSION PAPER

Towards a New Concept of Health:
Three Discussion Papers

by

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Foreword

Our notions of health and health care are in flux yet again. In fact, the one constant in the history of health care in this country is an ever-changing perception of health and how to achieve and maintain it.

At the turn of the last century, the main concern was sanitation and public health. By mid-century, the preoccupation had become access to quality hospital and medical services. Over the years, there have been those who observed that many key influences on health lay outside the traditional ambit of health authorities. In the 1970s, attention began to shift to the importance of lifestyle and the environments in which we all live. More recently, researchers and policy advisors have come to recognize that inequalities in social and economic conditions have an important bearing on the health of different population groups.

In 1998, the Health Network of the Canadian Policy Research Networks launched a major study entitled Towards a New Perspective on Health Policy. Our objectives were to explore the different streams of thought that have shaped our understanding of health and to assess the way new ideas about health come to shape health policy and the delivery of health-related programs and services. Sholom Glouberman, the Director of the project, and his team of researchers have done extensive investigation of the ways in which the four perspectives on health described above interact and support each other. That research is now bearing fruit.

Today’s volume brings together three papers, each building on its predecessor – the initial results of a search for a new concept of health suited to conditions at the start of the 21st century. Those conditions include significant inequalities in health outcomes among Canadians that persist even in the face of a universally accessible system of health care.

The implication of the papers included here, simply put, is that we can no longer afford to ignore the link between the quality of our relationships, be they political, economic or strictly social, and the state of our health. Issues of control, independence, equality, self-determination, to mention some of the most important, can be seen as critical in terms of their impact on health. The challenge ahead is to design policies for health that take these complexities into account.

This collection of papers is intended to provoke further discussion and should be understood as a contribution to a very important work in progress.

The work of the project team has benefited from monitoring by an Advisory Committee and the comments of independent reviewers. The project has also received the generous support of the funding organizations listed at the back of this publication. Our thanks to all participants.

Judith Maxwell
President
Preface

As the 1990s were drawing to a close, there was an apparent logjam in Canadian health policy. Stakeholders and policymakers at various levels were at an impasse when trying to discuss health issues or directions for new policy designed to improve the health status of Canadian society. It was as if the old conceptual frameworks and language were no longer sufficient for the task.

The inability to communicate about these issues was compounded by the vast changes in virtually all aspects of society and technology over the past 25 years, changes which were likely to continue. In response, CPRN’s Health Network undertook a large-scale project to promote a lively and productive debate in the health policy arena and to help relieve the policy logjam.

The project – *Towards a New Perspective on Health Policy* – is an effort to learn from the evolution and articulation of past policy frameworks and to use that experience to help develop a new framework for a changing modern context.

The project began with an examination of some of the current issues in health research and then went on to look at the history of the concept of health itself. It was hoped this conceptual analysis would stimulate thinking and discussion about fruitful future directions for policy research. The current document is a collection of three discussion papers that emerged as part of this ongoing conceptual development. Each builds on its predecessor. Each is an articulation of a work in progress. Each has benefited from peer review and from numerous collaborators and commentators at the many workshops and discussions groups where these ideas were refined.

The first paper, “Social Inequality – Aristotle’s Insights,” takes as its starting point the increasing emphasis in current epidemiological thinking on socio-economic determinants of health status. In particular, the growing recognition that in every society there seems to be a gradient of health, using many different measures of health status, that parallels the gradient in socio-economic disparity. What is most interesting about this work is not the facile conclusion that it is better to be rich than poor but, rather, the fact that the gradient is relatively smooth and linear between these two extremes. This suggests that within any given socio-economic class, even those who are only slightly ahead will also have slightly better health status.

To understand this relatively modern phenomenon, we turned to Aristotle, who in the 4th century BC wrote extensively about social class, its nature and its influences. As can be seen in this paper, this investigation into Aristotle’s discussion of goods gave us a new conceptual understanding of determinants that makes it clear how they can play a role without being, strictly speaking, causes. Second, and more important, was the insight that it is not the goods, to use Aristotle’s term, or the socio-economic means, to use ours, which are most important in explaining health status. Rather, it is the differing levels of capacity for action and social engagement embodied in these social gradients that might be the key to understanding the relationship between social inequality and health status.

The second paper, “The Health Gradient Challenge: A New Approach to Health Inequalities,” is an examination of the concept of health from early times to the present day.
It was motivated, in part, by the discovery at the outset of this project that very little theoretical work had been done on the concept of health in the past 20 years. That raised the question of whether our inability to move ahead in discussions of health policy might be a symptom of the stagnation in our thinking about health itself.

Our historical analysis yielded the expected result that there was a tradition, dating back at least to Hippocrates, that discussed health as a function of the individual organism. Similarly, it was found that there was an equally ancient tradition that discussed health as a function of the environment, primarily the physical environment but increasingly the social context as well. But most interesting was the discovery of a more recent tradition, though with some older forebears, that sees health as a function of the interaction of the individual with his or her social context. This was particularly evident in the sociological writings of Talcott Parsons and Aaron Antonovsky, however, it also emerged in such fields as geriatrics and health psychology.

This growing perspective on health as a function of the interaction of a person with his or her social context fits well with the analysis of social gradients in terms of capacity for action and engagement in the first paper. Together, they have lead to the working hypothesis of this overall project:

**The quality of the interaction between an individual and his or her social context is a major contributor to health.**

This is the conclusion reached in the third paper bundled here: “A Dynamic Concept of Health.” It synthesises the results of the two earlier lines of research and places them in the context of other developments in contemporary intellectual history. The most noteworthy of these is the shift from the old physics, which promised a world of perfect predictability and control, to the new physics, which acknowledges the fundamental complexity of the universe, with its concomitant loss of perfect predictability and of the hope of attaining perfect control, in spite of ever-increasing knowledge bases.

Together, these three documents present one of the first fresh conceptual analyses of health in many years. It is hoped that this early conceptual work will continue to generate discussion and provoke debate, both within the context of the *Towards a New Perspective on Health* project, and more widely in the community of researchers and policymakers concerned with health and health policy. Ultimately, we hope it will provide a key ingredient in a new platform for health policy in Canada.

To date, our hypothesis has been presented to a wide variety of audiences including the Federal, Provincial, Territorial Advisory Committee on Population Health and the Health Canada Policy Forum. *Closing the Loop: The Third International Conference on the Scientific Basis for Health Services*, an international conference held in October 1999, provided an opportunity to introduce our ideas to an international audience. Most recently, we presented this conceptual work at an international symposium of policy researchers and stakeholders we hosted in Toronto, and at a workshop held jointly with Health Canada.

These papers do not represent the end of our work on these topics. Throughout the research here reported we have engaged in an iterative process of discussion and revision with various stakeholders and other researchers. This process is ongoing, and the ideas expressed in these
documents will doubtless continue to evolve. We hope that the publication of these reports at this stage will be a starting point for further discussion, and not the final word on anything.
Social Inequality – Aristotle’s Insight

by

Sholom Glouberman
Introduction

It has been known for a long time that the level of health of a population is closely associated with a number of non-health factors. In fact, the gathering of statistical data that measures the health of a population according to socio-economic gradients goes back to the early 19th century. In 1842, for example, Edwin Chadwick, a father of public health and a favourite son of Jeremy Bentham, presented mortality tables⁴ that correlated gradients of child mortality with the level of their father’s occupation. In this century, the correlation was established between mortality rates and social class.²

Since then, much more evidence supporting the notion that social status and the social environment play a key role in health status has been amassed. The Black Report³ of 1980 was a landmark study of health inequalities in the United Kingdom. It identified major issues in the study of inequalities in health and included clear evidence that differences in health followed gradients of socio-economic status. Richard Wilkinson’s Unhealthy Societies (1996) continues in this tradition by using gradients to present socio-economic correlations with health disparities. Similar studies in Canada have shown that mortality, various kinds of morbidity, and measures of health tend to follow gradients of education, social status, income and other socio-economic circumstances. Further, many of these studies suggest that the social environment is the most important factor influencing health, more important than health care, the physical environment or genetics.

There is little debate today that inequalities in social status are correlated with inequalities in health. Rather, the debate lies in the field of health policy. As Sir Donald Acheson suggests, “today the question is not whether these facts are valid but who cares and what can be done about them.”⁴ Despite the clear conclusions and the rather spectacular findings of work on health inequalities in Canada and abroad, there has been some difficulty in framing and adopting the policy consequences of this evidence. Instead, we are caught up in political debates between the Left and the Right over what the data might mean and how to address health inequalities. These debates are further complicated by the fact that, despite the vast amounts of research, there are still large unknowns about the causes of morbidity and mortality. Finally, if it is true that health is a function of the social environment, it seems beyond the reach of any ministry or department of health to create meaningful health policy without becoming “health imperialists.”

Given these difficulties in our current policy situation, it might be useful to turn to a pre-Enlightenment view of society, health, and well-being, one that might allow for new ways of thinking about these issues and how we might construct policy that takes into account their complex interrelation. Aristotle provides some ways of thinking about the individual and his or her environment that allow for an interaction between the two. This paper briefly outlines some of the debates that have plagued policymakers grappling with questions of inequalities in health. It then goes on to discuss Aristotle’s notions of goodness and civil status, and how these relate to well-being. From this discussion, we can draw upon Aristotle’s ideas to see how they might help us to understand more about health and health policy, and to articulate a preliminary hypothesis on the nature of health. That hypothesis suggests that a significant contributor to health is the quality of the relationship between an individual and his or her social context. Finally, we apply and test this preliminary hypothesis against some examples in an attempt to delineate some possible policy directions.
Debates around Health Policy

The Left-Right Divide

After the publication of the Black Report in 1980, there was a Left-Right division concerning its results. Acheson notes that the report became “a party political football.”\(^5\) This division of perspectives on the results of research in health inequalities remains today, and limits our ability to think about health policy and what both these views might bring to it.

The argument of the Right focuses on individuals and suggests that everyone must have the relatively untramelled freedom to accumulate wealth. This accumulation will result in the greatest increase in the wealth of the population as a whole and will also improve the wealth of the most socio-economically deprived. Health follows wealth, or so the argument goes: improvements in wealth will increase the health of the whole population – the least well off as well as everyone else. Although inequalities may persist, the Right argues that general improvements will affect everyone. At the same time, it may be necessary to provide a safety net for the worst off. In support of this argument, there are those who argue that improvement in health in industrialized countries over the last 150 years is mainly due to an increase in general prosperity.

The Left argues that reducing inequalities not only improves the health of the least well off but also results in an improvement of health of the whole population. Using examples that compare the United Kingdom with Sweden, Richard Wilkinson argues in support of this view that in countries like Sweden, where there is little disparity between social classes, not only is the health of the least well off improved, but so is the health of the best off.\(^6\)

The Luck of the Draw

Epidemiological studies on determinants of health do not provide direct causal accounts of illness; rather, they indicate risk factors: they illustrate varying degrees of risk of illness at different socio-economic levels of the population. A significant risk of a condition, however, does not constitute a causal explanation. While it remains true that at each socio-economic level some people are sick and others are healthy, the presence of proven risk factors cannot predict individual outcomes of disease. There is still no way to ascertain whether a particular person will get lung cancer or not. Jill, who is poor and smokes like a chimney, can remain healthy and live a long life, while Jack, who is a rich non-smoking vegetarian jogger, can die early on of lung cancer.

We cannot, nor should we, identify socio-economic risk factors with direct causes. Although someone may be at higher risk because of his or her social and economic situation, the luck of the draw is of prime importance in the risk of most illnesses. This notion is reflected in population-based data on heart disease. The data indicate that of the known factors that influence heart disease in certain populations, the most significant known ones may be social status or control over work, but even larger components remain unknown. Further, given this large component of “unknown” factors, many policymakers assume that more knowledge is what is necessary to create policy. This view, however, perpetuates what may be an illusion that it is possible to fully understand the direct causes of all illness, and impedes us in our thinking about possibilities for health policy now.
Equality of What?

Even if it were accepted that reducing inequalities would improve the health of the population, the question remains, “Equality of what?” There is widespread disagreement among egalitarians about what should be equalized in order to improve general well-being (and by implication the health of the population). This is true on a number of fronts including health, education, and welfare, for example.

Health Imperialism

Tackling Inequalities in Health suggests four levels of policy initiative in order to reduce inequality. They are:

1. Strengthening individuals
2. Strengthening communities
3. Improving access to essential facilities and services
4. Encouraging macroeconomic and cultural change

However, the book quickly points out that “[d]espite some successes, efforts to strengthen individuals and communities have had a minimal impact on reducing inequalities in health. Greatest gains in health in the past have resulted from improvements in living and working conditions.” It concludes that a “worthwhile agenda for tackling inequalities in health must therefore include a strong focus on reducing poverty and a commitment to the careful monitoring of the impact of major public policies on health, particularly among the most vulnerable groups.”

This kind of conclusion leaves government departments of health with a particular dilemma: if their mission is to improve the health of the population, or even if they adopt a mission of reducing inequalities in health, the policy tools available to them are limited. They cannot themselves develop policies for “macroeconomic or cultural change.” Nor can they develop policies that will increase access to essential facilities outside health such as housing or circumstances such as working conditions.

This seemingly frustration of purpose is apparent in many departments of health. Government officials in health recognize their inability to develop policies that will change socio-economic circumstances. When faced with the declared desire by the Ministry of Health to develop such policies, officials in other government departments often consider their efforts to result from a kind of “health imperialism,” that is, the idea that health must be the focus of all government policy. What, then, is the relationship between the health of the population and other government objectives?

Aristotle and Health

In the Nicomachean Ethics and the Politics, Aristotle considers many issues relevant to current discussions about health and health policy. Like us, he lived in a society with clear social gradients, and he considers the connection between these gradients and different levels of well-being. His discussion of “goods” sheds light on our understanding of determinants, and his thoughts about misfortune can help us to think about the nature of risks and their links to
determinants. Finally, his consideration of the place of individuals and their relation to others and to their social environment can help us to frame a hypothesis that might help with our current dilemmas about health and the direction of health policy.

Aristotle on the Good Man

For Aristotle, the good person lives well. Importantly, this notion of goodness is not limited to Judeo-Christian notions of morality. Different people have different capacities for goodness. In the Politics and Ethics, Aristotle writes that one’s relation to one’s society or state provides a level of social and civil status. One’s status is used to mark different capacities for living well. Aristotle describes a range of civil status, which descends from the level of full citizen (always male) to artisan, political slave, woman and natural slave. This range is related to a person’s capacity to lead a good life – to live well.

Living well requires goods that provide the means to live well. There are three types of goods: goods of the body, goods of the soul, and external goods. 11 Goods of the body include such things as health, fitness, strength, and suppleness. Examples of goods of the soul include virtues, intelligence and wit. External goods could include wealth, property, civil status, training and so on. A person’s capacities are dependent on their external goods as well as their internal ones.

The distribution of these goods follows the levels of civil status and, consequently, the capacity to live well. An individual is an element of the state. 12 The nature of the state and the individual’s place in it determines much about the goods at his or her disposal. Thus a full citizen has the means to live well. He has training in the science of politics, which is tied to the right to participate in government and the capacity to make decisions with consequences to the well-being of the state. An artisan has training only in his trade, less right to govern, and hence a more limited capacity for the good life than a full citizen. Though he may be well educated, a political slave has no civil status. This limits his capacity to live well. In Aristotle’s day, women were given almost no education and had no rights to property or capacity to govern. In this patriarchal society, their range of moral action was severely limited. Finally, a natural slave has limited intellectual capacity, no training, and functions only in response to his master’s orders; hence the natural slave has the most limited capacity for goodness. 13

Just as there is a hierarchy of goodness among people, so there is a hierarchy of goods and purposes, and a relation between particular goods and further ends or virtues. 14 According to Aristotle, the virtues are modes of choice, ways of bringing ends into action. They are dispositions of the individual, and require the various goods as part of their capacity. Fitness and strength, for example, are goods of the body for the virtue of courage. A weak or unhealthy person will have less capacity to act courageously. Similarly, intelligence is a means to the end of a virtue such as courage, and education in the science of politics is an external good to the end of engagement in government. These virtues themselves stand in relation to the ultimate end of eudaimonia. This term has been variously translated as well-being, living a good life, being a virtuous person, excellence, or happiness.

When we apply this picture to a particular virtue such as courage, the goods associated with it might be presented as follows:
Aristotle recognizes that people at all social levels can be courageous or cowardly. Further, possession of goods of the body does not guarantee that someone will be courageous. Thus a full citizen can be cowardly despite his goods. Similarly, having fewer goods does not bar someone lower on the social scale from courage. A woman can be courageous despite her lack of strength, for example. But the courage of a woman involves different actions from that of a man: because of differences in strength, a rather cowardly but strong man is able to perform actions that would require great courage for a (weak) woman. Courage involves different actions for different individuals because it depends on the physical, mental and external resources one brings to an action. This example does not show that courage is a relative concept. Instead it points to the question of understanding the concept relative to the context in which it is applied.

The possession of goods, then, should not be confused with the good life. The good lyre player, notes Aristotle, uses a good lyre to play well. However, “[t]his makes men fancy that external goods are the cause of happiness, yet we might as well say that a brilliant performance on the lyre was to be attributed to the instrument and not the skill of the performer.” The quality of the lyre is no guarantee of good playing. Similarly, being a full citizen with all the external goods provides no guarantee of the good life.

The ways in which someone uses the goods at his or her disposal is particularly important for Aristotle. Well-being for him is not a state, but an activity. He believes that the good life involves action and engagement with one’s society. Thus one measure of the difference between different levels of people is how they act in relation to their social context. At every level one’s actions have consequence, but those of a full citizen are the most directly consequential while those of the natural slave are the most instrumental and circumscribed. Yet at every level one can act well or badly. It seems as if the arena of living well is the interaction between the individual and his or her social context.

Close relationships, contemplation (or understanding), and fortune all play critical parts in Aristotle’s views on the active good life, or eudaimonia. He argues, for example, that friendship contributes to resiliency in times of misfortune. He also suggests that understanding is a mode for achieving eudaimonia. There is a fundamental human inclination to try to understand the nature of the world. Once again, the goods required for this sort of contemplative life are distributed by level of civil status: the role of the intelligent and insightful observer requires many resources, and is thus reserved for those who have had sufficient life experience, the appropriate resources of body and mind, and whose level in society provides them with the necessary external goods.

Finally, fortune also plays a part in contributing to the good life. Good luck, for Aristotle, is not a sufficient condition for the good life, as the good life must be one of active engagement. Instead he argues that the absence of bad luck is a necessary condition for living well. It is nonsense to
think that someone who suffers from great misfortune can still lead the good life. Notes Aristotle, “The fine man on the rack does not live well.”

**How Aristotle’s Ideas Can Help Us Understand More about Health**

Aristotle recognizes that possession of goods is not the cause of living well, in the same way as “determinants of health” such as education, employment, and personal health practices are not direct causes of health or sickness. At each social level, Aristotle says, available goods can make some measure of well-being possible. Similarly, health-related determinants are not sufficient to determine health. Both goods and determinants seem to function as resources with different degrees of necessity. In both cases, the ways in which people relate to the resources or goods available to them becomes a critical factor in their health.

For Aristotle, the nature of this interaction is not constant across the lifespan. Children who are learning how to become good citizens are most amenable to education by habit formation. Adults, who are presumably serving as citizens, are living what he calls the political life. At this stage, what is paramount is their active engagement both in their local group of intimates, and in the larger society as a whole. Finally, in later life, people may enter a state of solitary contemplation, which for Aristotle is the highest good, but, importantly, not to be practised by all, and especially not without a firm grounding in the earlier stages. Thus there is an appropriate level of engagement with one’s social environment, at each stage of life, and each stage has the former as prerequisite. Without adequate habituation and education in youth, one cannot properly engage with one’s society during one’s prime, and without adequate engagement during the adult, political years, there can be no hope for happiness later in life. Thus if human well-being is the goal of society, attention must be paid at each stage, not only to the individuals and their social contexts but to the nature of their interaction with them.

Importantly, in all this, Aristotle is not a health imperialist. In fact, he hardly discusses the notion of health directly. Rather, he sees it as one more good for the end of well-being, or _eudaimonia_. Similarly, at least some current discussions on health see health as a means to the end of living well overall. Both views suggest that while health is certainly a necessary condition for well-being, it is not an end in itself. Thus Aristotle may help us to understand the place of health policy in terms of a larger scope of policies aimed at well-being.

**Application to Some Examples**

Aristotle’s notion of the good life identifies three main elements: the individual, who has certain goods of the body and the soul; the social context, which provides external resources; and the mode of interaction between them. From his discussion on the good life, we are able to arrive at a preliminary hypothesis. To reiterate, that hypothesis is that _a significant contributor to health is the quality of the relationship between an individual and his or her social context_. We can explore, and test, this idea by applying it to various health-related situations. In so doing, we may indicate preliminary directions for policy.
**Example 1: Health Inequalities: Hopelessness and Heart Disease**

Everson’s study correlates a measure of hopelessness with the onset of atherosclerosis. Everson defines hopelessness as “negative expectancies about oneself and the future.” Her results suggest that men who identify themselves as being “hopeless” are at a higher risk for heart disease. Two items on her study questionnaire were, “I feel that it is impossible to reach the goals I would like to strive for,” and “The future seems to me to be hopeless. And I can’t believe that things are changing for the better.”

These statements, and Everson’s results, appear to be less about psychological states of individuals, or about the nature of the environment, than about the relationship between the individual and the environment. As Everson notes, “These notions suggest that individuals in interaction with their environment develop a set of behavioural, social, psychological and physiological adaptations or adjustments that have a cumulative, generic effect on health.”

Hopelessness is thus understood to be a result of a deteriorating relationship with one’s social context. It is not a mental state but rather a belief about external possibilities, and is highly relational. The Whitehall studies of civil servants in the United Kingdom suggest that control over one’s work and one’s place in a hierarchy of employment are also directly related to the chance of developing heart disease. Marmot’s study suggests that job control is not merely a feature of the work environment but about the relationship between workers and the work they do. Policy implications here would focus on improving that relationship.

**Example 2: Social Marketing: Smoking and HIV Prevention**

When social marketing urges people to stop smoking or to practice safer sex, it works well in some communities but not in others. Smoking cessation programs are much more effective for middle-class communities than for poorer people. Similarly, several years ago, successful safer sex campaigns urged an increasingly well-organized gay male community to use condoms. More recent attempts to influence intravenous drug users not to share needles and to promote safer sex practices for a younger and poorer cohort of gay men have not been very successful, as evidenced by new waves of HIV infection in Canada.

One way to understand both the successes and failures of these campaigns is to think about their effect on the community in which individuals are at risk. In middle-class communities, it has become increasingly difficult to maintain a smoking habit and good relations with others. There is increasing community pressure on its members to stop smoking, and it might be easier to stop smoking than to relieve the strain on relationships that accompany it. On the other hand, in many poorer communities, smoking is a form of cheap entertainment that is encouraged by all; thus there is considerable community encouragement to take it up. Maintaining good relations with others in the community requires at least tolerance for smoking and abstention requires a special effort.

A similar case can be made about the varying success of efforts to stop the spread of HIV in different communities. As safer sex became the community norm in the older gay male community, it became increasingly difficult not to practice safer sex. However, in the community of intravenous drug users there was no such community uptake regarding the sharing of needles. Similarly, younger and poorer members of the gay community do not respond well to safe sex campaigns.
Both these cases suggest the special importance of relational connections between individuals and their social context. When these connections are health inducing, social marketing works. When they are not, lack of compliance with health-inducing practices seems to stem less from ignorance than from the nature of one’s relationship to a social context. Although the focus of social marketing is to individuals, it turns out to be most effective if it changes the culture of the community to which individuals want to belong. Here, policy implications suggest that social marketing must focus on ways to exploit that connection between an individual and the community to which he or she currently belongs or would like to belong.

Example 3: The Health Care System: How Individuals Relate to It

There is a dramatic difference between Canadian health policy issues and those in the United States. The major issue in the United States is “coverage.” There are over 40 million Americans with no health care coverage, and, according to some experts, another 20 million who are underinsured. In the United States, issues about inequalities in health are submerged by the more obvious and painful consequences of inequalities in health care.

This allows us to surface a peculiar role of health care coverage in thinking about health. As well as being measured in terms of productivity or the outcome of health care interventions, the role of a publicly funded universally accessible health care system is to provide security to the effect that one will be cared for should one become ill. Current public concern in Canada may well be connected to the fear that such care will not be forthcoming given the state of the health care system.

Following our hypothesis, in providing such security, a universal health care system fosters a stronger relation between individual citizens and the state. If the hypothesis is correct, a universal health care system will improve population health status simply by existing. That is, we might be able to postulate that a key function of our health care system, in addition to treating sick people, is to foster a robust relationship between an individual and his or her social context. This fact would provide one explanation for the differences in health status between those countries with and without universal health care coverage.

Conclusion

This paper is only a preliminary exploration of ideas that will contribute to the creation of a fresh policy framework for health. It is clear that we are currently hampered in our thinking about health policy by debates and dilemmas around evidence and “health imperialism.” Going back to Aristotle allows us to think about health, individuals, the social environment, and policy in new ways, and to develop policy that works to foster a robust connection between individuals and their social environment.
Notes


9. Ibid.

10. Ibid. p. xix.


12. *Politics*, i, 2, 1053a 19f.

13. See generally the *Politics*, especially Book I.


17. *NE*, x, 6, 13, 1176a 33-35.


20. *NE*, 1, x, 1100b 24-30.


22. Ibid., p. 1491.

23. Ibid., p. 120.

References


The Health Gradient Challenge: A New Approach to Health Inequalities

by

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The prevailing theories of health in a society shape its health policy and affect the nature of health interventions. An examination of the development of these major theories of health provides insight into the major advancements in health and suggests new directions for improvements in the health of a population. There are many theories of health, most of which can be categorized into two major concepts: one that views health as a function of the human body and the other that views health as a function of the external environment. These concepts have been the driving forces behind the dramatic increase in the health of the population of the developed world in recent centuries. As a result of this improvement, it is now possible to consider the contribution of factors other than physical factors to health. The World Health Organisation’s definition of health as a “state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity,”1 first articulated in 1947, reflects this expansion of the definition of health. Continuing advancements have led to the evolution of the two traditional concepts and the emergence of a third concept, one that views health as a function of the interaction between the individual and the environment.

Continuous developments in the many fields associated with health illustrate its complex nature. Research into inequalities in health has consistently shown that many indicators of health status, such as infant mortality, correlate with a variety of socio-economic indicators, such as mean household income, and educational attainment. Evidence is clear that health status worsens as one moves down the socio-economic ladder, but perhaps most striking is the fact that it seems to do so in a smooth gradient. It is not merely the case that the poorest citizens have worse health than the richest but rather, within each broad socio-economic class, there is a gradient with those just slightly better off showing improved health status over those immediately beneath them. This finding is particularly unsettling in a country such as Canada, where there is a comprehensive social infrastructure and universal health care designed to minimize inequalities associated with socio-economic status. A major challenge for policymakers, academics and health professionals is to reduce and perhaps eliminate these health gradients.

The findings in the inequalities in health literature demonstrate the need for a concept of health to consider variables not traditionally associated with health that will identify new leverage points for interventions to reduce the health gradients. The third concept of health appears most promising in achieving this goal for several reasons. First, it builds upon the advancements achieved as a result of the two older concepts, namely universal health care and public health measures. As a result, this concept can concentrate on the more interactive psychological, social and emotional contributors to health. Second, this approach examines health from a developmental perspective by identifying factors that might contribute to health at a very early stage. Finally, this concept of health increases our understanding of the persistent health gradients as well as individual differences in health status.

**Health As a Function of the Individual**

The concept of health as a function of the human body dates back at least as far as Ancient Greece when Hippocrates introduced his humoral theory of disease. According to his theory, good health was the result of the four humors maintaining equilibrium. Increasing knowledge of anatomy and physiology convinced people that the key to good health could be found in the body. It was believed that a thorough knowledge of the human body and specific diseases would resolve the problem of ill health. During the Renaissance, numerous investigators borrowed methods from other scientific disciplines to identify, categorize and explain various
diseases and the human body. Arguably, the earliest strands of a modern approach to medicine is found when Rhazes of Persia differentiated smallpox from measles in the 9th century. Others place the beginning of modern medicine with the first discovery of contagion by Girolamo Francastoro (1478-1553) of Verona. He stipulated the existence of micro-organisms that are capable of reproduction. However, theories of micro-organisms did not take hold until the 19th century, when they could be more easily observed with the assistance of the microscope.

Vesalius (De Humani Corporis Fabrica, 1543) and Harvey (Exercitatio De Motu Cordis, 1628) helped foster the emerging metaphor of the body as a machine, emphasizing the lever-like action of muscles and joints and the analogy between circulation and pumps, valves, and conduits. Newton’s Principia (1687), describing the simple mechanical laws governing the universe, further entrenched the desire to understand all natural phenomenon, including health and disease in mechanical terms. For example, Thomas Morgan’s Philosophical Principles of Medicine (1725) was divided into 3 parts: (i) “A Demonstration of the General Laws of Gravity with Their Effects upon Animal Bodies,” (ii) “The More Particular Laws Which Obtain in the Motion and Secretion of the Vital Fluids, Applied to the Principal Diseases and Irregularities of the Animal Machine,” and (iii) “The Primary and Chief Intentions of Medicine in the Cure of Diseases, Problematically Propos’d and Mechanically Resolv’d.” He argued that the body is a “pure machine” and that all its operations are the result of its organization and structure. Diseases were particular irregularities on his view. He suggested that a person who is ignorant of mathematics and mechanism attempting to cure diseases is like a blind person attempting to regulate clockwork and a deaf person attempting to tune an organ. Van Helmont (1577-1644) introduced chemistry into medicine, later elaborated on by Boyle and Hook.

Thus theories of health and disease during the Renaissance followed other scientific movements of the era. Health and disease were explained either in terms of general mathematical or physical principles, in keeping with Copernicus, Kepler, Galileo, and Newton, or in accordance with chemical principles, in keeping with Boyle, Willis, and Mayow. Bodily functions were explained in terms of their chemical (iatrochemical) or mathematical (iatrophysical or iatromathematical) principles. One prominent leader of this movement was Thomas Sydenham (1624-1689, Britain), who dominated the field by studying the natural history of diseases. His approach was to reduce diseases to “certain and determinate kinds,” in the same way that botanists do with species of plants. Linnaeus, de Sauvages, and Cullen all attempted to classify diseases into discrete categories. Bodily norms were calculated and many diseases were identified in terms of deviations from these norms such as hyper- and hypotension, hyper- and hypochlorydria, anaemia and polycythemia.

These efforts to understand the functioning of the body and the mechanisms of disease continue today. The result of this work is a comprehensive knowledge that has led to the development of antibiotics, drugs, vaccines and other procedures used to treat and prevent various illnesses. As we move into the 21st century, the focus of this research is becoming more microscopic with endeavors such as the Human Genome Project. Upon completion of this project, our understanding of the composition and functions of the human body will increase dramatically. This knowledge will result in a different approach to the prevention and treatment of disease.

Perhaps the greatest advancement in health policy achieved as a result of this concept of health is the implementation of universal health care programs in many countries. The
philosophy behind this service is that the health of the population will improve if all of its members have access to medical services. Many state-supported health care systems are currently threatened by the increasing costs that accompany sophisticated treatments and drugs. In many countries, consumers must now bear some of the burden of their medical expenses. This trend threatens to steepen the gradient between the haves and have-nots.

This concept of health is important in understanding illness and developing appropriate treatments and procedures. There is a continued need for research into the biological basis of health. Because a central characteristic of this concept of health is its focus on bodily functions and mechanisms of disease, it tends to ignore the fact that health involves many dimensions apart from physical factors. It is clear that health gradients cannot be explained solely in terms of the physical state of individuals.

**Health As a Function of the Environment**

This concept of health also dates back, at least, to Ancient Greece. Hippocrates identifies the contribution of the environment to health in his book *Airs, Waters, Places*. Such an identification of health with place certainly underlies many historical practices such as the burning of the possessions and houses of lepers, who were then ostracized from the community, to careful avoidance of plague cities in the medieval world. However, it was in the 18th and 19th centuries that this concept gained prominence with the birth of the public health movement and the discovery of the disease causing nature of bacteria. The rapid urbanization of the population at the time resulted in numerous epidemics spreading rapidly through the population. Edwin Chadwick’s report on the health of the working classes in 1842 in Great Britain and Lemuel Shattuck’s report to the Massachusetts Sanitary Commission in 1850 drew attention to the impact of squalid living and working conditions on the health of the majority of the population. Overcrowded housing, polluted water supplies, inadequate sewage treatment, adulterated food and child labour were identified as factors contributing to ill health. The discovery of bacteria’s role in disease further confirmed the role of these factors in health. As a result of reforms realized due to the efforts of public health advocates, the health of the British and American populations improved dramatically during the 18th and 19th centuries. This view of health as a function of the environment resulted in interventions with visible benefits enjoyed by a significant group of people. Medical historian Erwin Ackerknecht writes that innovative and new antibiotics saved fewer lives than the mundane procedure of pasteurizing milk. Oliver Wendell Holmes argued that “the bills of mortality are more affected by drainage than this or that method of medical practice.”

A prominent articulation of this concept in the 20th century can be found in the work of Thomas McKeown. McKeown examined morbidity and mortality rates in England and Wales, first recorded in 1839. Mortality began to decline in 1870, and the decline is almost wholly attributable to the reduction of deaths from infectious diseases. The main influences, in order of importance, were (i) a rising standard of living (beginning before 1838), (ii) improvements in the external environment (beginning around 1870), and (iii) prevention in the treatment of diseases in the individual (in the 20th century).

The growth of the population in the 18th century suggests that a significant improvement in health began at least 70 years prior to the registration of births and deaths. McKeown rejects the possibility that this improvement was due to specific measures as significant medical
advances were not realized until the 20th century, thus the efficacy of such measures would have been comparable in the 18th and 19th centuries. Chance is also dismissed due to the unprecedented growth of the population. McKeown concludes that the initial advancement of health must have been due to a rise in the standard of living that was the result of improvements in the food supply, coupled with a reduction in the birth rate.

In the past 30 years, this concept has expanded to include factors from the social environment that affect health. In the 1970s and 1980s, nurses dominated discussions on health, arguing that an individual’s health is encompassed by his or her physical, mental, emotional, social, spiritual, environmental, etc., status. They subsequently expanded the notion of health to include family health and community health. Recently, Health Canada proposed 12 “determinants of health,” a list of 12 social and environmental factors thought to contribute to the health of an individual. A policy consequence of such lists is the development of health promotion strategies. These programs are designed to target negative influences on health. A more extreme interpretation of this concept of health is the Healthy Cities/Healthy Communities model that proposes designing communities with health promotion as one of the major goals.

This concept of health is important as it resulted in the development of health interventions that target external contributors to health. These interventions are capable of reaching a large audience, promoting a healthy lifestyle and are cost-effective. This concept of health begins to explain the health gradient. It suggests that as an individual moves down the socio-economic ladder, the available resources diminish, which leads to poorer health. This explanation is correct to a certain extent. However, it is obvious that the availability of resources can be distinguished from one’s actual use of them. Though availability of at least some resources may be a necessary condition for healthy living, they, like biological resources, are not sufficient to assure the health of an individual. For example, a wealthy person with access to numerous resources might die at an early age whereas a significantly poorer person might live healthily into his 90s. This suggests that the interaction between an individual and his or her environment may also play a role in health.

**Health As a Function of the Interaction between Individuals and Their Social Context**

The two traditional concepts of health do not account for all factors influencing health. A third approach, which sees health as a result of the interaction between individuals and their environment, can also be traced to the writings of the classical world, though it has received relatively little attention until recently. The modern appreciation of this concept began in the sociological literature. It articulates a more active role for individuals with respect to their health. Individuals’ interaction with their environment, especially the social environment, is thought to be a significant determinant of their health status. The writing of Talcott Parsons and Aaron Antonovsky reflects this understanding. Talcott Parsons first introduced this notion in his paper “Definitions of Health and Illness in Light of American Values and Social Structures.” He argued that people are healthy if they can perform their routine tasks. Mental health is defined in terms of a capacity to perform institutionalized roles, and physical health is defined in terms of a capacity to perform institutionalized tasks. Parsons put forth the idea that when people are sick, they adopt a particular institutionalized social role with distinct features. This was the first time someone had articulated a definition of health that was entirely social and interactive. Parsons suggests that it is insufficient to examine
individuals’ constitution or their external circumstances. Rather, it is necessary to consider their behaviour and how they relate to the world around them. Parsons captures the idea that a person’s health is a function of the quality of an individual’s engagement with his or her social context.

Aaron Antonovsky expands on this idea in *Health, Stress, and Coping*. He argues that a person’s health and, broadly speaking, success in the world are a function of the available resources and his or her ability to use them. A person with a strong sense of coherence, who views the world as predictable, meaningful, and ordered, and who is armed with basic resources and can and does navigate through everyday life, is better equipped to overcome hardships and ill health. Such a person is more resilient than one with a weaker sense of coherence or fewer basic resources. Moreover, a person who has external resources but is ill-equipped to use them, or a person with a strong sense of coherence but few resources will not fare as well and is less likely to succeed or be healthy. Both dimensions are necessary for good health.

Parsons and Antonovsky both emphasize the importance of this interactive dimension of health. Recent research has demonstrated the salient role of psychosocial variables in health. Interestingly, the health gradient is steepest for stress-related illnesses. This suggests that individuals’ perception of their situation is a deciding factor in their health. Similar results have emerged from studies relating persons’ sense of control over their work to incidence of heart disease, or their feelings of hopelessness about the future and their ability to act to shape it to atherosclerosis. An interesting feature of this research is that much of it was initially motivated by a desire to find the link between environmental factors and ill health, and it is only on re-examination of the sorts of questions asked and measures made that the relational aspects of these studies have emerged.

Likewise, a great deal of attention has been given to the role of social support in illness. The positive effect of social support was understood as an external resource. However, more careful study of this effect has found that it is not the quantity but the quality of social support that is a determining factor in patient outcomes. This finding lends support to the idea that individuals’ engagement with their environment is relevant in determining their health.

By emphasizing the importance of psychosocial variables, this concept provides fresh insight into the health gradient and individual differences along the gradient. It has been found that people further down the socio-economic ladder are generally less able to interact with the mainstream social context. This trend is exemplified in the health care resources used by people of lower socio-economic status. While poorer people account for a disproportionate number of emergency room visits, many do not have a family physician. As a result, they forgo the opportunity to develop an ongoing relationship that could connect them with the dominant social context while meeting their health care needs. However, strong connections within an individual’s social context can, to some extent, compensate for the absence of other resources associated with health and well-being.

The current acceptance of a biopsychosocial model of health emphasizes the need to understand health on many levels. It may be possible to supplement our current strategies for improving the health of the population with new measures. Policies designed according to the concept of health as a function of the interaction between individuals and their context offer a promising direction to explore, even as there emerges a new focus on policies designed to foster stronger social relations in general.
Three Concepts – Competitors or Complements

From the foregoing, it would be easy to assume that adopting this third concept of health will serve as a panacea, correcting the earlier, erroneous views of health as a function of the individual or the environment. Nothing could be further from the truth. The goal of articulating this third perspective was not to supplant the other two but, rather, to supplement them with the goals of furthering our understanding of health, and of articulating new policy directions that might be less entangled with entrenched political views.

The view of health as a function of the individual has fostered tremendous successes in the development of therapeutic measures to combat particular diseases and alleviate symptoms. Advances in every field of medical practice from diagnostics to antibiotics to surgery are largely attributable to this concept. In part this has been due to the nature of evidence available to those working within this framework. Closely related to deterministic theories in the physical sciences of the past millennium, the focus on health as a function of the individual organism has been aided by the fact that research in this domain produces clearly interpretable, empirical results. Careful experimentation has made it possible to lay down many clear causal pathways for ill health, and it is only to be expected that the ongoing success of the Human Genome Project will yield even greater insights of the causal mechanisms of health. Unfortunately, this concept has also been utilized for political ends quite divorced from its scientific utility. On the view of health as a function of the individual, one can also seek to attribute individual responsibility, even blame, for ill health to that individual. Such has been the direction taken by many on the right side of the political divide, in debate over the health consequences of, for example, smoking, charging those on the left with a failure to acknowledge individual responsibility for the health consequences of lifestyle choices.

The view of health as a function of the environment has been somewhat less successful, though one must not underestimate the impact of clean air and clean water, as articulated by such luminaries as Hippocrates, Chadwick and Lalonde. More recently, the impact of the social environment has gained some prominence in the debates over public health policy. Unlike the research focussing on the individual, however, that focussing on the environment is much less deterministic and causal in its conclusions. Correlational studies identify risk factors and provide estimates of the changing odds ratios of suffering ill health in the presence of environmental contingencies ranging from toxic waste and power lines, to repetitive labour and alternative family structures. This fundamental difference in the nature of the evidence available to those working within this concept, in contrast to those working in the more traditional medical concept focussed on the individual, has helped fuel much of the debate over the correct interpretation of health determinants, and the proper policy directions to be investigated. This concept has also become a rallying point for political aims, this time for those on the left of the political spectrum, who charge the Right with ignoring the threats posed by environmental degradation and class disparities.

The third alternative provides no magic solution to the debates over the nature of evidence to be consulted, but may provide a way to get past the political divide currently occupying much debate over health policy. The sort of evidence marshalled by those working within this tradition is seen by many as even less clearly causal and deterministic than the environmental evidence. Rather, the evidence for this concept comes from a careful re-examination and re-interpretation of the sorts of questions asked in survey instruments, and the actual
circumstances under which much earlier research was conducted. Additionally, evidence can be obtained by more sophisticated statistical procedures focussing on the unexplained variation in health outcomes from earlier studies on various determinants. However, this evidence is now quite far removed from the simpler physical/causal models developed within traditional medical research, and additionally calls into question the ready interpretation of the correlational evidence from those in the environmental camp. While a focus on the interaction between individuals and their environments cannot resolve the epistemological controversies dividing those working in the other two traditions, it is to be hoped that it can, in some way, avoid the political affiliations all too commonly associated with the earlier concepts.

The goal then is not to denigrate the many accomplishments of past efforts focussing on health as a function of individuals or their environment, but rather to complement their successes with a potentially fruitful new approach that may allow for policy interventions freer of traditional political rivalries.
Notes


4. Ibid., p. 501-506.


References


A Dynamic Concept of Health

by

Sholom Glouberman
Introduction

There have been few philosophical examinations of the concept of health since the 1970s, despite the fact we have considerably changed our thinking about health and our approaches to health and social policy. In this paper, we will place some of the current work being done on inequalities in health into this changing intellectual context. We will try to sketch a conceptual framework for thinking about health and test it against some of its implications for general health policy and for prevention.

The Building Blocks of Health Policy

We will begin this discussion by considering three major building blocks of government involvement in health. These include: first, the early implementation of public health measures such as sanitation, inspection and public health nursing; second, the enactment of universal health care coverage; and third, the introduction of government sponsored health promotion programs. We have used government health policy initiatives in the United Kingdom and Canada as examples, but our analysis may apply to other Western countries with some adjustment for local influences. More recently research into inequalities in health suggests that a fourth block of health policy is emerging.

Block 1: Public Health Measures
How do we stop epidemics and keep people healthy?

The recurrent cholera epidemics and the discoveries by scientists like Snow led to the realization that these epidemics were transmitted by contaminated water. A cleaner water supply required some form of government intervention if only to regulate and inspect for contaminants. It took a long time for reformers like Edwin Chadwick, a father of public health (and the favourite son of Jeremy Bentham), to convince government to initiate public health policies for a clean water supply and other sanitation initiatives such as public health inspection and nursing. This was an important early building block of government health policy.¹

For many years public health advocates claimed that the clean water policies of the 19th century did more to improve health status than medical discoveries of the 20th century such as penicillin and other antibiotics. More recently there has been some debate about the relative impact of these public health measures. It has been argued by some population epidemiologists that improved health owed less to public health measures than to a general increase in prosperity, which afforded better nutrition and housing.² Despite this disagreement about the extent of their impact, it is indisputable that the public health initiatives did contribute considerably to general health improvement and continue to answer the question “How do we keep people healthy?”

Here the efforts were to improve the health of a population by means of interventions that kept people healthy. The focus was on the collective and the environment rather than the individual and the body. It was on prevention rather than treatment.

Block 2: Universal Health Care Coverage
How do we diagnose and treat people with ill health?

A second building block of health policy was the introduction of government-funded health services. The poor health of military recruits for the Boer War in the United Kingdom led people
to think about how to assure the diagnosis and treatment of those who suffered from ill health. There was an emerging role for government in the provision of health care to an entire population. But it was not until after the Second World War that the National Health Service was created in the United Kingdom. It was believed that universal medical coverage would completely “cure” the population of ill health, so that, in time, there would be a reduction in the need for it. In Canada, widespread ill health from the time of the Depression and World War II led to the enactment of medicare in 1968.

Once more there was a delay between the ideas associated with this second block of health policy and its final implementation. And there is also some dispute about the extent of the contribution of universal health care coverage to the health of the population. Some claim that improvements in health status after the initiation of universal health care coverage are less a result of these government policies than to a similar increase in prosperity and other changes. Despite these debates, there is no disagreement with the view that universal medical coverage has contributed to the treatment of ill health.

Medical services focus primarily on the individual and the body rather than the collective and the environment. They provide diagnosis and treatment, which together with the existing and expanding prevention programs would seem to now provide complete health coverage to the population.

**Block 3: Health Promotion**

*How do we improve people’s health?*

In the 1960s and 1970s Thomas McKeown argued that

> ... in order of importance the major contributions to improvement in health in England and Wales were from limitations of family size (a behavioural change), increase in food supplies and a healthier physical environment (environmental influences), and specific preventive and therapeutic measures.  

His idea that there are more important influences on health than traditional public health measures and medical care had a strong effect on thinking about health. McKeown’s ideas shaped the content and direction of the Lalonde Report, arguably the most significant Canadian health policy document in the last 25 years. The Lalonde Report articulated the health field concept that recognizes four elements “affecting the level of health in Canada,” human biology, environment, lifestyle and health care organization. These four major influences on health can be used as a “tool for analyzing health problems, determining health needs of Canadians and choosing the means by which those needs can be met.”

The Lalonde Report recommended that government policy be extended to encourage people to assume more responsibility for their own health through improvements in their lifestyles, and to create healthier social environments, which would also contribute to the health of individuals and populations. The report marks a transition in government policy to place increasing emphasis on health promotion. The ideas in it were expanded in the Epp Report: “Achieving Health for All: A Framework for Health Promotion” and in the “Ottawa Charter.” These later reports shifted from the stress on individual lifestyle. They emphasized the importance of the social environment, power and control, coping skills, social justice, housing, education, and civil society in promoting health. They also specified action: the need for health workers to advocate

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*Towards a New Concept of Health*
and act to improve health. They set in motion major changes at the federal and provincial levels. Health Canada reorganised itself and many provinces also adjusted institutional structures to facilitate health promotion.

As time passed the health promotion literature recognised an increasing number of influences on health, which interacted in complex ways. A recent document considers that there are at least 12 critical determinants of health, including social support networks, education, employment and working conditions, social environments, physical environments, personal health practices, healthy child development, biology and genetic endowment, health service, gender and culture.7

This third building block of health policy, like the first two, took some time to implement. Some health promotion advocates argue that it has not been fully implemented yet. And just as there were debates about the impact of traditional public health and universal health insurance, there are disagreements about the efficacy of health promotion.

**The Emerging Block 4: Inequalities in Health**

*Why are some people healthy and others not?*

It has been known for a very long time that the level of health of a population is closely associated with a number of non-health factors. Edwin Chadwick presents mortality tables as early as 1842, which indicate that gradients of child mortality correlate with the level of their father’s occupation.8 Gradients of a wide variety of health indicators along social class lines have been an ongoing feature of epidemiological studies. They become even more apparent when statistical data begin to be gathered using formal class definitions in Britain early in this century. A 1957 epidemiology text is a good example. “Cancer of the stomach, myocardial degeneration, pneumonia and ulcer of the stomach have a definite rising gradient from Social Class I to V.” Infant mortality followed the gradients in 1932, and continues to follow them in 1950.9

“The Black Report” of 1980 was a landmark study of health inequalities in the United Kingdom. It provided clear and more complete evidence of gradients of socio-economic status following differences in health.10 Richard Wilkinson’s *Unhealthy Societies* continues in this tradition by using gradients to present the socio-economic correlations with health disparities. His sources are epidemiological studies in the United Kingdom and other developed countries.11 Similar studies in Canada and the United States have shown that mortality, various kinds of morbidity, self-reporting of health and similar health measures seem to follow gradients of education, social status, income and other socio-economic circumstances.

*“Why are some people healthy and others not?”* This is the question that forms the title of a prominent publication by Canadian researchers on inequalities in health. They have amassed population-based evidence in a systematic and integrated way in an attempt to understand how different factors influence health.12 The result has been to demonstrate that social environments have a far stronger impact on health than individual behaviours. Trying to understand these social-structural dimensions has become a central focus of their research. Health promotion researchers recognised these impacts but did not engage in detailed empirical research needed to identify the correlation between social gradients and health status and to explain their interaction.
Canadian and other researchers on inequalities in health have attempted to integrate evidence of what is known about identifiable factors that influence health over the life course from large-scale population health studies. Along the way, evidence regarding the relative contribution of health care, the physical environment and genetics has been assessed and the conclusion has been that these factors are far less critical than the social environment over the course of people’s lifetime.13

Researchers in inequalities in health have “drilled down” into various social determinants and assessed the significance of more particular factors. After showing that the rank of civil servants was a good indicator of morbidity and mortality, British researchers began to look more carefully at the nature of work and how it is done. Recent Whitehall studies indicate that lack of control over work contributes significantly to ill health. In fact, after correcting for smoking, alcohol consumption and nutrition, it is the most significant contributor to heart disease in the population studied.14

Other studies look more carefully at particular components of people’s lives. Correcting for other differences such as smoking, nutrition and other health-related behaviours, studies have shown that hopelessness is tied to cardiac disease. This study of 2,500 Finnish males used measurements of the blood flow in their carotid arteries to show that hopelessness is closely correlated with the onset of atherosclerosis.15

**Policy Implications Are Unclear**

Despite the clear conclusions of this and similar work in Canada and abroad, and the rather spectacular findings, there has been some difficulty in framing and adopting the policy consequences of this work. “Today the question is not whether these facts are valid but who cares and what can be done about them.”16 Similar complaints have been heard in Canada from researchers in health inequalities.

After the publication of the Black Report there was a left-right division on interpreting its results. “The House of Commons debate of 6 December 1982, . . . developed on strict party lines and reached its forgone conclusion by 10 PM.”17 This division of perspectives on the results of research remains. Sir Donald Acheson concludes, “In the circumstances it is particularly unfortunate that the issue has become a party political football.”18

The argument of the Right focuses on individuals. Everyone must have the relatively untrammelled freedom to accumulate wealth. This will result in the greatest increase in the wealth of the population as a whole and will also improve the wealth of the most socio-economically deprived. There is an explicit recognition that health and well-being follow wealth. Improvements in wealth will increase the health of the whole population – the least well off as well as everyone else. Although inequalities may persist, general improvements will affect everyone. At the same time, it may be necessary to provide a safety net for the worst off. In support of this, there are those who argue that improvement in health in industrialised countries over the last 150 years is mainly due to an increase in general prosperity. There has also been a narrowing of longevity differences so that everyone lives longer and the gradients of disparity along class lines are shallower. As mentioned earlier, higher incomes, improved diet, housing and working conditions are more significant factors than either sanitation or medical advance. An example of this kind of change is in the reduction of infant mortality, which has been to the
benefit of all classes. Even though inequalities remain there is evidence that in the long term, except for occasional blips, the differences between the best and worst off have been reduced.

The political Left argues that reducing inequalities not only improves the health of the least favoured but results in an improvement of health of the whole population. Wilkinson is a good example of someone who holds this view. Using examples, which compare the United Kingdom with Sweden, Wilkinson argues that in countries like Sweden where there is less disparity between classes, not only is the health of the least well off improved but so is the health of the best off. Sir Douglas Black, concludes, “a radical cure demands nothing less than a renewed dedication to the welfare state.”

The epidemiological studies do not provide direct causal accounts of illness; instead they indicate risk factors. A significant risk of a condition does not constitute a causal explanation. The gradients of health indicate varying degrees of risk of illness at different socio-economic levels of the population. It remains true that at each level some people are sick and others are healthy. The presence of proven risk factors cannot predict individual outcomes of disease. There is still no way to ascertain whether a particular person will get lung cancer or not. Jill who is poor and smokes like a chimney can remain healthy and live a long life, while Jack who is a rich, non-smoking, vegetarian jogger can die early on of lung cancer.

We cannot, nor should we, identify socio-economic risk factors with direct causes. It remains true that even though someone may be at higher risk because of his or her social and economic situation, the luck of the draw remains of prime importance in the risk of most illnesses. This is reflected in population-based data, which indicate that of the known factors that affect heart disease in certain populations, the most significant known ones may be social status or control over work, but even larger components remain unknown.

Even if it were accepted that reducing inequalities would improve the health of the population, the question remains, “Equality of what?” There is widespread disagreement among egalitarians about what should be equalised in order to improve general well-being (and by implication the health of the population.) This is true on a number of fronts including health, education, welfare, etc.

_Tackling Inequalities in Health_ suggests four levels of policy initiative to this end.

- Strengthening individuals
- Strengthening communities
- Improving access to essential facilities and services
- Encouraging macroeconomic and cultural change

It quickly points out that

Despite some successes, efforts to strengthen individuals and communities have had a minimal impact on reducing inequalities in health. Greatest gains in health in the past have resulted from improvements in living and working conditions.

It concludes that
A worthwhile agenda for tackling inequalities in health must therefore include a strong focus on reducing poverty and a commitment to the careful monitoring of the impact of major public policies on health, particularly among the most vulnerable groups. This kind of conclusion leaves government departments of health with a particular dilemma: If their mission is to improve the health of the population, or even if they adopt a mission of reducing inequalities in health, the policy tools available to them are limited. They cannot themselves develop policies for “macroeconomic or cultural change” nor can they develop policies that will increase access to essential facilities outside the health portfolio, such as housing, or circumstances such as control over work.

This frustration of purpose is apparent in many departments of health. Government officials in health recognise their inability to develop policies that will change socio-economic circumstances. Officials in other government departments when faced with the declared desire by the ministry of health to develop such policies often consider their efforts to result from a kind of health imperialism. Must health be the focus of all government policy? What is the relationship between the health of the population and other government objectives?

**Ideas Relevant to An Understanding of Health**

Changes in three big ideas have had a substantial impact on our concept of health. We have moved from a deterministic Newtonian account of the physical world to a post-Einsteinian one with strong consequences to the nature of explanation. We have changed our attitude to the natural environment to become far more respectful of it and our place in it. And finally we have begun to recognize the importance of interactions between autonomous individuals and their social context. A review of these changing ideas may point us in some new directions and help us unravel some of the puzzles about health policy.

**The Evolution of the Old Physics**

For Plato and some other ancient Greek philosophers like Parmenides, the physical world is the world of becoming. We cannot have knowledge of the physical world but only opinion and uncertainty because it is constantly changing. For many mediaeval philosophers, human uncertainty about the physical world is set against divine knowledge. Only God can understand the physical world; it remains mysterious to humans. It is with the rise of modern science that the belief grows that humans can gain a powerful understanding of the physical world. Francis Bacon’s *Novum Organon* is a good example of this change in attitude. He argues that humans can unlock the secrets of nature and reap its treasures by ridding themselves of false preconceptions and engaging in the new scientific enterprise. The success of Newtonian physics, and science in general, resulted in a strongly mechanistic and deterministic picture of the physical universe. Its high point in the early 19th century was marked by the work of Pierre Simon Laplace. He envisages a being, often referred to as “Laplace’s Demon,” which is capable of complete knowledge of the deterministic universe. Explanation in Laplace’s universe requires causal links and accurate predictions. There is no room for choice, or chance or uncertainty.

We may regard the present state of the universe as the effect of its past and the cause of its future. An intellect which at any given moment knew all of the forces that animate nature and the mutual positions of the beings that compose it, if this intellect were vast enough to submit the data to analysis, could condense into a single formula the
movement of the greatest bodies of the universe and that of the lightest atom; for such an intellect nothing could be uncertain and the future just like the past would be present before its eyes.\footnote{23}

The New Physics

The picture presented by Laplace is contradicted by the occurrence of a large number of non-predictable phenomena that occur throughout nature at every level, from the sub-atomic to the cosmic. Many things like the weather, the stock market or the next drip of a faucet are not completely predictable. In Laplace, this non-predictability was due to a lack of complete knowledge on our part; we now know that this is not the case. We have come to accept that the physical world has strong characteristics of uncertainty and indeterminism. Advances in mathematics and physics such as Poincaré’s work on the three body problem have led us to deny the possibility of Laplace’s Demon.

In contrast to the Newtonian picture of the world, modern chaos theory speaks of a world in which there is always some uncertainty in any real measurement, which makes it impossible to specify initial conditions to infinite accuracy. Extreme sensitivity to initial conditions (the butterfly effect) makes it impossible to accurately predict the weather over long periods of time. Uncertainty about such phenomena may be the norm rather than a special case. Some suggest that this uncertainty and the lack of constant stability are important considerations in helping us to understand the physical world. Explanation is no longer in terms of prediction and control.\footnote{24}

If we apply these ideas to our understanding of health, they suggest that attempts to consider the human body as the single site for the study of health are insufficient. The genome project is often presented as a complete explanation of human biology on the Newtonian model. There is no doubt that it will have enormous consequences for our capacity to understand and control many types of disease. But given that genes set out only some of the initial conditions for health, there will still be a great deal of variation of outcome. An epigenetic perspective on health has already emerged, that is, that many non-genetic factors will contribute to the initial conditions and hence have strong influence on lifelong health. It is unlikely that there will ever be a complete (causal) account of health (or illness) that considers the body in isolation.

Relation to the Physical Environment

A second big shift in ideas that affect our understanding of health is about the relationship between humans and the natural environment. In early animistic cultures people see themselves as an element of nature: everything is “ensouled.” This close connection to the rest of nature forces a constant focus on the interaction between human affairs and the natural world. In mediaeval society, although humans are special, the natural world is also a divine creation that demands consideration and respect. The land needs to rest as does man; animals are literally creatures of God. The Newtonian and especially Cartesian pictures of a mechanical universe increase the distance between humans and the natural world. Bacon’s ideas about “taming” nature for our own ends suggests the possibility of control over nature through discovering its secrets. Scientific advance begins to be seen as a solution to problems that occur in nature. This approach grows and reaches its peak in the early parts of the 20th century when major engineering and design projects were launched with the view that scientific expertise would always be able to solve any problems that might arise. Rachel Carson’s Silent Spring (1962)
marked a renewed realization that humans are part of nature and must learn to respect it rather than attempt to control all aspects of it.\textsuperscript{25}

This changing understanding of the connection between humans and nature is mirrored in changes in our concept of health. A good example of this change occurs in the area of nutrition. It was not so long ago that the scientific future gave us a vision of healthy food in the form of pills. The growth of an organic, natural food industry and a growing concern about the possible side effects of genetically engineered produce emerge from a recognition that humans are inseparable from a complex and delicately balanced natural environment. We have two different pictures of what we should ingest. The first is a belief in the magic bullet drug that will deliver health and youth, and the second is the expectation that a more natural organic way of life will maintain our health throughout life.

**Individuals and the Social Environment**

The third “big idea” that has changed our notion of health has to do with human identity. In primitive societies, individuals identify themselves by means of their relationships with others. Her network of relationships determine who someone is: daughter of A, sister of B and cousin of C. The notion of separate personal identity without this kind of reference arises gradually as individuals become responsible for their individual souls in medieval society.\textsuperscript{26} Increasingly the individual soul becomes more private and internal. For Descartes it becomes a problem for the deeply individual soul to prove the existence of an external world.\textsuperscript{27} This Cartesian view of personal identity has been gradually eroding. Although theories of human development from Freud onward continue to recognize the importance of the individual, there is increasing evidence of the strong impact on identity of the interaction between individuals and their social environment.

**Three Ways of Thinking about Health**

There appear to be three main elements in concepts of health: the individual, the social context, and the mode of interaction between them. If we begin to apply these ideas to our understanding of health, we can identify three traditions for thinking about health, each of which stresses one of the three elements. In another paper we trace the traditions behind these three approaches (see the second paper in this volume, *The Health Gradient Challenge: A New Approach to Health Inequalities*).

The medical tradition focuses on the individual. Major advances in medical knowledge have resulted from an ever-deepening understanding of the physiology and psychology of the individual person. Interventions on the individual body seek to maintain health and prevent or cure illness.

Thomas McKeown’s ideas are a good example of a second tradition, which looks beyond the body. He argues that medical intervention is a lesser contributor to the health of an individual than the environment. This emphasis on environmental factors is a strong part of the public health tradition, which begins with the sanitarian movements and can be traced through ideas of health promotion and current work on the inequalities in health. Increasingly this tradition emphasises the social and economic environment as having the greatest influence on health.
A third view of health, which focuses on interactions between individuals and their environment, began to be articulated in the 20th century. Talcott Parson’s work on the boundary between health and illness relates people’s capacities to engage in their social and work environment. His ideas help us to understand health in terms of the interplay between an individual and his or her social context. Antonovsky’s discussion of the nature of resiliency identifies the capacity to use the resources one has to respond to misfortune. This echoes Aristotle’s description of the fine man as one who can cope with misfortune. (In the first paper in this volume – “Social Inequality – Aristotle’s Insight” – we examined some of the connections between Aristotle’s notions of ethics and politics and some of our current ideas about health.)

Our Hypothesis

The considerations above have led us to postulate the following hypothesis, which we can test against a number of research results.

The quality of the interaction between an individual and his or her social context is a major contributor to health.

Application to Some Examples

As this paper was being written it became apparent that we could apply this hypothesis to some of the examples that appear in earlier papers in this volume. Considering research results using the hypotheses may shed new light on them and, in a still preliminary way, indicate some policy directions.

Example 1: Health Inequalities: Marmot and Control over Work

When Marmot’s results in the Whitehall Study declare that control over work is the most critical factor correlated with heart disease, the implication is that control over work is a characteristic of the workplace. Control over work is not merely an environmental characteristic of the workplace. Some workers feel as if they have little control over their work in circumstances where others feel as if they have a great deal of control. This variance occurs over a broad range of work from policy development to the automobile assembly line. It would seem on the face of it worthwhile to consider that workers’ sense of control over work is a function of the nature of the work environment and also how the worker interacts with it.

Much of the preventive efforts in the workplace have to do with occupational health and safety issues. A lesson from the Whitehall studies is that there are more opportunities for preventive policies and programs that might be considered. We contend that health-related policies and programs can be categorized into three groups, ones that target the individual, ones that target the work environment and ones that focus on the interaction between the two. Our hypothesis would then suggest that it is worthwhile to look more carefully at the best policy mix for fresh opportunities to improve health in the workplace.

Example 2: Health Inequalities: The Everson Study

Research efforts are continually discovering finer socio-economic correlates with health. Everson’s study is a good example; it connects self-assessed measures of hopelessness with the
onset of atherosclerosis. She defines hopelessness as “negative expectancies about oneself and the future.” The two items on the questionnaire were, “I feel that it is impossible to reach the goals I would like to strive for;” and “The future seems to me to be hopeless. And I can’t believe that things are changing for the better.” Responses were on a five-point scale from “absolutely agree” to “absolutely disagree.”

These statements appear to be less about psychological states of individuals or about the nature of the environment than about the relationship between the individual and the environment. In fact Everson speaks of this in her study.

These notions suggest that individuals in interaction with their environment develop a set of behavioural, social, psychological and physiological adaptations or adjustments that have a cumulative, generic effect on health.

Hopelessness thus is understood to be a result of a deteriorating relationship with one’s social context. It is not a mental state but rather a belief about external possibilities and is highly interactive.

**Example 3: Social Marketing: Smoking and HIV Prevention**

Social marketing has had very mixed responses in different sectors of the population. Attempts to urge people to stop smoking have worked well in middle-class communities but have been less successful for poor people. AIDS/HIV campaigns have had similarly varied results. Campaigns to increase the use of condoms had a strong impact on the organized gay community several years ago. But recent attempts to influence intravenous drug users not to re-use needles and to encourage safe sex by a younger and poorer cohort of gay men have not been very successful as is evidenced by a new wave of HIV infection in Canada.

One way to understand both the successes and failures of these campaigns is to think about their effect on the community within which individuals are at risk. In middle-class communities it has become increasingly difficult to maintain a smoking habit and good relations with others. There is increasing community pressure on its members to stop smoking. It is easier to stop smoking than to endure the strain on relationships that it entails. On the other hand, in some poor communities smoking is a form of cheap entertainment that is encouraged by all and there is considerable community pressure to take it up. Maintaining good relations with others in these communities requires at least tolerance for smoking and abstention requires a special effort.

A similar case can be made about the varying success of efforts to stop the spread of HIV in different communities. As safe sex became the community norm in the older gay community, it became increasingly difficult not to practice safe sex. And in the community of intravenous drug users there was no such community uptake. Similarly, younger and poorer members of the gay community spurn the advice of their more respectable elders and their community does not respond well to the safe sex campaigns.

Both these cases suggest the special importance of interactions between individuals and their social context. When these are health inducing, social marketing works, when they are not, lack of compliance with health inducing practices seems to stem less from ignorance than from the nature of one’s relationship to a social context. Although much of the focus of social marketing
has been the individual, it turns out to be most effective if it impacts on the community to which individuals want to belong.

**Example 4: The Health Care System: How Individuals Relate to It.**

At meetings with American policymakers, a recurrent theme has been the dramatic difference between Canadian and American health policy issues. An American pointed out that the major issue in the United States is “coverage.” There are over 40 million people in the United States with no health care coverage and, according to some experts, another 20 million are underinsured. In the United States, issues about inequalities in health are submerged under the more obvious and painful consequences of inequalities in health care.

This allows us to surface a peculiar role of health care coverage in thinking about health. Far from being measured in terms of its productivity or the outcome of health care interventions, the role of a publicly funded universally accessible health care system is to provide security that one will be cared for should one become ill. Current public concern in Canada may well be connected to the fear that such care will not be forthcoming given the current state of the health care system.

According to our hypothesis, a universal health care system, which provides such security, fosters a stronger relation between individual citizens and the state. This will, if the hypothesis is correct, improve population health status. It would provide one explanation for the differences in health status between those countries with and without universal health care coverage and would identify an interesting preventive aspect of universal coverage.

**Conclusion and Next Steps**

This work remains preliminary and exploratory. Further investigation might look for studies, beyond those mentioned above, that specifically investigate the connection between health and the strength of relationships such as family, friends and work colleagues. Two researchers, Keith Oatley and Barbara Schuster, have begun searching the literature and have already uncovered several concrete policy and clinical examples that support our hypothesis.

Connecting these examples with other work on inequalities in health may lead us to a fresh policy framework. We believe that such a framework can be conceptually rigorous and empirically well founded. Its policies should be easy to articulate and its implementation can be subject to clear evaluation. Several workshops have been organized at Health Canada to apply our hypothesis to specific policy domains. In this way, our new framework can be developed and refined iteratively, through application. We hope that such a policy framework will add a new dimension beyond policies that focus too intently on either the individual or the social environment.
Notes


22. Ibid.


33. Ibid., p.120

References


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